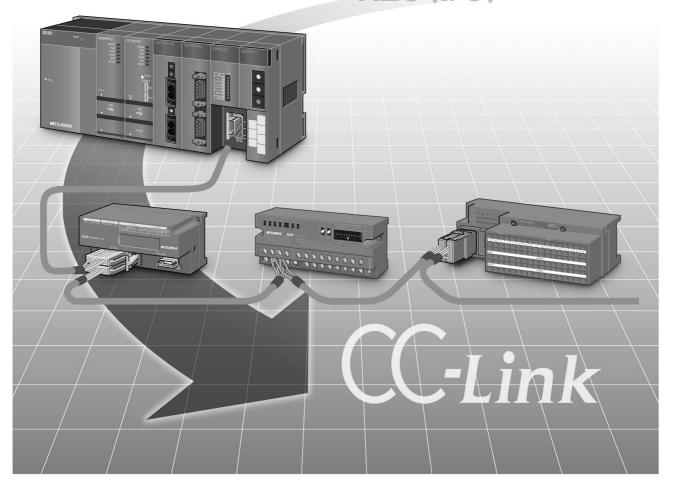




Mitsubishi Programmable Controller

Transition from MELSECNET/MINI-S3, A2C (I/O) to CC-Link Handbook

MELSECNET/MINI-S3 A2C (I/O)



Feb. 2016 Edition

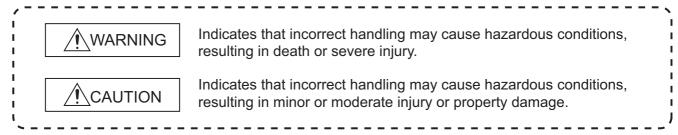
SAFETY PRECAUTIONS

(Read these precautions before using this product.)

Before using this product, please read this handbook and the relevant manuals carefully and pay full attention to safety to handle the product correctly.

The precautions given in this handbook are concerned with this product only. For the safety precautions of the programmable controller system, refer to the user's manual for the CPU module used.

In this handbook, the safety precautions are classified into two levels: "/NWARNING" and "/NCAUTION".



Under some circumstances, failure to observe the precautions given under "____CAUTION" may lead to serious consequences. Observe the precautions of both levels because they are important for personal and system safety.

Make sure that the end users read this handbook and then keep the manual in a safe place for future reference.

■When replacing with the Q series

[Design Precautions]

WARNING

- For the operating status of each station after a communication failure in the data link, refer to the MELSEC-Q CC-Link System Master/Local Module User's Manual. Failure to do so may result in an accident due to an incorrect output or malfunction.
- When connecting a peripheral with the CPU module or connecting an external device, such as a personal computer, with an intelligent function module to modify data of a running programmable controller, configure an interlock circuit in the program to ensure that the entire system will always operate safely. For other forms of control (such as program modification or operating status change) of a running programmable controller, read the relevant manuals carefully and ensure that the operation is safe before proceeding. Especially, when a remote programmable controller is controlled by an external device, immediate action cannot be taken if a problem occurs in the programmable controller due to a communication failure. To prevent this, configure an interlock circuit in the program, and determine corrective actions to be taken between the external device and CPU module in case of a communication failure.
- Do not write any data to the "system area" of the buffer memory in the intelligent function module.
 Also, do not use any "use prohibited" signal as an output signal from the CPU module to the intelligent function module. Doing so may cause malfunction of the programmable controller system.
- To set a refresh device in the network parameter, select the device Y for the remote output (RY) refresh device ("Remote Output (RY)"). If a device other than Y, such as M and L, is selected, the CPU module holds the device status even after its status is changed to STOP. For how to stop data link, refer to the MELSEC-Q CC-Link System Master/Local Module User's Manual.
- If a CC-Link dedicated cable is disconnected, the network may be unstable, resulting in a communication failure of multiple stations. Configure an interlock circuit in the program to ensure that the entire system will always operate safely even if communications fail. Failure to do so may result in an accident due to an incorrect output or malfunction.

[Design Precautions]

CAUTION

 Do not install the control lines or communication cables together with the main circuit lines or power cables. Keep a distance of 100mm or more between them. Failure to do so may result in malfunction due to noise.

[Installation Precautions]

CAUTION

- Use the programmable controller in an environment that meets the general specifications in the user's manual for the CPU module used. Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- To mount the module, while pressing the module mounting lever located in the lower part of the module, fully insert the module fixing projection(s) into the hole(s) in the base unit and press the module until it snaps into place. Incorrect mounting may cause malfunction, failure or drop of the module. When using the programmable controller in an environment of frequent vibrations, fix the module with a screw.
 - Tighten the screws within the specified torque range. Undertightening can cause drop of the screw, short circuit or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction. Shut off the external power supply (all phases) used in the system before mounting or removing the module. Failure to do so may result in damage to the product.
- Shut off the external power supply (all phases) used in the system before mounting or removing the module. Failure to do so may result in damage to the product.
- Do not directly touch any conductive parts and electronic components of the module. Doing so can cause malfunction or failure of the module.

[Wiring Precautions]

WARNING

- Shut off the external power supply (all phases) used in the system before installation and wiring.
 Failure to do so may result in electric shock or damage to the product.
- After wiring, attach the included terminal cover to the module before turning it on for operation. Failure to do so may result in electric shock.

[Wiring Precautions]

<u>^</u>CAUTION

- Use applicable solderless terminals and tighten them within the specified torque range. If any spade solderless terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
- Tighten the terminal screws within the specified torque range. Undertightening can cause short circuit, fire, or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.
- Do not install the control lines or communication cables together with the main circuit lines or power cables. Failure to do so may result in malfunction due to noise.
- Prevent foreign matter such as dust or wire chips from entering the module. Such foreign matter can cause a fire, failure, or malfunction.
- A protective film is attached to the top of the module to prevent foreign matter, such as wire chips, from entering the module during wiring. Do not remove the film during wiring. Remove it for heat dissipation before system operation.
- Use CC-Link dedicated cables for a CC-Link system. If not, the performance of the CC-Link system is not guaranteed. For the maximum station-to-station distance and the overall cable distance, follow the specifications in Section 2.2 and the MELSEC-Q CC-Link System Master/Local Module User's Manual. If not, normal data transmission is not guaranteed.
- Place the cables in a duct or clamp them. If not, dangling cable may swing or inadvertently be pulled, resulting in damage to the module or cables or malfunction due to poor contact.
- When disconnecting the cable from the module, do not pull the cable by the cable part. For the cable with connector, hold the connector part of the cable. For the cable connected to the terminal block, loosen the terminal screw. Pulling the cable connected to the module may result in malfunction or damage to the module or cable.

[Startup and Maintenance Precautions]

WARNING

- Do not touch any terminal while power is on. Doing so will cause electric shock or malfunction.
- Shut off the external power supply (all phases) used in the system before cleaning the module or retightening the terminal screws or module fixing screws. Failure to do so may result in electric shock or cause the module to fail or malfunction. Undertightening can cause drop of the screw, short circuit or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.

[Startup and Maintenance Precautions]

<u>^</u>CAUTION

- Do not disassemble or modify the modules. Doing so may cause failure, malfunction, injury, or a fire.
- Shut off the external power supply (all phases) used in the system before mounting or removing the module. Failure to do so may cause the module to fail or malfunction.
- After the first use of the product, do not mount/remove the module to/from the base unit, and the terminal block to/from the module more than 50 times (IEC 61131-2 compliant) respectively.
 Exceeding the limit of 50 times may cause malfunction.
- Before handling the module, touch a grounded metal object to discharge the static electricity from the human body. Failure to do so may cause the module to fail or malfunction.

[Disposal Precautions]

CAUTION

When disposing of this product, treat it as industrial waste.

●When replacing with the L series●

[Design Precautions]

MARNING

- For the operating status of each station after a communication failure, refer to the MELSEC-L CC-Link System Master/Local Module User's Manual in this manual.
 - Incorrect output or malfunction due to a communication failure may result in an accident.
- When connecting a peripheral with the CPU module or connecting an external device, such as a personal computer, with an intelligent function module to modify data of a running programmable controller, configure an interlock circuit in the program to ensure that the entire system will always operate safely.

For other forms of control (such as program modification or operating status change) of a running programmable controller, read the relevant manuals carefully and ensure that the operation is safe before proceeding.

Especially, when a remote programmable controller is controlled by an external device, immediate action cannot be taken if a problem occurs in the programmable controller due to a communication failure.

To prevent this, configure an interlock circuit in the program, and determine corrective actions to be taken between the external device and CPU module in case of a communication failure.

- Do not write any data to the "system area" of the buffer memory in the intelligent function module.
 Also, do not use any "use prohibited" signals as an output signal from the CPU module to the intelligent function module.
 - Doing so may cause malfunction of the programmable controller system.
- To set the auto refresh parameter, select the device Y for the remote output (RY) refresh device. If a device other than Y, such as M and L, is selected, the CPU module holds the device status even after its status is changed to STOP.
 - For how to stop a data link, refer to the MELSEC-L CC-Link System Master/Local Module User's Manual.
- If a CC-Link dedicated cable is disconnected, the network may be unstable, resulting in a communication failure of multiple stations.
 - Configure an interlock circuit in the program to ensure that the entire system will always operate safely even if communications fail.
 - Failure to do so may result in an accident due to an incorrect output or malfunction.

[Design Precautions]

ACAUTION

 Do not install the control lines or communication cables together with the main circuit lines or power cables.

Keep a distance of 100mm or more between them.

Failure to do so may result in malfunction due to noise.

[Installation Precautions]

∴WARNING

 Shut off the external power supply (all phases) used in the system before mounting or removing a module.

Failure to do so may result in electric shock or cause the module to fail or malfunction.

[Installation Precautions]

CAUTION

- Use the programmable controller in an environment that meets the general specifications in the Safety Guidelines provided with the CPU module or head module.
 - Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- To interconnect modules, engage the respective connectors and securely lock the module joint levers until they click.
 - Incorrect interconnection may cause malfunction, failure, or drop of the module.
- Do not directly touch any conductive parts and electronic components of the module.
 Doing so can cause malfunction or failure of the module.

[Wiring Precautions]

↑ WARNING

- Shut off the external power supply (all phases) used in the system before wiring.
 Failure to do so may result in electric shock or cause the module to fail or malfunction.
- After installation and wiring, attach the included terminal cover to the module before turning it on for operation.

Failure to do so may result in electric shock.

[Wiring Precautions]

ACAUTION

- Use applicable solderless terminals and tighten them within the specified torque range.
 If any spade solderless terminal is used, it may be disconnected when a terminal block screw comes loose, resulting in failure.
- Do not install the control lines or communication cables together with the main circuit lines or power cables.

Failure to do so may result in malfunction due to noise.

- Place the cables in a duct or clamp them.
 - If not, dangling cable may swing or inadvertently be pulled, resulting in damage to the module or cables or malfunction due to poor contact.
- Tighten the terminal block screws within the specified torque range.
 - Undertightening can cause short circuit or malfunction.
 - Overtightening can damage the screw and/or module, resulting in drop, short circuit, fire, or malfunction.
- When disconnecting the cable from the module, do not pull the cable by the cable part.
 - For the cable with connector, hold the connector part of the cable.
 - For the cable connected to the terminal block, loosen the terminal screw.
 - Pulling the cable connected to the module may result in malfunction or damage to the module or cable.
- Prevent foreign matter such as dust or wire chips from entering the module.
 - Such foreign matter can cause a fire, failure, or malfunction.
- A protective film is attached to the top of the module to prevent foreign matter, such as wire chips, from entering the module during wiring.
 - Do not remove the film during wiring.
 - Remove it for heat dissipation before system operation.
- For the CC-Link system, use dedicated cables that are specified by the manufacturer.
 - If not, the performance of the CC-Link system is not guaranteed.
 - Also, the maximum overall cable length and the station-to-station cable length must meet those specified in Section 2.2 and the MELSEC-L CC-Link System Master/Local Module User's Manual. If not, normal data transmission is not guaranteed.

[Startup and Maintenance Precautions]

MARNING

- Do not touch any terminal while power is on.
 - Doing so will cause electric shock or malfunction.
- Shut off the external power supply (all phases) used in the system before cleaning the module or retightening the terminal block screws.
 - Failure to do so may result in electric shock.

[Startup and Maintenance Precautions]

CAUTION

- Do not disassemble or modify the modules.
 Doing so may cause failure, malfunction, injury, or a fire.
- Shut off the external power supply (all phases) used in the system before mounting or removing a module.
 - Failure to do so may cause the module to fail or malfunction.
- Tighten the terminal block screws within the specified torque range.
 Undertightening can cause drop of the component or wire, short circuit, or malfunction.
 Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.
- After the first use of the product (module and terminal block), do not connect/disconnect the product more than 50 times (in accordance with IEC 61131-2).
 Exceeding the limit may cause malfunction.
- Before handling the module, touch a conducting object such as a grounded metal to discharge the static electricity from the human body.
 Failure to do so may cause the module to fail or malfunction.

[Disposal Precautions]

ACAUTION

When disposing of this product, treat it as industrial waste.

CONDITIONS OF USE FOR THE PRODUCT

- (1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
 - i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
 - ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.
- (2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.

MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT. ("Prohibited Application")

Prohibited Applications include, but not limited to, the use of the PRODUCT in;

- Nuclear Power Plants and any other power plants operated by Power companies, and/or any
 other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above, restrictions Mitsubishi may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTs are required. For details, please contact the Mitsubishi representative in your region.

REVISIONS

* The handbook number is given on the bottom left of the back cover.

Print Date	* Handbook Number	Revision
Dec., 2005	L(NA)08061ENG-A	First edition
Aug., 2007	L(NA)08061ENG-B	Model addition
		Addition of modules to be replaced
		AJ65DBTB1-32D, AJ65BTB1-16D, AJ65BTB2-16D, AJ65DBTB1-32R,
		AJ65DBTB1-32T1, AJ65BTB1-16T, AJ65DBTB1-32DR, AJ65DBTB1-32DT1,
		AJ65BT-R2N, A6ADP-1MC16D, A6ADP-1MC16T, A6ADP-2MC16D
		Partial correction
		SAFETY PRECAUTIONS, Section 1.1, Section 1.2, Section 5.1, Section 5.2.1,
		Section 5.2.2, Section 5.2.3, Section 5.3, Chapter 8, Section 9.2, Appendix 1.3
Mar., 2008	L(NA)08061ENG-C	Model addition
		Renewal tool for A0J2
		Partial correction
		Section 1.1, Section 1.2 to Section 1.4 → Section 1.3 to Section 1.5,
		Section 1.3, Section 5.1, Section 5.2.1 to Section 5.2.3, Section 8.2,
		Appendix 1 → Appendix 2, Appendix 2.1, Appendix 2.4, Appendix 2.5
Mar., 2013	L(NA)08061ENG-D	Deletion of the AJ65BT-R2 from the alternative models
		Addition
		CONDITIONS OF USE FOR THE PRODUCT, GENERIC TERMS AND
		ABBREVIATIONS, Specifications comparison between AX80Y10C and
		AJ65DBTB1-32DR
		Partial correction
		SAFETY PRECAUTIONS, Section 1.3.2, Section 1.5, Section 2.1, Section 2.2.1, Section 2.2.2, Section 8.1, Section 8.2, Section 9.2, Appendix 2, WARRANTY
Feb., 2016	L(NA)08061ENG-E	
1 Cb., 2010	L(IVA)0000 ILIVO-L	Model addition
		LJ61BT11, L26CPU-(P)BT, A2CCPU
		Addition
		Section 4.1.2
		Partial addition
		Cover, Section 1.1, 1.4, 2.1, 5.1, 5.2, WARRANTY
		Change
		Chapter 9 → Appendix 1, Appendix1 → Appendix 2, Appendix 2 → Appendix 3
		Partial correction
		SAFETY PRECAUTIONS, GENERIC TERMS AND ABBREVIATIONS, Section
		4.1, 6.1, 6.2, 7.2, 8.2

Japanese Handbook Version L-08057-H

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- For the products shown in handbooks for transition, catalogues, and transition examples, refer to the manuals for the relevant products and check the detailed specifications, precautions for use, and restrictions before replacement.
 - For the products manufactured by Mitsubishi Electric Engineering Co., Ltd., Mitsubishi Electric System & Service Co., Ltd., and other companies, refer to the catalogue for each product and check the detailed specifications, precautions for use, and restrictions before use.
 - The manuals and catalogues for our products, products manufactured by Mitsubishi Electric Engineering Co., Ltd., and Mitsubishi Electric System & Service Co., Ltd. are shown in Appendix of each handbook for transition.
- Products shown in this handbook are subject to change without notice.

GENERIC TERMS AND ABBREVIATIONS

Unless otherwise specified, this handbook uses the following generic terms and abbreviations.

Generic term/abbreviation	Description
Series	
	The abbreviation for large types of Mitsubishi MELSEC-A series programmable
A series	controllers
	The abbreviation for compact types of Mitsubishi MELSEC-A series programmable
AnS series	controllers
A/AnS series	A generic term for A series and AnS series
	The abbreviation for large types of Mitsubishi MELSEC-QnA series programmable
QnA series	controllers
	The abbreviation for compact types of Mitsubishi MELSEC-QnA series programmab
QnAS series	controllers
QnA/QnAS series	A generic term for QnA series and QnAS series
A/AnS/QnA/QnAS series	A generic term for A series, AnS series, QnA series, and QnAS series
Q series	The abbreviation for Mitsubishi MELSEC-Q series programmable controllers
L series	The abbreviation for Mitsubishi MELSEC-L series programmable controllers
CPU module type	
	A generic term for A series, AnS series, QnA series, QnAS series, Q series, and L
CPU module	series CPU modules
Basic model QCPU	A generic term for the Q00JCPU, Q00CPU, and Q01CPU
Dasie Model Qui C	A generic term for the Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, and Q25HCPU
High Performance model QCPU	* This handbook mainly explains the Q02CPU, Q02HCPU, Q06HCPU, and
riigii i enormance model QCi O	Q12HCPU.
Process CPU	A generic term for the Q02PHCPU, Q06PHCPU, Q12PHCPU, and Q25PHCPU
Redundant CPU	-
Redundant CPU	A generic term for the Q12PRHCPU and Q25PRHCPU
	A generic term for the Q00U(J)CPU, Q01UCPU, Q02UCPU, Q03UD(E)CPU,
Universal model QCPU	Q03UDVCPU, Q04UD(E)HCPU, Q04UDVCPU, Q06UD(E)HCPU, Q06UDVCPU,
	Q26UDHCPU, Q10UD(E)HCPU, Q13UD(E)HCPU, Q13UDVCPU, Q20UD(E)HCPU
	Q26UD(E)HCPU, Q26UDVCPU, Q50UDEHCPU, and Q100UDEHCPU
LCPU	A generic term for the L02SCPU, L02SCPU-P, L02CPU, L02CPU-P, L06CPU,
25. 0	L06CPU-P, L26CPU, L26CPU-P, L26CPU-BT, and L26CPU-PBT
Built-in CC-Link function	The abbreviation for the L26CPU-BT/L26CPU-PBT built-in CC-Link system
Built-iii GG-Eirik function	master/local function
CPU module model	
ACPU	A generic term for MELSEC-A series CPU modules
AnSCPU	A generic term for MELSEC-AnS series CPU modules
	A generic term for the A1NCPU, A1NCPUP21/R21, A1NCPUP21-S3, A2NCPU,
AnNCPU	A2NCPU-S1, A2NCPUP21/R21, A2NCPUP21/R21-S1, A2NCPUP21-S3(S4),
	A3NCPU, A3NCPUP21/R21, and A3NCPUP21-S3
A = A ODLI	A generic term for the A2ACPU, A2ACPU-S1, A3ACPU, A2ACPUP21/R21,
AnACPU	A2ACPUP21/R21-S1, and A3ACPUP21/R21
AnUCPU	A generic term for the A2UCPU, A2UCPU-S1, A3UCPU, and A4UCPU
AnUS(H)CPU	A generic term for the A2USCPU, A2USCPU-S1, A2USHCPU-S1
A/AnSCPU	A generic term for MELSEC-A series and -AnS series CPU modules
AnN/AnACPU	A generic term for the AnNCPU and AnACPU
AnN/AnA/AnSCPU	A generic term for the AnNCPU, AnACPU, and AnSCPU
AHMAHAAHSOFU	
	A generic term for the A2CCPU, A2CCPU-DC24V, A2CCPUP21/R21, A2CCPUC24
A2CCPU	PRF), and A2CJCPU
A2CCPU	

Generic term/abbreviation	Description
A/AnS/QnA/QnASCPU	A generic term for MELSEC-A series, -AnS series, -QnA series, and -QnAS series CPU
AAIIO/QIIA/QIIAOOI U	modules
QCPU	A generic term for MELSEC-Q series CPU modules
LCPU	A generic term for MELSEC-L series CPU modules

1

INTRODUCTION

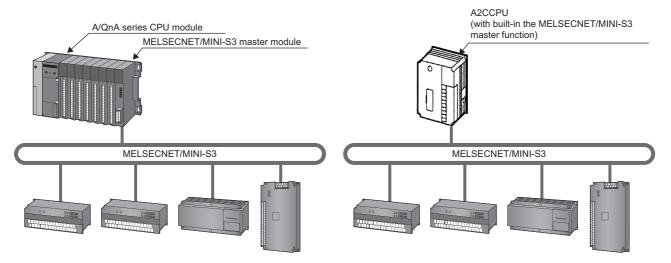
1.1 Replacing with MELSEC-Q/L series

The MELSEC-Q/L series does not have a MELSECNET/MINI-S3 master module. For this reason, it is recommended to use the CC-Link system when replacing the MELSECNET/MINI-S3 system using the MELSEC-Q/L series.

(Before replacement)

Configuration example of MELSECNET/MINI

• Configuration example of A2CCPU



(After replacement)

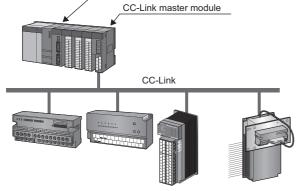
• Configuration example of when the CPU module is replaced with the QCPU

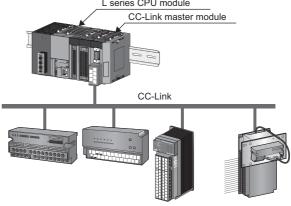
• Configuration example of when the CPU module is replaced with the LCPU

L series CPU module

CC-Link master module

CC-Link master module

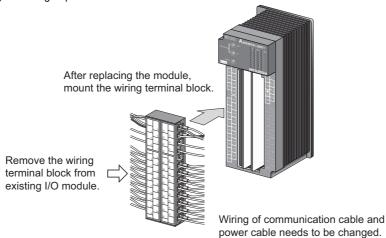




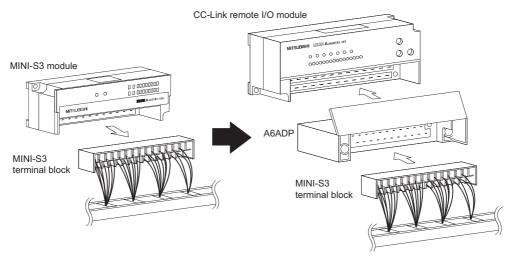
1.2 Suggestions for Replacement with the Remote I/O Module of CC-Link System

Module before		Module after replacement	Corresponding module
replacement (current status)	Туре	Outline	(before replacement → after replacement)
	CC-Link system compact type remote I/O module	Reconfiguration of the system is easy. Selecting the best match model from the wide selection of modules for a module before replacement is possible.	(All models)
MELSECNET/MINI-S3- compatible module (AJ35□-□) A2C (I/O) module (A□C)	CC-Link system remote I/O module (A2C shape)	Module mounting size is the same. This A2C shape CC-Link I/O module has the same shape (same mounting dimensions) with A2C (I/O) module. No processing for mounting holes is required when replacing the module. I/O signal wiring is the same. Since the terminal block of the same shape is used, I/O signal wiring is the same. Optional products are available. The A6DIN1C and A2CCOM-TB (sold separately) are available. If the A2C (I/O) is used before replacement, it can be utilized.	AX41C/AX81C → AJ65DBTB1-32D AY51C → AJ65DBTB1-32T1 AX40Y50C → AJ65DBTB1-32DT1 AY13C → AJ65DBTB1-32R AX40Y10C/AX80Y10C → AJ65DBTB1-32DR
	CC-Link system remote I/O module	Change in wiring is unnecessary. By using a wiring conversion adapter, terminal block of the module before replacement can be utilized to the module after replacement "2 (regarding communication cable and power cable, wiring change is required).	AJ35TB1-16D → AJ65BTB1-16D AJ35TB2-16D → AJ65BTB2-16D AJ35TB1-16T → AJ65BTB1-16T

*1 Man-hour taken for wiring change can be reduced since wiring to the external device can also be used by partially changing the wiring of power cable and communication cable.



*2 Image figure of replacement using wiring conversion adapter



INTRODUCTION

1.3 Suggestions for Replacement with Renewal tool for A0J2

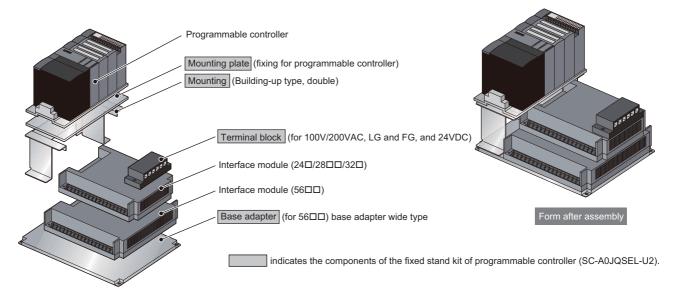
1.3.1 Advantages of using renewal tool for A0J2 (manufactured by Mitsubishi Electric System & Service Co., Ltd.)

(1) Renewal tool for A0J2

This tool is for replacing the existing MELSECNET/MINI-S3 compact type I/O module with a CC-Link module. It is composed of the interface module to which wiring terminal block of existing I/O module can be attached, components for a programmable controller, and connection cable.

Also, the interface module has the conversion function that converts AC input into DC input and DC output into relay output and triac output. The interface module can be replaced with the FCN connector type DC I/O module.

(a) Configuration example of Renewal tool for A0J2



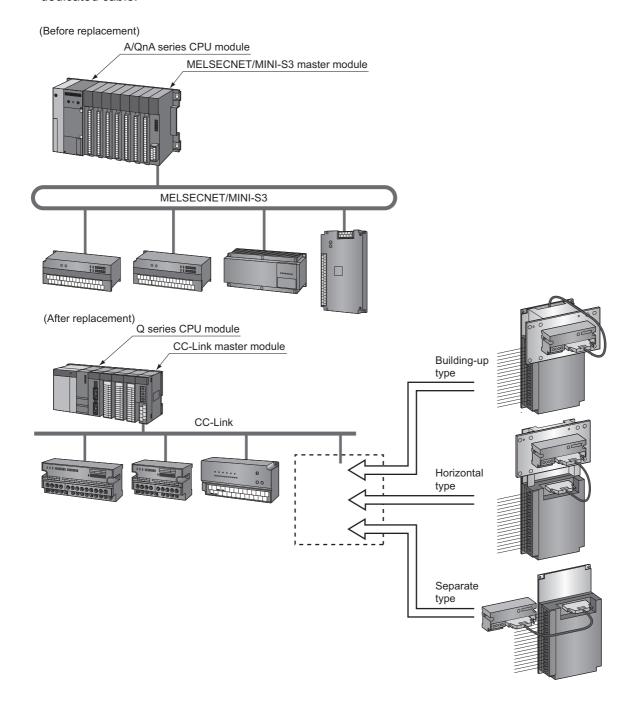
For details on the renewal tool for A0J2, interface modules, and mounting dimensions, refer to the following.

 Renewal tool for A0J2 series Transition from MELSEC-A0J2(H) series to renewal system using renewal tool (Issued by Mitsubishi Electric System & Service Co., Ltd.)

(2) Using existing cables

Although the A/QnA series CPU module is replaced with the Q series CPU module, the external wiring terminal block attached to the existing MELSECNET/MINI-S3 compact type remote I/O module can be utilized to the interface module. It allows to replace the modules without external wiring change. (The module is replaced with FCN connector type DC I/O module of CC-Link.)

Also, new wiring is unnecessary since the CC-Link I/O module is connected to the interface module with dedicated cable.



⊠POINT

For specifications comparison and functional comparison between the existing MELSECNET/MINI-S3 compact type remote I/O module and the renewal tool for A0J2 after replacement, refer to APPENDICES.

(3) Processing the mounting holes is unnecessary.

Mounting dimensions of the base adapter included with renewal tool for A0J2 is the same with dimensions of existing A0J2 I/O module. Replacement without processing the mounting holes is possible.

(4) I/O address change is unnecessary.

By replacing the MELSECNET/MINI-S3 compact type remote I/O module with FCN connector type DC input/output module of CC-Link, the I/O address assignment of the MELSECNET/MINI-S3 compact type remote I/O module can be utilized.

It eliminates I/O address change and allows substantial reduction of program correction.

(5) List of alternative models

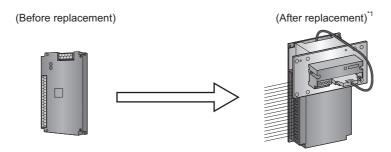
	ntinued (MELSECNET/ INI-S3)		Alternative model	(CC-Link/renewal tool for A0J2)	
Product	Model	CC-Link		Renewal tool for A0J2 ^{*1}	
Flouuci	Wodel	CC-LIIIK	Interface module	Fixed stand kit of programmable controller*2*3	
Input module	AJ35PTF-32A	AJ65SBTCF1-32D	SC-A0JQIF32A		
input module	AJ35PTF-32D	AJ055BTCF1-32D	SC-A0JQIF32D		
	AJ35PTF-24R		SC-A0JQIF24R		
Output module	AJ35PTF-24S	AJ65SBTCF1-32T	SC-A0JQIF24S	SC-A0JQSES-U1 (Building-up type, single)	
	AJ35PTF-24T		SC-A0JQIF24T	SC-A0JQSES-F (Horizontal type, single)	
	AJ35PTF-28AR		SC-A0JQIF28AR	SC-A0JQBSS (Separate type, single)	
	AJ35PTF-28AS		SC-A0JQIF28AS	SC-AUJQBSS (Separate type, single)	
	AJ35PTF-28DR		SC-A0JQIF28DR		
	AJ35PTF-28DS		SC-A0JQIF28DS		
1/0	AJ35PTF-28DT	AJ65SBTCF1-32D+	SC-A0JQIF28DT		
I/O module	AJ35PTF-56AR	AJ65SBTCF1-32T	SC-A0JQIF56AR	CC A0 IOCEL 114 (Building up type single)	
	AJ35PTF-56AS		SC-A0JQIF56AS	SC-A0JQSEL-U1 (Building-up type, single)	
	AJ35PTF-56DR		SC-A0JQIF56DR	SC-A0JQSEL-U2 (Building-up type, double)	
	AJ35PTF-56DS		SC-A0JQIF56DS	SC-A0JQSEL-F (Horizontal type, single/double)	
	AJ35PTF-56DT		SC-A0JQIF56DT	SC-A0JQBSL (Separate type, single/double)	

- *1 The renewal tool for A0J2 series Interface module and the cable for connecting the CC-Link I/O module (SC-A0JQCDDM) are also required.
- *2 The fixed stand of programmable controller is equipped with a Q33B mounting plate as standard equipment. A separately-sold mounting plate (SC-A0JQPT2) is required to use CC-Link modules.
- *3 To use fixed stands of programmable controller for double stack, arrange the CC-Link module for the second stand on a location different from the installation surface of the existing panel. (Up to two CC-Link modules can be mounted on the existing space.)
 - For details, refer to the related catalogs and manuals issued by Mitsubishi Electric System & Service Co., Ltd.

1.3.2 Proposal of replacement with renewal tool for A0J2

(1) Building-up type

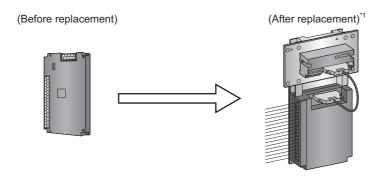
The CC-Link I/O module can be built up to the existing panel if there is room for depth in front of existing module, and can be installed on the installation surface of the existing panel.



*1: Up to two CC-Link I/O modules can be used for a renewal tool for A0J2. Install the third CC-Link I/O module or later separately.

(2) Horizontal type

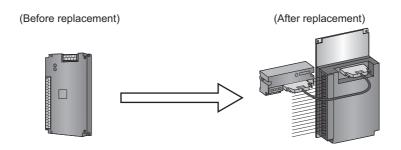
The CC-Link I/O module can be installed horizontally, if there is room above the existing module.



*1: Up to two CC-Link I/O modules can be used for a renewal tool for A0J2. Install the third CC-Link I/O module or later separately.

(3) Separate type

When CC-Link I/O modules cannot be stacked or installed horizontally, install them separately.



Remark

Other than CC-Link, replacement to the QCPU or AnSCPU is possible. For details, contact your local Mitsubishi sales representative. (refer to Section 1.5).

1 INTRODUCTION

1.4 Precautions for Replacement

- (a) Before replacing MELSECNET/MINI-S3 with CC-Link, be sure to refer to the manuals for each of the CC-Link modules, and confirm the functions, specifications and methods of use of the modules.
- (b) For replacement using renewal tool for A0J2, always refer to the following manual. Select correct products after checking the functions, specifications, and usage. (Reference manual)
 - Renewal tool for A0J2 series transition from MELSEC-A0J2(H) series to renewal system using renewal tool (Refer to Appendix 2.5.)
- (c) When stations installing a MELSECNET/MINI-S3 CC-Link module wiring conversion adapter to the CC-Link remote I/O module (AJ65BTB1-16D, AJ65BTB2-16D or AJ65BTB1-16T) is mixed, the maximum number of connected modules is 32 with the use of a version 1.10 compatible CC-Link dedicated cable. (No restrictions when using cables other than a version 1.10 compatible CC-Link dedicated cable.)
- (d) After replacing MELSECNET/MINI-S3 with CC-Link, be sure to check operation of the entire system before starting actual operation.

1.5 Contact of the Relevant Products

Renewal tool manufactured by Mitsubishi Electric Engineering Co., Ltd.

For products manufactured by Mitsubishi Electric Engineering Co., Ltd., contact your local sales representative.

Introduction of "replacement of MELSEC-A series, system renewal service, and renewal tool for A0J2"

For replacement of MELSEC-A series and system renewal service, contact your local sales representative.

PERFORMANCE SPECIFICATIONS **COMPARISONS**

2.1 Performance Specifications Comparisons between MELSECNET/MINI-S3 and CC-Link

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

	Specifications			Commodibility	Precautions for	
	Item	MELSECNET/MINI-S3	A2CCPU	CC-Link	Compatibility	replacement
Per master	Max. number of link stations	64 stations (8 points/station)		64 stations (32 points/ station)	0	
station	Maximum control I/O points	1024 points *1	512 points	4096 points + 512 words	0	
Number of modules		Max. 64 modules (according to the specifications for the CPU module used.)	The CPU has specifications equivalent to those of a master module.	When setting parameters with GX Developer/GX Works2: Max. 8 modules *2*3 When setting parameters with dedicated instructions: Max. 64 modules*3 (according to the specifications for the CPU module used.)	0	
Communi	ication speed	1.5Mbps		156k/625k/2.5M/5M/ 10Mbps	0	
Transmis	sion method	Ring		Bus	×	New cable must be laid.
Overall ca	able distance	No restriction		1200m (at 156kbps)	×	When the transmission distance exceeds 1200m, use a CC-Link repeater module.
Max. tran distance I stations		Optical data link: 50m (35m)*4 Twisted pair data link: 100m (50m)*5	Twisted pair data link: 100m (50m)*5	1200m (at 156kbps)	0	
	of occupied I/ per stations	In I/O dedicated mode: 32 points In extended mode: 48 points		32 points	Δ	For the extended mode, the number of occupied points changes.

- *1: When 16 separate refresh type remote I/O modules AJ35PTF-128DT (number of occupied stations: 4) are connected, 1024 I/O points each can be controlled.
- *2: The following CPU modules have the restriction of the number of modules mounted.
 - Q00(U)J/Q00(U)/Q01(U)CPU: 2
 - Q02UCPU: 4
 - L02S/L02CPU(-P): 2
 - L06/L26CPU(-P): 4
 - L26CPU-(P)BT: Built-in CC-Link function + 3
- *3: Total number of CC-Link master stations and local stations.
- *4: When a 2VTPE-1 optical combined vinyl-insulated sheath cable (manufactured by Mitsubishi Cable Industries, Ltd.) is used, the max. transmission distance between stations is 35m.
- *5: The max. transmission distance between stations varies according to the size of the twisted pair cable. $0.2mm^2$ or more to less than $0.5mm^2 \dots 50m$,

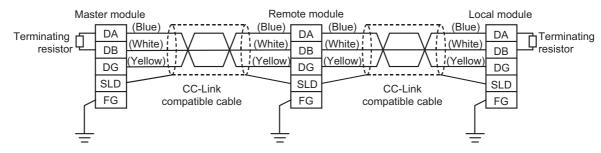
0.5mm² or more ... 100m

2.2 Wiring in CC-Link

New cables must be laid when replacing MELSECNET/MINI-S3 with CC-Link as the two systems differ in the applicable cable types.

2.2.1 CC-Link Ver.1.00 cable specifications

(1) Connection method

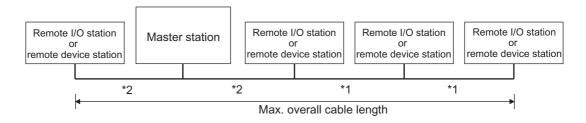


In the CC-Link system, the terminal resistor to be connected varies according to the cable to be used.

Cable type	Terminal resistor
CC-Link dedicated cable	110Ω 1/2 W (brown/brown)
CC-Link dedicated high-performance cable	130 Ω 1/2 W (brown/orange/brown)

(2) Cable length between stations, max. overall cable length

1) When the system is composed of only remote I/O stations and remote device stations



^{*1:} Cable length between remote I/O stations or remote device stations

CC-Link dedicated cable (110 Ω used as terminal resistor)

Transmission speed	Cable length b	etween stations	Max. overall cable length
mansinission speed	*1	*2	wax. Overall cable leligill
156kbps			1200m
625kbps	30cm or more		600m
2.5Mbps	7		200m
5Mbps	30cm to 59cm*	1m or more	110m
Sivibps	60cm or more		150m
	30cm to 59cm*	1	50m
10Mbps	60cm to 99cm*		80m
	1m or more		100m

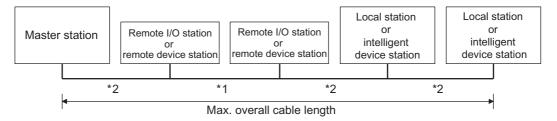
CC-Link dedicated high-performance cable (130 Ω used as terminal resistor)

Transmission speed		Cable length be	etween stations	Max. overall cable length	
Hallsillis	sion speed	*1	*2	- Max. Overall cable length	
156	ikbps			1200m	
625	ikbps			900m	
2.51	Mbps			400m	
5N	1bps	30cm or more		150m	
	Number of	30cm of more			
	connected			100m	
	modules		1m or more	100111	
	:1 to 32				
	Number of	30cm to 39cm*	ini oi more	80m	
10Mbps	connected				
томора	modules	40cm or more		100m	
	:33 to 48				
	Number of	30cm to 39cm*		20m	
	connected	40cm to 69cm*		30m	
	modules	70cm or more		100m	
	:49 to 64	7 OGHI OI IIIOIC		100111	

^{*} When an actual cable length between remote I/O stations or remote device stations is in this range at even one location, the above max. overall cable length applies.

^{*2:} Cable length between master station and next stations

2) When the system is composed of remote I/O stations, remote device stations, local stations, and intelligent device stations



^{*1:} Cable length between remote I/O stations or remote device stations

CC-Link dedicated cable (110 Ω used as terminal resistor)

Transmission speed	Cable length be	Max. overall cable length	
Iransmission speed	*1	*2	Max. Overall cable length
156kbps			1200m
625kbps	30cm or more		600m
2.5Mbps			200m
5Mbps	30cm to 59cm* 2m or more		110m
Sivibps	60cm or more	ZIII OI IIIOIE	150m
	30cm to 59cm*		50m
10Mbps	60cm to 99cm*		80m
	1m or more		100m

CC-Link dedicated high-performance cable (130 Ω used as terminal resistor)

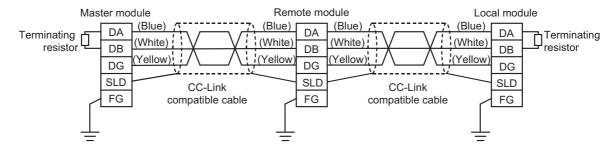
Transmission speed	Cable length b	Max. overall cable length	
Transmission speed	*1	*2	Max. Overall cable length
156kbps			1200m
625kbps	30cm or more		600m
2.5Mbps			200m
EMbpo	30cm to 59cm*	2m or more	110m
5Mbps	60cm or more		150m
10Mbps	70cm to 99cm*		50m
TOWNDPS	1m or more		80m

^{*} When an actual cable length between remote I/O stations or remote device stations is in this range at even one location, the above max. overall cable length applies.

^{*2:} Cable length between master/local stations or intelligent device stations and next stations

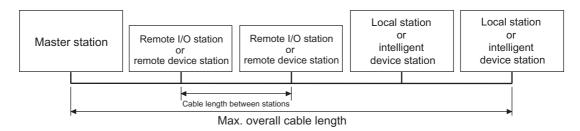
2.2.2 CC-Link Ver.1.10 cable specifications

(1) Connection method



Cable type	Terminal resistor
Ver1.10-compatible CC-Link dedicated cable	110 Ω 1/2 W (brown/brown/brown)

(2) Cable length between stations, max. overall cable length



Ver.1.10-compatible CC-Link dedicated cable (110 Ω used as terminal resistor)

Transmission speed	Cable length between stations	Max. overall cable length
156kbps		1200m
625kbps		900m
2.5Mbps	20cm or more	400m
5Mbps		160m
10Mbps		100m

3

FUNCTIONAL COMPARISONS

3.1 Functional Comparisons between MELSECNET/MINI-S3 and CC-Link

○: Compatible, △: Partial change required, ×: Not compatible

		Specifi	cations	Compati-	nge required, × . Not compatible
Item MELSECNET/MINI-S3			CC-Link	bility	Precautions for replacement
Commur with rem station		Communication with batch refresh type remote I/O modules, separate refresh type remote I/O modules and remote terminal modules is possible.	Communication with remote I/O stations, remote device stations, local stations, and intelligent device stations is possible.	×	Create new programs as the two systems are not compatible in the program.
RAS function	Communication / line error detection	Communications with all stations sometimes is discontinued when an error occurs on even one station. The faulty station is detected on the master station and is stored to buffer memory.	Only the faulty station is disconnected, and communication with other stations is continued normally. The faulty station is detected on the master station and is stored to buffer memory.	Δ	The method of confirmation is different. Review the program.
RA	Line check	Breakage of the optical cables and twisted pair cables can be checked by changing the operation mode of the master station.	Breakage of twisted pair cables can be checked by changing the operation mode of the master station.	Δ	program.
Others	Monitor station function	The I/O status of the remote I/O module can be monitored by the LEDs on the master station.	None	×	Connect the programming tool and check by the device monitor.



REPLACING MASTER MODULE/REMOTE MODULE

4.1 Replacing Master Module

4.1.1 List of alternative master module models

MELSECNET/MINI-S3 models to be discontinued		Alternative model for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
	AJ71PT32-S3	QJ61BT11N/LJ61BT11/	Examine replacement with CC-Link.	
Master module	AJ71T32-S3	L26CPU-(P)BT (Built-in CC-Link function)	For details, refer to the User's Manual for the respective	
Master module	A1SJ71PT32-S3		module.	
	A1SJ71T32-S3	(Built-III CC-EIIIK IUIICIOII)	module.	

4.1.2 List of alternative models for the A2CCPU

MELSECNET/MINI-S3 models to be discontinued		Alternative model for CC-Link		
Product name Model name		Model name	Remarks (restrictions)	
	A2CCPU			
	A2CCPUP21	QJ61BT11N/LJ61BT11/ L26CPU-(P)BT (Built-in CC-Link function)	The A2CCPU is a CPU that has a built-in master function of the MELSECNET/MINI-S3. Examine replacement of the built-in master function with	
	A2CCPUR21			
CPU module	A2CCPU-DC24			
CPO module	A2CCPUC24		CC-Link.	
	A2CCPUC24-		Separately select CPU modules and other functions	
	PRF		depending on the existing control contents.	
	A2CJCPU			

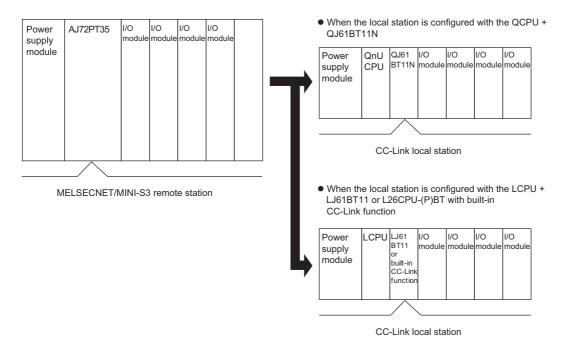
4.2 Replacing Remote Module

CC-Link does not have a remote module that uses a building block type I/O module. When replacing a remote module, consider replacing it with each CC-Link remote module or a local station.

4.2.1 List of alternative remote module models

MELSECNET/MINI-S3 models to be discontinued		Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
Remote module	AJ72PT35	None	Consider replacing it with each CC-Link remote module	
Remote module	AJ72T35	None	or a local station ^{*1} .	

*1: A program is required for a CC-Link local station as it cannot directly control I/O modules. For this reason, the following system changes are required.



5

REPLACING I/O MODULE

5.1 List of Alternative I/O Module Models

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative model for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
	AX11C	AJ65SBTB2N-16A	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Required Change in input resistance: Required
			5) Change in functions: Required (2-wire type for inputs)
Input module	AX21C	None	No alternative model • Please consider using the FA goods FA- TH16X200A31L. (The FA goods are manufactured by Mitsubishi Electric Engineering Co., Ltd.) The 24VDC input module for CC-Link (AJ65SBTCF1-32D) is required to use the FA goods.
	AX31C	AJ65SBTB1-32D	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12/24VAC, 12VDC not allowed) Change in rated input current: Not required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in input response time: Required (35/30ms→ 1.5ms) 5) Change in functions: Required (12/24VAC, 12VDC not allowed)

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative model for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
	AJ35PTF-32A ^{*1}	AJ65SBTB2N-16A	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required 5) Change in functions: Required (2-wire type for inputs)
Input module	AX41C	AJ65SBTB1-32D	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Not required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) 5) Change in functions: Required (12VDC not allowed)

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
	ontinued Model name	Model name	Romarks (rostrictions)
Product name	AX41C	Model name AJ65DBTB1-32D	Remarks (restrictions) 1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in input response time: Not required
Input module	AX81C	AJ65SBTB1-32D	 5) Change in functions: Required (12VDC not allowed) 1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Not required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) 5) Change in functions: Required (12VDC not allowed)
		AJ65DBTB1-32D	1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in input response time: Not required 5) Change in functions: Required (12VDC not allowed)

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
Input module	AJ35PTF-32D ^{*1}	AJ65SBTB1-32D	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) 5) Change in functions: Required (12VDC not allowed, no optics)
	AJ35TB1-16A	AJ65SBTB2N-16A	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Required Change in input resistance: Required 5) Change in functions: Required (2-wire type for inputs)
	AJ35TB2-8D	AJ65SBTB3-8D	 1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) 5) Change in functions: Required (2-wire type → 3-wire type)
	AJ35TB3-8D	AJ65SBTB3-8D	 1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) 5) Change in functions: Not required

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
Input module	AJ35TB1-16D	AJ65SBTB1-16D	 Change in external wiring: Required Change in number of modules: Not required Change in program Change in number of occupied I/O points: Required Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in functions: Not required

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
Input module	AJ35TB1-16D	AJ65BTB1-16D	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Not required 5) Change in functions: Not required
	AJ35TB2-16D	AJ65SBTB3-16D	 Change in external wiring: Required Change in number of modules: Not required Change in program Change in number of occupied I/O points: Required Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in functions: Required Change in external wiring: Required Change in number of modules: Not required Change in program Change in number of occupied I/O points: Required Change in specifications
		AJ65BTB2-16D	Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Not required 5) Change in functions: Not required 1) Change in external wiring: Required
	AJ35TC1-32D	AJ65SBTCF1-32D	 2) Change in number of modules: Not required 3) Change in program

	IINI-S3, A2C models iscontinued		Alternative models for CC-Link
Product name	Model name AY13C	Model name AJ65SBTB2N-16R	Remarks (restrictions) 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required
		AJ65DBTB1-32R	(2-wire type for outputs) 1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required
Output module	AY15CEU	AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required (Note that a connect life is half.) 5) Change in functions: Required (2-wire type for outputs)
		AJ65DBTB1-32R	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: : Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required
	AY23C	AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Required (2-wire type for outputs)
	AY51C	AJ65SBTB1-32T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Not required

	MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)	
	AY51C	AJ65DBTB1-32T1	1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Not required	
		AJ65SBTB1-16TE	 Change in external wiring: Required Change in number of modules (2 modules necessary) Change in program Change in number of occupied I/O points: Required Change in specifications Change in rated output voltage: Required (5VDC not allowed) Change in rated output current: Required (2A → 0.1A) Change in functions: Required (5VDC not allowed) 	
Output module	AY61CE	AJ65SBTB1-32TE1	 Change in external wiring: Required Change in number of modules: Not required Change in program Change in number of occupied I/O points: Not required Change in specifications Change in rated output voltage: Required (5VDC not allowed) Change in rated output current: Required (2A → 0.5A) Change in functions: Required (5VDC not allowed) 	
	AY81C	AJ65SBTB1-16TE	 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Required (0.5A → 0.1A) 5) Change in functions: Not required 	
		AJ65SBTB1-32TE1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required	
	AJ35PTF-24S ^{*1}	AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, no high-speed type fuse, no optics)	

	IINI-S3, A2C models	Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
Output module	AJ35PTF-24T ^{*1}	AJ65SBTB1-32T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (no optics)
	AJ35TB1A-8R	AJ65SBTB2N-8R	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (Change to 16 points per common (2-wire type))
	AJ35TB2-8R	AJ65SBTB2N-8R	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required
	AJ35TB1-16R	AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs)
	AJ35TB1A-8T	AJ65SBTB1-8T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Required 5) Change in functions: Required (Change to 16 points per common (2-wire type))
	AJ35TB2-8T	AJ65SBTB2-8T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (5VDC not allowed) Change in rated output current: Not required 5) Change in functions: Required (5VDC not allowed)

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative model for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
Output module	AJ35TB1-16T	AJ65SBTB1-16T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Required 5) Change in functions: Not required
		AJ65BTB1-16T	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required
	AJ35TB2-16T	AJ65SBTB2-16T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Required 5) Change in functions: Not required
	AJ35TC1-32T	AJ65SBTCF1-32T	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Not required 5) Change in functions: Not required 6) Others: External wiring connectors not attached
	AJ35PTF-24R ^{*1}	AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules: Required (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, no optics)

^{*1:} Replacement using renewal tool for A0J2 is possible (refer to Appendix 2).

MELSECNET/MINI-S3, A2C models to be discontinued			Alternative model for CC-Link
Product name	Model name	Model name	Remarks (restrictions)
			Change in external wiring: Required
			2) Change in number of modules (2 modules necessary)
			3) Change in program
			Change in number of occupied I/O points: Required
			4) Change in specifications
		AJ65SBTB2N-16A	Change in rated input voltage: Not required
	AX10Y10C	+	Change in rated input current: Required
		AJ65SBTB2N-16R	Change in ON voltage/ON current: Not required
			Change in OFF voltage/OFF current: Required
			Change in input resistance: Required
			Change in rated output voltage: Not required
			Change in rated output current: Not required
I/O module			5) Change in functions: Required (2-wire type for I/Os)
i/O module			Change in external wiring: Required
			2) Change in number of modules (2 modules necessary)
			3) Change in program
			Change in number of occupied I/O points: Required
			4) Change in specifications
		AJ65SBTB2N-16A	Change in rated input voltage: Not required
	AX10Y22C	+	Change in rated input current: Required
		AJ65SBTB2N-16S	Change in ON voltage/ON current: Not required
			Change in OFF voltage/OFF current: Required
			Change in input resistance: Required
			Change in rated output voltage: Not required
			Change in rated output current: Required
			5) Change in functions: Required (2-wire type for I/Os)

	MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)	
Product name	Model name	AJ65SBTB1-16D + AJ65SBTB2N-16R	Remarks (restrictions) 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required	
I/O module	AX40Y10C		Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, 12VDC not allowed) 1) Change in external wiring: Required 2) Change in number of modules: Required (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications	
		AJ65SBTB32-16DR	Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (12VDC not allowed)	
	AX40Y10C	AJ65DBTB1-32DR	1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required Change in functions: Required (12VDC not allowed)	

	MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)	
		AJ65SBTB1-32DT2	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Required (12VDC not allowed) Change in rated output current: Required	
I/O module	AX40Y50C	AJ65DBTB1-32DT1	5) Change in functions: Required (12VDC not allowed) 1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in input response time: Not required Change in rated output voltage: Not required Change in rated output current: Required	

	MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)	
		AJ65SBTB1-16D + AJ65SBTB2N-16R	 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required 	
I/O module	AX80Y10C	AJ65DBTB1-32DR	(2-wire type for outputs, 12VDC not allowed) 1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required Change in rated output current: Not required 5) Change in functions: Required (12VDC not allowed)	
	AX80Y14CEU	AJ65SBTB1-16D + AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in rated output voltage: Not required Change in rated output current: Not required (Note that a connect life is half.) 5) Change in functions: Required (2-wire type for outputs, 12VDC not allowed)	

	IINI-S3, A2C models iscontinued	Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
	AX80Y80C	AJ65SBTB1-16D + AJ65SBTB1-16TE	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Required Change in rated output current: Required	
			(0.5A → 0.1A) 5) Change in functions: Required (12VDC not allowed)	
I/O module	AX80Y80C	AJ65SBTB1-32DTE1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required	
	AJ35PTF-28AR* ¹	AJ65SBTB2N-16A + AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary: AJ65SBTB2N-16A × 1 module AJ65SBTB2N-16R × 1 module) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required Change in rated output current: Not required (Note that a contact life is half.) 5) Change in functions: Required (2-wire type for I/Os, no optics)	

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
I/O module	AJ35PTF-56AR ^{*1}	AJ65SBTB2N-16A + AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules: Required (4 modules necessary: AJ65SBTB2N-16A × 2 modules AJ65SBTB2N-16R × 2 modules) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Not required Change in rated output current: Not required (Note that a connect life is half.) 5) Change in functions: Required (2-wire type for I/Os, no optics)	

 $^{^{\}star}$ 1: Replacement using renewal tool for A0J2 is possible (refer to Appendix 2).

	IINI-S3, A2C models iscontinued	Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
	AJ35PTF-28AS ^{*1}	AJ65SBTB2N-16A + AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary: AJ65SBTB2N-16A × 1 module, AJ65SBTB2N-16S × 1 module) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for I/Os, no high-speed fuse, no optics)	
I/O module	AJ35PTF-56AS* ¹	AJ65SBTB2N-16A + AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules: Required (4 modules necessary: AJ65SBTB2N-16A × 2 modules	
	AJ35PTF-28DS ^{*1}	AJ65SBTB1-16D + AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required Change in functions: Required (2-wire type for outputs, no optics, 12VDC not allowed)	

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
I/O module	AJ35PTF-56DS ^{*1}	AJ65SBTB1-32D + AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules: Required (3 modules necessary: AJ65SBTB1-32D × 1 module AJ65SBTB2N-16S × 2 modules) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, no optics, 12VDC not allowed)	

MELSECNET/MINI-S3, A2C models		Alternative models for CC-Link		
	iscontinued		Alternative models for Co-Link	
Product name	Model name	Model name	Remarks (restrictions)	
	AJ35PTF-28DR ^{*1}	AJ65SBTB1-16D + AJ65SBTB2N-16R	 Change in external wiring: Required Change in number of modules: Required (2 modules necessary: AJ65SBTB1-16D × 1 module	
I/O module	AJ35PTF-56DR ^{*1}	AJ65SBTB1-32D + AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules: Required (3 modules necessary: AJ65SBTB1-32D × 1 module AJ65SBTB2N-16R × 2 modules) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, no optics, 12VDC not allowed)	

^{*1:} Replacement using renewal tool for A0J2 is possible (refer to Appendix 2).

	MINI-S3, A2C models liscontinued		Alternative models for CC-Link
Product name	Model name	Model name	Remarks (restrictions)
	AJ35PTF-28DT ^{*1}	AJ65SBTB1-32DT2	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Not required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Required (12VDC not allowed) Change in rated output current: Not required 5) Change in functions: Required (no optics, 12VDC not allowed)
I/O module	AJ35PTF-56DT ^{*1}	AJ65SBTB1-32D + AJ65SBTB1-32T1	 Change in external wiring: Required Change in number of modules (2 modules necessary) Change in program Change in number of occupied I/O points: Required Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required Change in functions: Required (no optics, 12VDC not allowed)
	AJ35TB1-16AR	AJ65SBTB2N-8A + AJ65SBTB2N-8R	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for I/Os)

^{*1:} Replacement using renewal tool for A0J2 is possible (refer to Appendix 2).

	MINI-S3, A2C models		Alternative models for CC-Link		
	iscontinued	Madalmana	Damanta (maginistiana)		
Product name	Model name AJ35TB1-16DR	Model name AJ65SBTB1-8D + AJ65SBTB2N-8R	Remarks (restrictions) 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required Change in functions: Required (2 wire type for outputs)		
I/O module	AJ35TB1-16DT	AJ65SBTB1-16DT2	(2-wire type for outputs) 1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Not required		
	AJ35TC1-32DT	AJ65SBTCF1-32DT	 Change in external wiring: Required Change in number of modules: Not required Change in program Change in number of occupied I/O points: Not required Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Required Change in rated output current: Not required Change in functions: Not required Others: External wiring connectors not attached 		

MELSECNET/MINI-S3, A2C models		Alternative models for CC-Link			
	iscontinued				
Product name	Model name	Model name	Remarks (restrictions)		
	AJ35PJ-8A				
	AJ35PJ-8D				
Stand-alone	AJ35PJ-8R				
I/O module	AJ35PJ-8S1	None			
(for optical data	AJ35PJ-8T1	None			
link)	AJ35PJ-8T2		No alternative model		
	AJ35PJ-8T3		Consider the following mounting methods.		
	AJ35PJ-8S2		Select a CC-Link I/O module and mount it inside a panel		
	AJ35TJ-8A		or prepare a dedicated mounting box.		
	AJ35TJ-8D		Replace the existing module with a CC-Link water-proof		
Stand-alone	AJ35TJ-8R		module.		
I/O module	AJ35TJ-8S1	Ness			
(for twisted pair	AJ35TJ-8T1	None			
data link)	AJ35TJ-8T2				
	AJ35TJ-8T3				
	AJ35TJ-8S2				
Separate refresh type remote I/O module	AJ35PTF-128DT	AJ65SBTCF1-32D + AJ65SBTCF1-32T	1) Change in external wiring: Required 2) Change in number of modules (4 modules necessary: AJ65SBTCF1-32D × 2 modules AJ65SBTCF1-32T × 2 modules) 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in input response time: Required (107ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (no optics) (64 points are divided into four groups and I/O refresh is performed to each of the four groups. → Batch refresh by units)		

5.2 I/O Module Specifications Comparison

5.2.1 Input module specifications comparison

(1) Specifications comparison between AX11C and AJ65SBTB2N-16A

			O: Comp		hange required, ×: Not compatible
Speci	ications	AX11C	AJ65SBTB2N-16A	Compatibility	Precautions for replacement
Number of in	out points	32 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16A modules.
Insulation method		Photocoupler	Photocoupler	0	
Rated input v	oltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input of	urrent	Approx. 6mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	0	
Operating vo	tage range	85 to 132VAC (50/60Hz±5%)	85 to 132VAC (50/60Hz± 3%, distortion rate 5% within)	0	
Maximum nu simultaneous		75% simultaneously ON (at 110VAC)	100% simultaneously ON (at 110VAC) 60% simultaneously ON (at 132VAC)	0	
Inrush curren	t	Max. 200mA, within 1ms (with 132VAC)	Max. 200mA, within 1ms (with 132VAC)	0	
ON voltage/C	N current	80V or more/5mA or more	80V or more/5mA or more	0	
OFF voltage/	OFF current	30V or less/1mA or less	30V or less/1.7mA or less	0	
Input impeda	nce	Approx. 18k Ω (60Hz), Approx. 21k Ω (50Hz)	Approx. 15k Ω (60Hz), Approx. 18k Ω (50Hz)	0	
Response	OFF→ON	15ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
time	ON→ OFF	30ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
Common terr		16 points/common	16 points/common (2-wire type)	0	
	cupied stations ccupied points)	4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
External con	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so		R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3 , RAP2-3SL, TGV2-3N	×	Change in wiring is required.
	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
I/O module power supply	Current	56mA (at 24V TYP.)	40mA or less (24VDC when all points are ON)	Δ	The current consumption increases by using two AJ65SBTB2N-16As. The current capacity needs to be reconsidered.
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.62kg	0.25kg	0	

(2) Specifications comparison between AX31C and AJ65SBTB1-32D

 $\bigcirc \colon \mathsf{Compatible}, \ \ \underline{\wedge} \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

Specifications		AX31C		AJ65SBTB1-32D Compatibility Precautions for replacement			
Number of in		32 points		32 points	0		
Insulation me		Photocoupler		Photocoupler	0		
Rated input v	voltage	12/24VDC	12/24VAC 50/60Hz	24VDC	Δ	12/24VAC, 12VDC cannot be used.*1	
Rated input of	current		VAC/DC),	Approx. 7mA	Δ	Rated input current is smaller.*2	
Operating vo	Operating voltage range		10.2 to 26.4VAC (50/60Hz±5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12/24VAC, 12VDC cannot be used.*1	
Maximum nu simultaneous			aneously ON 5.4VAC)	100% simultaneously ON	0		
ON voltage/0			2mA or more	14V or more/3.5mA or more	Δ	12/24VAC, 12VDC cannot be used.*1	
OFF voltage/	OFF current		or more A or less	6V or less/1.7mA or less	Δ	12/24VAC, 12VDC cannot be used.*1	
Input resistar impedance)	nce (Input	Approx	∢ 2.7k Ω	Approx. 3.3k Ω	Δ	Input resistance is increased.*2	
Response	OFF→ON	30ms or less (12/24VDC)	35ms or less (12/24VAC, 60Hz)	1.5ms or less (at 24VDC)	Δ	The receptors times differ	
time	ON→OFF	30ms or less (12/24VDC)	35ms or less (12/24VAC, 60Hz)	1.5ms or less (at 24VDC)	Δ	The response times differ.	
	Common terminal arrangement		s/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/ common, wiring with a different voltage per common is not possible.	
Number of or stations (num occupied poi	nber of	4 stations (4 stations × 8 points)		1 station (1 station × 32 points)	0		
Operation inc	-	ON indication (LED)		ON indication (LED)	0		
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included		Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.	
Applicable w	ire size	0.75 t	o 2mm ²	0.3 to 2mm ²	0		
Applicable so	Applicable solderless terminal		.5, R2-3.5 .5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3 , RAP2-3SL ,TGV2-3N	×	Change in wiring is required.	
I/O module	Voltage	15.6 to	31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.	
supply	Current	56mA (at 2	4VDC TYP.)	45mA or less (24VDC when all points are ON)	0		
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.	
Weight	Weight		62kg	0.25kg	0		

^{*1:} To use at 24VAC, convert to direct current externally before inputting.

^{*2:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB1-32D.

(3) Specifications comparison between AJ35PTF-32A and AJ65SBTB2N-16A

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Specifications		AJ35PTF-32A	AJ65SBTB2N-16A	Compat- ibility	Precautions for replacement
Number of input points		32 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16A modules.
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input	current	10mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	Δ	Rated input current is smaller.* 1
Maximum nu simultaneous points		100% simultaneously ON	100% simultaneously ON (at 110VAC) 60% simultaneously ON (at 132VAC)	Δ	Use within specification range.
Inrush curre	nt	Max. 300mA, within 0.3ms (132VAC)	Max. 200mA, within 1ms (132VAC)	0	
ON voltage/0	ON current	80V or more/6mA or more	80V or more/5mA or more	0	
OFF voltage current	/OFF	40V or less/4mA or less	30V or less/1.7mA or less	Δ	OFF current has been reduced.* 1
Input impeda	ance	Approx. 10k Ω (60Hz), Approx. 12k Ω (50Hz)	Approx. 15k Ω (60Hz), Approx. 18k Ω (50Hz)	Δ	Input impedance has increased.*1
Response	OFF → ON	15ms or less (6ms TYP.)	20ms or less (100VAC, 60Hz)	0	
time	ON → OFF	35ms or less (16ms TYP.)	20ms or less (100VAC, 60Hz)	0	
Common ter		16 points/common	16 points/common (2-wire type)	0	
Number of o stations (nur occupied poi	nber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External con method	nection	Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N,	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	110mA or less	40mA or less (24VDC when all points are ON)	0	-
External dim	ensions	254(H) × 132(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.75kg	0.25kg	0	

^{*1} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB2N-16A.

(4) Specifications comparison between AX41C and AJ65SBTB1-32D

Specifications		AX41C	O: Compatible, △: Partial change required, ×: Not compatible AJ65SBTB1-32D Compatibility Precautions for replacement			
Number of input points		32 points	32 points	0		
Insulation method		Photocoupler	Photocoupler	0		
Rated input v		12VDC/24VDC	24VDC	Δ	12VDC cannot be used.	
Rated input of		Approx. 3mA/Approx. 7mA	Approx. 7mA	0		
·		10.2 to 31.2VDC	19.2 to 26.4VDC	Ü		
Operating vo	tage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.	
Maximum nu	mber of	100% simultaneously ON (at	100% simultaneously ON	0		
simultaneous	input points	26.4VDC)	100% Simultaneously ON	0		
ON voltage/C	N current	8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.	
OFF voltage/	OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.	
Input resistar	ice	Approx. $3.3k \Omega$	Approx. 3.3k Ω	0		
		Positive common	Positive/negative common			
Input method		(sink type)	shared type	0		
		(Sink type)	(sink/source shared type)			
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0		
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0		
Common terr arrangement	ninal	16 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/ common, wiring with a different voltage per common is not possible.	
Number of o	cupied	4 stations	1 station			
stations (num		(4 stations × 8 points)	(1 station × 32 points)	0		
occupied poi	•			_		
Operation inc	lication	ON indication (LED)	ON indication (LED)	0		
External con	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.	
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0		
Applicable solderless terminal		R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3 , RAP2-3SL, TGV2-3N	×	Change in wiring is required.	
I/O module Voltage power supply Current		15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.	
		55mA (at 24VDC TYP.)	45mA or less (24VDC when all points are ON)	0		
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.	
Weight		0.6kg	0.25kg	0		

(5) Specifications comparison between AX41C and AJ65DBTB1-32D

Specif	ications	AX41C	AJ65DBTB1-32D	atible, <u>∧</u> : Partial cl	hange required, × : Not compatible Precautions for replacement
Number of in		32 points	32 points		Trecautions for replacement
		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	0	
Insulation me		Photocoupler	Photocoupler	0	10/70
Rated input v	oltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of	urrent	Approx. 3mA/Approx. 7mA	Approx. 5mA	Δ	Rated input current is smaller. *1
Operating vo	tage range	10.2 to 31.2VDC (ripple ratio within 5%)	20.4 to 31.2VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu	mber of	100% simultaneously ON	100%	0	
simultaneous	input points	(at 26.4VDC)	(at 26.4VDC)	0	
ON voltage/C	N current	8V or more/2mA or more	15V or more/3mA or more	Δ	12VDC cannot be used.
OFF voltage/	OFF current	4V or less/1mA or less	5V or less/1.5mA or less	Δ	12VDC cannot be used.
Input resistar	ce	Approx. 3.3k Ω	Approx. 4.7k Ω	Δ	Input resistance becomes higher.*1
Input method		Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0	
Common terr	ninal	16 points/common	16 points/common (2 points) (terminal block 1-wire type)	0	
Number of oc stations (num occupied poin	ber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	
Operation inc	ication	ON indication (LED)	ON indication (LED)	0	
External conr	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit parts included	50-point terminal block (M3.5 × 7 screws) Transmission circuit parts included	0	The number of applicable solderless terminals inserted is within two.
Applicable wi	re size	0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable so	lderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5	0	
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	55mA (at 24VDC TYP.)	45mA or less (24VDC, when all points are ON)	0	
External dime	ensions	$170(H) \times 64(W) \times 80(D) \text{ mm}$	$170(H) \times 64(W) \times 80(D) \text{ mm}$	0	
Weight		0.6kg	0.6kg	0	

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32D.

(6) Specifications comparison between AX81C and AJ65SBTB1-32D

Speci	ications	AX81C	AJ65SBTB1-32D	Compatibility	hange required, × : Not compatible Precautions for replacement
Number of in		32 points	32 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Insulation method Rated input voltage		12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of					
		10.2 to 31.2VDC			
Operating voltage range		(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu	mber of	100% simultaneously ON		_	
simultaneous	input points	(at 26.4VDC)	100% simultaneously ON	0	
ON voltage/0	N current	8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/	OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistar	ice	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
<u> </u>		Positive/negative common	Positive/negative common		
Input method		shared type	shared type	0	
		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common terrarrangement		16 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/ common, wiring with a different voltage per common is not possible.
Number of or stations (num occupied poi	ber of	4 stations (4 stations × 8 points)	1 station (1 station \times 32 points)	0	
Operation inc		ON indication (LED)	ON indication (LED)	0	
·	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	Iderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module power	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	55mA (at 24VDC TYP.)	45mA or less (24VDC when all points are ON)	0	
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.6kg	0.25kg	0	

(7) Specifications comparison between AX81C and AJ65DBTB1-32D

Specif	ications	AX81C	AJ65DBTB1-32D	Compatibility	Precautions for replacement
Number of in	put points	32 points	32 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of	urrent	Approx. 3mA/Approx. 7mA	Approx. 5mA	Δ	Rated input current is smaller. *1
Operating vo	Itage range	10.2 to 31.2VDC (ripple ratio within 5%)	20.4 to 31.2VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu	mber of	100% simultaneously ON	100%	0	
simultaneous	input points	(at 26.4VDC)	(at 26.4VDC)	0	
ON voltage/C	N current	8V or more/2mA or more	15V or more/3mA or more	Δ	12VDC cannot be used.
OFF voltage/	OFF current	4V or less/1mA or less	5V or less/1.5mA or less	Δ	12VDC cannot be used.
Innut register					Input resistance becomes
Input resistar	ice	Approx. 3.3k Ω	Approx. 4.7k Ω	Δ	higher. *1
Input method		Positive/negative common shared type (sink/source shared type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0	
Common terr		16 points/common	16 points/common (2 points) (terminal block 1-wire type)	0	
Number of oc stations (num occupied poin	ber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
External conn	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit parts included	50-point terminal block (M3.5 × 7 screws) Transmission circuit parts included	0	The number of applicable solderless terminals inserted is within two.
Applicable wi	re size	0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable so terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5	0	
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	55mA (at 24VDC TYP.)	45mA or less (24VDC, when all points are ON)	0	
External dime	ensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.6kg	0.6kg	0	

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32D.



(8) Specifications comparison between AJ35PTF-32D and AJ65SBTB1-32D

Specif	ications	AJ35PTF-32D	AJ65SBTB1-32D	Compatibility	hange required, × : Not compatible Precautions for replacement
Number of in		32 points	32 points	O	Tresdutions for replacement
Insulation me		Photocoupler	Photocoupler	0	
Rated input voltage		12VDC/24VDC	24VDC		12VDC cannot be used.
		Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12 V D G carmot be used.
Rated input current		10.2 to 31.2VDC	19.2 to 26.4VDC	U	
Operating vol	tage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nui		75% simultaneously ON	100% simultaneously ON	0	
		9.5V or more/2.6mA or more	14V or more/3.5mA or more		12VDC cannot be used.
ON voltage/O				Δ	
OFF voltage/		6.0V or less/1.0mA or less	6.0V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistan	ce	Approx. 3.4k Ω	Approx. 3.3k Ω	0	
Input method		Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (at 6ms TYP.)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
Common terr arrangement	ninal	16 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/common, wiring with a different voltage per common is not possible.
Number of oc	cupied stations	4 stations	1 station	_	
(number of o	ccupied points)	(4 stations × 8 points)	(1 station × 32 points)	0	
Operation ind	ication	ON indication (LED)	ON indication (LED)	0	
External conr	ection method	Transmission/module power supply parts: 8-point terminal block (M3 screw) I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	110mA	45mA or less (24VDC when all points are ON)	0	
External dime	ensions	254(H) × 132(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.7kg	0.25kg	0	

(9) Specifications comparison between AJ35TB1-16A and AJ65SBTB2N-16A

 $\bigcirc : \mathsf{Compatible}, \ \underline{\wedge} : \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \times : \mathsf{Not} \ \mathsf{compatible}$

Specif	ications	AJ35TB1-16A	AJ65SBTB2N-16A	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input voltage		100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input current		Approx. 6mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	0	
		85 to 132VAC	85 to 132VAC		
Operating vo	Itage range		$(50/60Hz \pm 3\%,$	0	
		(50/60Hz ± 5%)	distortion rate 5% within)		
			100% simultaneously ON		
Maximum nu		100% simultaneously ON	(at 110VAC)	Δ	Use within specification range.
simultaneous	input points	,	60% simultaneously ON	Δ	l coo mam speamean anger
			(at 132VAC)		
ON voltage/C		80V or more/5mA or more	80V or more/5mA or more	0	
OFF voltage/	OFF current	30V or less/1mA or less	30V or less/1.7mA or less	0	
Input impeda	nce	Approx. 18k Ω (60Hz),	Approx. 15k Ω (60Hz),	0	
		Approx. 21k Ω (50Hz)	Approx. 18k Ω (50Hz)		
Response	OFF→ON	15ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
time	ON→ OFF	30ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
Common terr	ninal	16 nainta/aamman	16 points/common	0	
arrangement		16 points/common	(2-wire type)	0	
					The number of occupied points
	cupied stations	tions 2 stations	1 station	×	increases. The assignment of
(number of o	ccupied points)	(2 stations × 8 points)	(1 station × 32 points)	^	the entire system needs to be
					reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
			Transmission/module power		
			supply parts:		
		34-point terminal block	7-point terminal block		
External coni	nection method	(M3 screw)	(M3 × 5.2 screws)	×	Change in wiring is required.
		Transmission circuit part included	I/O part: 34-point terminal block		
			(M3 × 5.2 screws)		
Applicable wi	ro sizo	0.75 to 2mm ²		0	
Applicable wi	16 3126	0.75 to 2mm ⁻	0.3 to 2mm ² RAV1.25-3	0	
Applicable so	lderless	R1.25-3, R2-3	(Conforming to JIS C 2805)		In some cases, the solderless
terminal		RAV1.25-3, RAV2-3	V2-MS3, RAP2-3SL, TGV2-3N	Δ	terminal must be changed.
		15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
I/O module	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
power	Current		40mA or less	0	
supply	Current	50mA (at 24VDC)	(24VDC when all points are ON)	0	
					The overall size differs.
External dime	ensions	$55(H) \times 166(W) \times 50(D) \text{ mm}$	54(H) × 179(W) × 40(D) mm	×	Pay attention to the mounting
					dimensions.
Weight		0.35kg	0.25kg	0	

(10) Specifications comparison between AJ35TB2-8D and AJ65SBTB3-8D

 \bigcirc : Compatible, $\, \underline{\wedge} \, :$ Partial change required, $\, \times :$ Not compatible

Specific	ations	AJ35TB2-8D	AJ65SBTB3-8D	Compat- ibility	Precautions for replacement
Number of in	put points	8 points	8 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	24VDC	24VDC	0	
Rated input of	urrent	Approx. 7mA	Approx. 7mA	0	
0		19.2 to 26.4VDC	19.2 to 26.4VDC		
Operating vol	itage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum nur simultaneous points		100% simultaneously ON	100% simultaneously ON	0	
ON voltage/C	N current	14V or more/3.5mA or more	14V or more/3.5mA or more	0	
OFF voltage/ current	OFF	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input resistar	nce	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
		Positive/negative common	Positive/negative common		
Input method		shared type	shared type	0	
		(sink/source shared type)	(sink/source shared type)		
Response	OFF → ON	10ms or less	1.5ms or less (at 24VDC)	0	
time	ON → OFF	10ms or less	1.5ms or less (at 24VDC)	0	
Common terr arrangement		8 points/common (2-wire type)	8 points/common (3-wire type)	0	
Number of occupied stations (number of occupied points)		1 station (1 station × 8 points)	1 station (1 station × 32 points)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
External conr method	nection	26-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N,	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	69mA (at 24VDC TYP.)	40mA or less (24VDC when all points are ON)	0	
External dime	ensions	55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.3kg	0.18kg	0	

(11) Specifications comparison between AJ35TB3-8D and AJ65SBTB3-8D

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Specif	ications	AJ35TB3-8D	AJ65SBTB3-8D	Compatibility	Precautions for replacement
Number of in	put points	8 points	8 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input voltage		24VDC	24VDC	0	
Rated input of	urrent	Approx. 7mA	Approx. 7mA	0	
Operating vo	tage range	19.2 to 26.4VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	0	
Maximum nu simultaneous		100% simultaneously ON	100% simultaneously ON	0	
ON voltage/C	N current	14V or more/3.5mA or more	14V or more/3.5mA or more	0	
OFF voltage/	OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input resistar	ice	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
Input method		Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less	1.5ms or less (at 24VDC)	0	
Common terr		8 points/common (3-wire type)	8 points/common (3-wire type)	0	
Number of occupied stations (number of occupied points)		1 station (1 station × 8 points)	1 station (1 station × 32 points)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
External con	nection method	26-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power	Current	69mA (at 24VDC)	40mA or less (24VDC when all points are ON)	0	
External dime	ensions	55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.3kg	0.18kg	0	

(12) Specifications comparison between AJ35TB1-16D and AJ65SBTB1-16D

_Spools	ications	AJ35TB1-16D	AJ65SBTB1-16D	atible, <u>∧</u> : Partial cl	hange required, × : Not compatible Precautions for replacement
					Precautions for replacement
Number of in	•	16 points	16 points	0	
Insulation me		Photocoupler	Photocoupler	0	
Rated input v	roltage	24VDC	24VDC	0	
Rated input of	urrent	Approx. 7mA	Approx. 7mA	0	
Operating vo	Itage range	19.2 to 26.4VDC	19.2 to 26.4VDC	0	
operating ve	ilago rango	(ripple ratio within 5%)	(ripple ratio within 5%)		
Maximum nu	mber of	70% simultaneously ON	100% simultaneously ON	0	
simultaneous	input points	(at 26.4VDC)	100 /c Gilliana incodelly Gill		
ON voltage/C	N current	14V or more/3.5mA or more	14V or more/3.5mA or more	0	
OFF voltage/	OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input resistar	nce	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
		Positive/negative common	Positive/negative common		
Input method		shared type	shared type	0	
		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less	1.5ms or less (at 24VDC)	0	
time	ON→ OFF	10ms or less	1.5ms or less (at 24VDC)	0	
Common terr		16 points/common			
arrangement		(2 terminals)	16 points/common	0	
arrangomone		(2 torring)			The number of occupied points
Number of oc	cupied stations	2 stations	1 station	×	increases. The assignment of
	ccupied points)	(2 stations × 8 points)	(1 station × 32 points)		the entire system needs to be
(ocupiou poiito)	(2 stations × o points)	(1 station × 52 points)		reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
			Transmission/module power		
			supply parts:		
		26-point terminal block	7-point terminal block		
External con	nection method	(M3 screw)	(M3 × 5.2 screws)		Change in wiring is required.
External com	lection method	Transmission circuit part included	I/O part:	×	Change in wining is required.
		Transmission circuit part included	18-point terminal block		
			·		
A P I. I			(M3 × 5.2 screws)		
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so	lderless	R1.25-3, R2-3	RAV1.25-3		In some cases, the solderless
terminal		RAV1.25-3, RAV2-3	(Conforming to JIS C 2805)	Δ	terminal must be changed.
	1		V2-MS3, RAP2-3SL, TGV2-3N		
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC	Δ	The operating voltage range
power		(peak voltage 31.2VDC)	(ripple ratio within 5%)		differs.
supply	Current	45mA or less (at 24VDC)	35mA or less	0	
'''		` -/	(24VDC when all points are ON)		
					The overall size differs.
External dime	ensions	55(H) × 135(W) × 50(D) mm	$54(H) \times 118(W) \times 40(D) \text{ mm}$	×	Pay attention to the mounting
					dimensions.
Weight		0.3kg	0.18kg	0	

(13) Specifications comparison between AJ35TB1-16D and AJ65BTB1-16D

Specif	ications	AJ35TB1-16D	AJ65BTB1-16D	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated input voltage		24VDC	24VDC	0	
Rated input current		Approx. 7mA	Approx. 7mA	0	
0		19.2 to 26.4VDC	19.2 to 28.8VDC		The operating voltage range
Operating vo	itage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	differs.
Maximum nu	mber of	70% simultaneously ON	100%	0	
simultaneous	input points	(at 26.4VDC)		0	
ON voltage/C	N current	14V or more/3.5mA or more	14V or more/3.5mA or more	0	
OFF voltage/	OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input resistar	ice	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
		Positive/negative common	Positive/negative common		
Input method		shared type	shared type	0	
		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	10ms or less	10ms or less	0	
Common terr	ninal	16 points/common	16 points/common	0	
arrangement		(2 terminals)	(terminal block 1-wire type)	0	
Number of oc	cunied				The number of occupied points
stations (num	•	2 stations	2 stations 1 station 2 stations × 8 points) (1 station × 32 points)	×	increases. The assignment of
occupied poir		(2 stations × 8 points)		^	the entire system needs to be
- Coodpied poil	110)				reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
		26 point terminal block (M3	27 point terminal block (M3.5		The existing terminal block of
External conr	nection method	screws) Transmission circuit part	screws) Transmission circuit and module power supply terminal	Δ	the AJ35TB1-16D can be used
External com	iccion metrod	included			by using wiring conversion
		50400	included		adapter *1.
Applicable wi	re size	0.75 to 2mm ²	0.75 to 2mm ²	0	
			RAV1.25-3.5		The existing terminal block of
Applicable so	lderless	R1.25-3, R2-3	(Conforming to JIS C 2805)		the AJ35TB1-16D can be used
terminal		RAV1.25-3, RAV2-3	RAV2-3.5	Δ	by using wiring conversion
			10AV2-3.3		adapter *1.
	Voltage	15.6 to 31.2VDC	15.6 to 28.8VDC		The operating voltage range
I/O module	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
power					The current consumption
supply	Current	45mA or less	60mA or less	Δ	increases. The current
	Curront	(at 24VDC)	(at 24VDC TYP.)	Δ	capacity needs to be
					reconsidered.
					The overall size differs.
External dime	ensions	55(H) × 135(W) × 50(D) mm	65(H) × 151.9(W) × 46(D) mm *2	×	Pay attention to the mounting
13/ 1 1/		0.01	2.20		dimensions.
Weight		0.3kg	0.32kg	×	

^{*1:} The A6ADP-1MC16D, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter can be used. For the mounting image, refer to *2 of Section 1.2.

^{*2:} When using the A6ADP-1MC16D, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter, the external dimensions are increased by 5.1mm (height) and 28.5mm (depth).

(14) Specifications comparison between AJ35TB2-16D and AJ65SBTB3-16D

Specif	fications	AJ35TB2-16D	AJ65SBTB3-16D	Compatibility	nange required, ×: Not compatible Precautions for replacement
Number of in		16 points	16 points	0	
Insulation me	· · · · · · · · · · · · · · · · · · ·	Photocoupler	Photocoupler	0	
		24VDC	24VDC	0	
Rated input voltage Rated input current		Approx. 7mA	Approx. 7mA	0	
Trated Input C	Junent	19.2 to 26.4VDC	19.2 to 26.4VDC	U	
Operating vo	Itage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum nu		100% simultaneously ON (at 26.4VDC)	100% simultaneously ON	0	
ON voltage/0		14V or more/3.5mA or more	14V or more/3.5mA or more	0	
OFF voltage/		6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input resistar	nce	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
Input method	ı	Positive/negative common shared type (sink/source shared type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less	1.5ms or less (at 24VDC)	0	
Common terr		16 points/common (terminal block 2-wire type)	16 points/common (3-wire type)	0	
Number of occupied stations (number of occupied points)		2 stations (2 stations × 8 points)	1 station (1 station × 32 points)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	dication	ON indication (LED)	ON indication (LED)	0	
External con	nection method	34-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	ire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power	Current	45mA or less (at 24VDC)	45mA or less (24VDC when all points are ON)	0	
External dime	ensions	55(H) × 166(W) × 50(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.35kg	0.25kg	0	

(15) Specifications comparison between AJ35TB2-16D and AJ65BTB2-16D

Speci	fications	AJ35TB2-16D	AJ65BTB2-16D	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input voltage		24VDC	24VDC	0	
Rated input of	current	Approx. 7mA	Approx. 7mA	0	
		19.2 to 26.4VDC	19.2 to 28.8VDC	-	The operating voltage range
Operating vo	Itage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	differs.
Maximum nu simultaneous		100% simultaneously ON (at 26.4VDC)	100%	0	
ON voltage/C		14V or more/3.5mA or more	14V or more/3.5mA or more	0	
OFF voltage/		6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input resistar		Approx. 3.3k Ω	Approx. 3.3k Ω	0	
input reciotar	100	Positive/negative common	Positive/negative common	<u> </u>	
Input method	ı	shared type	shared type	0	
mpat motiloc	•	(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less	10ms or less	0	
time		10ms or less	10ms or less	_	
	ON→OFF			0	
Common teri		16 points/common	16 points/common	0	
arrangement		(terminal block 2-wire type)	(terminal block 2-wire type)		The number of occupied points
Number of o	ccupied	2 stations	1 station		increases. The assignment of
stations (num	nber of		(1 station × 32 points)	×	the entire system needs to be
occupied poi	nts)				reconsidered.
Operation inc	dication	ON indication (LED)	ON indication (LED)	0	Tooling Tour
- Сроганот по		011	37 point terminal block (M3.5		The existing terminal block of
		34 point terminal block (M3	screws) Transmission circuit and		the AJ35TB2-16D can be used
External con	nection method	screws) Transmission circuit part	module power supply terminal	Δ	by using wiring conversion
		included	included		adapter *1.
Applicable w	ire size	0.75 to 2mm ²	0.75 to 2mm ²	0	dapter .
Applicable W	110 3120	0.73 to 211111	0.75 to 211111	0	The existing terminal block of
Applicable so	oldorloog	R1.25-3, R2-3	RAV1.25-3.5		the AJ35TB2-16D can be used
terminal	Jueness	RAV1.25-3, RAV2-3	(Conforming to JIS C 2805)	Δ	by using wiring conversion
terriiriai		100 1.20-0, 100 2-0	RAV2-3.5		adapter *1.
		15.6 to 31.2VDC	15.6 to 28.8VDC		The operating voltage range
	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
I/O module		(pour voilage on Evel)	(ripple rate within 670)		The current consumption
power		45mA or less	60mA or less		increases. The current
supply	Current	(at 24VDC)	(at 24VDC TYP.)	Δ	capacity needs to be
		,	,		reconsidered.
					The overall size differs.
External dime	ensions	55(H) × 166(W) × 50(D) mm	65(H) × 197.4(W) × 46(D) mm *2	×	Pay attention to the mounting
					dimensions.
Weight		0.35kg	0.4kg	×	
				1	·

^{*1:} The A6ADP-2MC16D, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter can be used. For the mounting image, refer to *2 of Section 1.2.

^{*2:} When using the A6ADP-2MC16D, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter, the external dimensions are increased by 5.1mm (height) and 28.5mm (depth).

(16) Specifications comparison between AJ35TC1-32D and AJ65SBTCF1-32D

Specif	ications	AJ35TC1-32D	AJ65SBTCF1-32D	Compatibility	hange required, × : Not compatible Precautions for replacement
Number of in		32 points	32 points	0	
Insulation me	· · ·	Photocoupler	Photocoupler	0	
Rated input voltage		24VDC	24VDC	0	
Rated input voltage Rated input current		Approx. 5mA	Approx. 5mA	0	
		19.2 to 26.4VDC	19.2 to 26.4VDC	Ŭ	
Operating vo	Itage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum nu	mber of	85% simultaneously ON		_	
simultaneous	input points	(at 26.4VDC)	100% simultaneously ON	0	
ON voltage/C	N current	17.5V or more/3.5mA or more	14V or more/3.5mA or more	0	
OFF voltage/	OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input resistar	ice	Approx. 4.7k Ω	Approx. 4.7k Ω	0	
		Positive/negative common	Positive/negative common		
Input method		shared type	shared type	0	
·		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less	1.5ms or less (at 24VDC)	0	
Common terr		Toms or less	1.5m3 of less (at 24VDC)	0	
arrangement	IIIIIai	32 points/common	32 points/common	0	
Number of oc	cunied				
stations (num	•	4 stations	1 station	0	
occupied poi		(4 stations × 8 points)	(1 station × 32 points)	O	
Operation inc	· ·	ON indication (LED)	ON indication (LED)	0	
			Transmission/module power	Ŭ	
		Transmission circuit: 8-point	supply parts:	×	
		terminal block	7-point terminal block		Change in wiring is required.
External con	nection method	(M3 screws)	(M3 × 5.2 screws)		
					The existing connector can be
		I/O part: 40-pin connector	I/O part: 40-pin connector	0	attached without change.
			Terminal block: 0.3 to 2mm ²		Ţ
			40-pin connector: 0.3mm ² or less		
			(for A6CON1, A6CON4)		
		Terminal block: 0.75 to 2mm ²			
Applicable wi	re size		0.2 to 0.08mm ²	0	
		40-pin connector: 0.3mm ²	(for A6CON2)		
			Twisted cable of 0.08mm ² ,		
			φ 0.25mm		
			(for A6CON3)		
Accessory		1 external wiring connector	None	×	40-pin connectors for external wiring are sold separately.
			RAV1.25-3		
Applicable so	olderless	R1.25-3, R2-3	(Conforming to JIS C 2805)	Δ	In some cases, the solderless
terminal		RAV1.25-3, RAV2-3	V2-MS3, RAP2-3SL, TGV2-3N	_	terminal must be changed.
I/O me dula	\/olto==	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
I/O module	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
power	Current	EEm \ (at 24\/DC\	45mA or less	_	
supply	Guireill	55mA (at 24VDC)	(24VDC when all points are ON)	0	
					The overall size differs.
External dime	ensions	$55(H) \times 166(W) \times 50(D) \text{ mm}$	$54(H) \times 118(W) \times 40(D) \text{ mm}$	×	Pay attention to the mounting
					dimensions.
Weight		0.25kg	0.15kg	0	

5.2.2 Output module specifications comparisons

(1) Specifications comparison between AY13C and AJ65SBTB2N-16R

○: Compatible, △: Partial change required, ×: Not compatible **Specifications** AY13C AJ65SBTB2N-16R Compatibility Precautions for replacement Number of output points 32 points 16 points points are used, use two × AJ65SBTB2N-16R modules. Although the insulation methods differ, the Insulation method Photocoupler Relay isolation Δ performance of the insulation is the same 24VDC 2A (resistance load)/ 24VDC 2A (resistance load)/point point Rated load voltage/current 240VAC 2A (COS ϕ =1)/point 0 240VAC 2A (COS ϕ =1)/point 8A/common 4A/common (2A/1 terminal) Minimum switching load 5VDC 1mA 5VDC 1mA 0 Maximum switching voltage 250VAC, 110VDC 264VAC, 125VDC 0 10ms or less 10ms or less Response OFF→ ON 0 time 12ms or less 12ms or less 0 ON→ OFF Mechanical life 20 million times or more 20 million times or more 0 Rated switching voltage/current Rated switching voltage/current load load 100,000 times or more 100,000 times or more 200VAC 1.5A, 240VAC 1A 200VAC 1.5A, 240VAC 1A $(COS \phi = 0.7) 100,000 \text{ times or}$ (COS ϕ =0.7) 100,000 times or more Electrical life more 0 200VAC 1A, 240VAC 0.5A 200VAC 1A, 240VAC 0.5A $(COS \phi = 0.35) 100,000 times$ $(COS \phi = 0.35) 100.000 \text{ times or}$ or more more 24VDC 1A, 100VDC 0.1A 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or (L/R=7 ms) 100,000 times or more more Maximum switching 3,600 times/hr 3,600 times/hr 0 frequency External 24VDC ± 10% Voltage None power Ripple voltage 4Vp-p or less supply 184mA (24VDC, all points ON) Current None _ As common terminal arrangement changes from 8 Common terminal points/common to 16 points/ 8 points/common 16 points/common (2-wire type) Δ arrangement common, wiring with a different voltage per common is not possible. The number of occupied Number of occupied points increases. The 4 stations 1 station stations (number of assignment of the entire × (1 station × 32 points × 2 modules) (4 stations × 8 points) occupied points) system needs to be reconsidered. ON indication (LED) Operation indication ON indication (LED) 0 Transmission/module power supply parts: 50-point terminal block 7-point terminal block External connection $(M3.5 \times 7 \text{ screws})$ (M3 × 5.2 screws) Change in wiring is required. × method Transmission circuit part I/O part: included 34-point terminal block (M3 × 5.2 screws) Applicable wire size 0.75 to 2mm² 0.3 to 2mm² 0 RAV1.25-3 Applicable solderless R1.25-3.5, R2-3.5 (Conforming to JIS C 2805) Change in wiring is required. × terminal RAV1.25-3.5, RAV2-3.5

V2-MS3, RAP2-3SL, TGV2-3N

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Specifications		AY13C	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
I/O module	voltage	13.0 to 31.2000	(ripple ratio within 5%)	Δ	differs.
					The current consumption
power supply	00 A (-+ 0.4) (D0 T)(D)	120mA or less		increases. the current	
supply	Current	90mA (at 24VDC TYP.)	(24VDC when all points are ON)	Δ	capacity needs to be
					reconsidered.
					The overall size differs.
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	Pay attention to the mounting
					dimensions.
Weight		0.7kg	0.35kg	0	

(2) Specifications comparison between AY13C and AJ65DBTB1-32R

Snoci	fications	AY13C	O: Compa AJ65DBTB1-32R	tible, <u>∧</u> : Partial cha Compatibility	ange required, × : Not compatible Precautions for replacement
		32 points	32 points		Frecautions for replacement
Number of output points Insulation method		Photocoupler	Photocoupler	0	
insulation method		24VDC 2A (resistance load)/	Filotocoupiei	U	
		point	24VDC 2A (resistance load)/point		
Rated load v	oltage/current	240VAC 2A (COS φ =1)/point	240VAC 2A (COS ϕ =1)/point	0	
		4A/common (2A/1 terminal)	4A/common (2A/1 terminal)		
Minimum sw	ritching load	5VDC 1mA	5VDC 1mA	0	
	vitching voltage	250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ ON	10ms or less	10ms or less	0	
time	ON→ OFF	12ms or less	12ms or less	0	
Mechanical I		20 million times or more	20 million times or more	0	
Weditallical	ille	Rated switching voltage/current	20 million times of more	U	
		load	Rated switching voltage/current		
		100,000 times or more	load		
		200VAC 1.5A, 240VAC 1A	100,000 times or more		
		(COS ϕ =0.7) 100,000 times or	200VAC 1.5A, 240VAC 1A		
		more	(COS ϕ =0.7) 100,000 times or		
Electrical life	•	200VAC 1A, 240VAC 0.5A	more	0	
		$(\cos \phi = 0.35) \ 100,000 \ \text{times}$	200VAC 1A, 240VAC 0.5A		
		$(COS \psi = 0.35)$ 100,000 times or more	(COS $\phi=0.35$) 100,000 times or		
		24VDC 1A, 100VDC 0.1A	more		
		(L/R=7 ms) 100,000 times or	24VDC 1A, 100VDC 0.1A		
		more	(L/R=7 ms) 100,000 times or more		
Maximum sv	vitching	0.000 (//	0.000 11	_	
frequency		3,600 times/hr	3,600 times/hr	0	
External	Voltago	24VDC± 10%	24VDC ± 10%	0	
External power	Voltage	Ripple voltage 4Vp-p or less	Ripple ratio 4Vp-p or less	0	
supply	Current	194mA (24V/DC all points ON)	180mA or less (24VDC, when all	0	
очры	Current	184mA (24VDC, all points ON)	points are ON)	0	
Common ter	minal	8 points/common	8 points/common (terminal block 1-		
arrangemen		о решилостинен	wire type)	Δ	
Number of o	•	4 stations	1 station		
stations (nur		(4 stations × 8 points)	(1 station × 32 points)	0	
occupied po	,			_	
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
Futar 1		50-point terminal block	50-point terminal block		The number of applicable
External con	inection	(M3.5 × 7 screws)	(M3.5 × 7 screws)	0	solderless terminals inserted
method		Transmission circuit part	Transmission circuit part included		is within two.
Applicable wire size		included	2.754.22		
Applicable wire size		0.75 to 2mm ²	0.75 to 2mm ² RAV1.25-3.5	0	
Applicable solderless		R1.25-3.5, R2-3.5	(Conforming to JIS C 2805)	0	
terminal		RAV1.25-3.5, RAV2-3.5	RAV2-3.5		
			20.4 to 26.4VDC		The operating voltage range
I/O module	Voltage	15.6 to 31.2VDC	(ripple ratio within 5%)	Δ	differs.
power			80mA or less		
supply	Current	90mA (at 24VDC TYP.)	(24VDC when all points are ON)	0	
External dim	ensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.7kg	0.7kg	0	

(3) Specifications comparison between AY15CEU and AJ65SBTB2N-16R

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

0	:t:	AV45	OFIL	A ICEODT			nange required, ×: Not compatible
Specif	ications	AY150	CEU	AJ65SB1	B2N-16R	Compatibility	Precautions for replacement
Number of ou	tput points	24 pc	ints	16 p	oints	×	When seventeen or more points are used, use two AJ65SBTB2N-16R modules.
Insulation me	thod	Photoco	oupler	Relay is	solation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
		24VD0	C 2A	24VD	OC 2A		
		(resistance	load)/point	(resistance	load)/point		
Rated load vo	oltage/current	240VAC 2A (CC 4A/con			OS ϕ =1)/point	0	
Minimum swi	tching load	5VDC	10mA	5VDC	C 1mA	0	
Maximum sw	itching voltage	264VAC 1	125VDC	264VAC,	125VDC	0	
Response	OFF→ON	10ms o	r less	10ms	or less	0	
time	ON→OFF	12ms o	r less	12ms	or less	0	
Mechanical li		20 million times or more 20 million times or more		0			
					voltage/current	Ŭ	
Electrical life		Rated switching loa 200,000 time 200VAC 2A, 2 (COS φ =0.7) 20 more 200VAC 1.1A, (COS φ =0.35) 2 more 24VDC 1.1A, 1 (L/R=7ms) 200,000	d es or more 40VAC 1.8A 00,000 times or re 240VAC 0.9A 00,000 times or re 100VDC 0.1A	$100,000 ext{ tim}$ $200 ext{VAC } 1.5A$ $(ext{COS } \phi = 0.7) ext{ 1}$ $000 ext{VAC } 1A$, $000 ext{COS } \phi = 0.35$ $000 ext{ or n}$ $000 ext{VAC } 1A$, $000 ext{L} 1A$, $0000 ext{L} 1A$, $00000 ext{L} 1A$, $000000000000000000000000000000000000$	ad nes or more A, 240VAC 1A 00,000 times or ore 240VAC 0.5A D) 100,000 times nore 100VDC 0.1A 0,000 times or ore	Δ	Reduce the exchange intervals of the modules as Mechanical/Electrical Life is cut to about half.
Maximum sw frequency	itching	3,600 tir	mes/hr	3,600 t	imes/hr	0	
External power	Voltage	24VDC: Ripple voltage		No	one	-	
supply	Current	230mA (24VDC	* *	No	ne	_	
Common terr		8 points/c 4 points/c	common	•	/common e type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.
Dielectric with	Dielectric withstand voltage		2,830VAC rms/3 cycle (elevation 2,000m)	Between AC external batch and ground	2,830VAC rms/3 cycle (elevation 2,000m)	0	
		Relay drive power supply- internal 5V circuit	500VDC 1 minute	Between DC external batch and ground	500VDC 1 minute	0	
Insulation resistance		10M Ω or more wi resistanc		ground 500\ insulation res 10M Ω Between DC ex ground 500\ insulation res	ternal batch and /DC with the istance tester or more ternal batch and /DC with the istance tester or more	0	

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Speci	fications	AY15CEU	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
		50-point terminal block	Transmission/module power supply parts: 7-point terminal block		
External con	nection method	(M3.5 × 7 screws)	(M3 × 5.2 screws) I/O part:	×	Change in wiring is required.
		Transmission circuit part included	34-point terminal block		
			(M3 × 5.2 screws)		
Applicable w	ire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so	olderless	RAV1.25-3.5,RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	94mA (at 24VDC TYP.)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases, the current capacity needs to be reconsidered.
External dim	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight	_	0.75kg	0.35kg	0	

(4) Specifications comparison between AY15CEU and AJ65DBTB1-32R

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Specif	ications	ΔΥ15	CEU	AJ65DBTB1-32R	Compatibility	Precautions for replacement		
Number of output points			oints	32 points	O	r recautions for replacement		
Insulation method		·	coupler	Photocoupler	0			
			sistance load)/	·	Ü			
5		ро	int	24VDC 2A (resistance load)/point				
Rated load v	oltage/current	240VAC 2A (C	OS ϕ =1)/point	240VAC 2A (COS φ =1)/point	0			
		4A/co	mmon	4A/common (2A/1 terminal)				
Minimum sw	itching load	5VDC	10mA	5VDC 1mA	0			
Maximum sw	ritching voltage	264VAC,	110VDC	264VAC, 125VDC	0			
Response	OFF→ ON	10ms	or less	10ms or less	0			
time	ON→OFF	12ms	or less	12ms or less	0			
Mechanical I	ife	20 million tir	nes or more	20 million times or more	0			
		Rated switching	voltage/current					
		lo	ad	Rated switching voltage/current load				
		200,000 tim	nes or more	100,000 times or more				
		200VAC 1.5A	, 240VAC 1A	200VAC 1.5A, 240VAC 1A				
		(COS ϕ =0.7) 2	00,000 times or	(COS ϕ =0.7) 100,000 times or		The service life is reduced to		
Electrical life		mo	ore	more	_	almost half. Shorten the		
Liectifical file		200VAC 1A,	240VAC 0.5A	200VAC 1A, 240VAC 0.5A	Δ	exchange intervals of the		
		$(\cos \phi = 0.35)$) 200,000 times	(COS $\phi=$ 0.35) 100,000 times or		module.		
		or n	nore	more				
			00VDC 0.1A	24VDC 1A, 100VDC 0.1A				
		` ′	0,000 times or	(L/R=7 ms) 100,000 times or more				
		mo	ore					
Maximum sw	ritching	3,600 t	imes/hr	3,600 times/hr	0			
frequency		0.41/0.0	. 100/	0.00/DQ + 400/				
External	Voltage		± 10%	24VDC ± 10%	0			
power		Rippie voitage	4Vp-p or less	Ripple ratio 4Vp-p or less 180mA or less				
supply	supply Current		c, all points ON)	(24VDC, when all points are ON)	0			
Common ter	Common terminal		common	8 points/common (terminal block 1-				
arrangement		4 points/		wire type)	0			
		AC external						
		batch - Relay	2,830VAC					
		drive power	rms/e cycle	Between AC external terminal batch				
		supply,	(elevation	and ground 1500VAC 1 minute Between DC external terminal batch	Δ			
Dielectric wit	hstand voltage	internal 5V	2000m)					
	Ū	circuit Relay drive						
			E00\/DC	and ground				
		power supply - internal 5V	500VDC 1 minute	500VAC 1 minute	0			
			1 minute					
			1	Between AC external terminal batch				
				and ground				
				500VDC with the insulation				
				resistance tester				
Inculation ro	landation maintage		ore with the	10M Ω or more				
Insulation resistance		insulation res	istance tester	Between DC external terminal batch	0			
				and ground				
				500VDC with the insulation				
				resistance tester				
				10M Ω or more				
Number of o	•	4 sta	tions	1 station	_			
stations (nun		(4 stations	× 8 points)	(1 station × 32 points)	0			
Operation in		ON indica	tion (LED)	ON indication (LED)				
Operation in	aloation		minal block	i i	0			
External con	nection	•	7 screws)	50-point terminal block				
method		*	n circuit part	(M3.5 × 7 screws)	×	Change in wiring is required.		
		inclu	•	Transmission circuit part included				
						•		

 $\bigcirc \colon \mathsf{Compatible}, \ \triangle \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

Specif	ications	AY15CEU	AJ65DBTB1-32R	Compatibility	Precautions for replacement
Applicable w	ire size	0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable solderless terminal		RAV1.25-3.5, RAV2-3.5	RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5	0	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	94mA (at 24VDC TYP.)	80mA or less (24VDC when all points are ON)	0	
External dim	ensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.75kg	0.7kg	0	

(5) Specifications comparison between AY23C and AJ65SBTB2N-16S

-Spacif	ications	AY23C	O: Comp AJ65SBTB2N-16S		hange required, ×: Not compatible
Specif	ications	Arzsc	AJ05561BZN-105	Compatibility	Precautions for replacement When seventeen or more
Number of ou	itput points	32 points	16 points	×	points are used, use two AJ65SBTB2N-16S modules.
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated load vo	oltage	100-240VAC, 40 to 70Hz	100-240VAC, 50/60Hz±5%	0	
Maximum loa	d voltage	264VAC	264VAC	0	
Maximum loa	d current	0.3A/point 60% simultaneously ON	0.6A/point, 4.8A/common	0	
Minimum load	d voltage/	18VAC 10mA, 100VAC 10mA, 240VAC 10mA	50VAC 100mA, 100VAC 10mA, 240VAC 10mA	0	
Maximum inr	ush current	20A 10ms or less	25A 10ms or less	0	
Leakage curr		Approx. 1.5mA (120VAC, 60Hz) Approx. 3.0mA (240VAC, 60Hz) 1.5V or less (100 to 300mA)	1.5mA (100VAC, 60Hz) 3.0mA (200VAC, 60Hz)	0	
Maximum vol	lage drop at	1.8V or less (50 to 100mA) 2.5V or less (10 to 50mA)	1.5V or less (at 0.6A)	0	
Response	OFF→ON	1ms or less	1ms or less	0	
time	ON→ OFF	0.5Hz+1ms or less	1/2 cycle + 1ms or less	0	
Surge suppre	essor	CR absorber (0.01 μ F+68 Ω)	CR absorber (0.01 μ F+47 Ω)	0	
Common terr arrangement	ninal	8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.
	cupied stations	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	×	The number of points assigned per module is not changed.
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
External conr	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	lderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module power	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	180mA (at 24VDC TYP.)	85mA or less (24VDC when all points are ON)	0	
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.75kg	0.35kg	0	
		•		•	•

(6) Specifications comparison between AY51C and AJ65SBTB1-32T1

Specifi	cations	AY51C	AJ65SBTB1-32T1	Compatibility	hange required, × : Not compatible Precautions for replacement
Number of out		32 points	32 points	•	Precautions for repracement
		Photocoupler	Photocoupler	0	
Insulation method Rated load voltage		12/24VDC	12/24VDC	0	
Rated load voi	lage	12/24 VDC	10.2 to 26.4VDC	0	
Operating load	I voltage range	10.2 to 31.2VDC	(ripple ratio within 5%)	0	
Maximum load	current	0.3A/point 75% simultaneously ON (7.2A/1 common (2A/1 terminal)	0.5A/point, 4.8A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum inru	sh current	1.2A 10ms or less	1.0A 10ms or less	Δ	The inrush current value differs. Pay attention to the selection of the load used.
Leakage curre	nt at OFF	0.1mA or less	0.1mA or less	0	
Maximum volta	age drop at	0.9VDC or less (TYP.) 0.3A 1.5VDC or less (MAX.) 0.3A	0.3VDC or less (TYP.) 0.5A 0.6VDC or less (MAX.) 0.5A	0	
Output method	<u> </u>	sink type	sink type	0	
	OFF→ON	2ms or less	0.5ms or less	0	
Response time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
External power	Voltage	10.2 to 31.2VDC	10.2 to 26.4VDC (ripple ratio within 5%)	0	
supply	Current	64mA (24VDC)	50mA or less (24VDC)	0	
Surge suppres		Zener diode	Zener diode	0	
Common term arrangement		32 points/common	32 points/common	0	
Number of occ	•	4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)	0	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation indi	cation	ON indication (LED)	ON indication (LED)	0	
External conne	ection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wire size		0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable sole terminal	derless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	93mA (at 24VDC TYP.)	65mA or less (24VDC when all points are ON)	0	
External dimer	nsions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.7kg	0.25kg	0	

(7) Specifications comparison between AY51C and AJ65DBTB1-32T1

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Specifi	cations	AY51C	AJ65DBTB1-32T1	Compatibility	ange required, × : Not compatible Precautions for replacement
Number of out	put points	32 points	32 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated load vol	Itage	12/24VDC	12/24VDC	0	
	d voltage range	10.2 to 31.2VDC	10.2 to 31.2VDC (ripple ratio within 5%)	0	
Maximum load	d current	0.3A/point 75% simultaneously ON (7.2A/1 common (2A/1 terminal))	0.5A/point, 8A/common (2A/1 terminal)	0	
Maximum inru	sh current	1.2A 10ms or less	1.2A 10ms or less	0	
Leakage curre	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum volta	age drop at ON	0.9VDC or less (TYP.) 0.3A 1.5VDC or less (MAX.) 0.3A	0.3VDC or less (TYP.) 0.5A 0.6VDC or less (MAX.) 0.5A	0	
Output method	d	sink type	sink type	0	
Dooponse	OFF→ON	2ms or less	0.5ms or less	0	
Response time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
External	Voltage	10.2 to 31.2VDC	10.2 to 31.2VDC (ripple ratio within 5%)	0	
power supply	Current	64mA (24VDC)	50mA or less (24VDC, when all points are ON) External load current not included	0	
Surge suppres	ssor	Zener diode	Zener diode	0	
Common term arrangement	inal	32 points/common	32 points/common (4 points) (terminal block 1-wire type)	0	
Number of occ	cupied stations cupied points)	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	
Operation indi	cation	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	0	The number of applicable solderless terminals inserted is within two.
Applicable wire size		0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable soluterminal	derless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5	0	
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	93mA (at 24VDC TYP.)	65mA or less (24VDC when all points are ON)	0	
External dimer	nsions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.7kg	0.7kg	0	

(8) Specifications comparison between AY61CE and AJ65SBTB1-16TE

 $\bigcirc : Compatible, \ \underline{\wedge} : Partial \ change \ required, \ \times : Not \ compatible$

Specif	ications	AY61CE	AJ65SBTB1-16TE		change required, ×: Not compatible
		ATOTOL	AJ033B1B1-101E	Compatibility	Precautions for replacement When seventeen or more
Number of output points		32 points	16 points	×	points are used, use two AJ65SBTB1-16TE modules.
Insulation method		Photocoupler	Photocoupler	0	
Rated load vo	oltage	5/12/24VDC	12/24VDC	Δ	5VDC cannot be used.
Operating loa	d voltage	4.5 to 26.4VDC	10.2 to 26.4VDC		5VDC cannot be used.
range		4.5 to 20.4 V B C	(ripple ratio within 5%)	Δ	3VDG carrier be asea.
Maximum loa	d current	2.0A/point (Condition: τ =L/R ≦ 2.5ms) 5A/common	0.1A/point 1.6A/common	×	The maximum load current per point becomes lower. Pay attention to the selection of the load to be used. The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum inre	ush current	8A 10ms or less	1A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leakage curr	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vol	tage drop at	0.25V or less (TYP.) 2.0A	0.1V or less (TYP.) 0.1A	0	
ON		0.4V or less (MAX.) 2.0A	0.2V or less (MAX.) 0.1A	O	
Output metho	od	Source type	Source type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→OFF	10ms or less (resistance load)	1.5ms or less (resistance load)	0	
External power	Voltage	None	10.2 to 26.4VDC (ripple ratio within 5%)	×	Wiring of the power supply for driving the output transistor is required.
supply	Current	None	30mA or less (24VDC)	×	Wiring of the power supply for driving the output transistor is required.
Surge suppre	ssor	Zener diode	Zener diode	0	
Common terr arrangement	ninal	8 points/common	16 points/common	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	ication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
			RAV1.25-3		
Applicable so terminal	Iderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	(Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	150mA (at 24VDC TYP.)	50mA or less (24VDC when all points are ON)	0	
External dimensions		170(H) × 64(W) × 80(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting
					dimensions.

(9) Specifications comparison between AY61CE and AJ65SBTB1-32TE1

 $\bigcirc \colon \mathsf{Compatible}, \ \ \underline{\wedge} \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

Specif	ications	AY61CE	AJ65SBTB1-32TE1	Compatibility	Precautions for replacement
Number of ou		32 points	32 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated load voltage		5/12/24VDC	12/24VDC	Δ	5VDC cannot be used.
Operating loa	id voltage	4.54,00.47/00	10.2 to 26.4VDC		5)/00
range	, and the second	4.5 to 26.4VDC	(ripple ratio within 5%)	Δ	5VDC cannot be used.
Maximum load current		2.0A/point (Condition: τ =L/R ≦ 2.5ms) 5A/common	0.5A/point 4.8A/common	×	The maximum load current per point becomes lower. Pay attention to the selection of the load to be used. The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum inre	ush current	8A 10ms or less	1A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leakage curr	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vol	tage drop at	0.25V or less (TYP.) 2.0A	0.5V or less (TYP.) 0.1A		The value of maximum voltage
ON		0.4V or less (MAX.) 2.0A	0.8V or less (MAX.) 0.1A	×	drop at ON becomes higher.
Output metho	od	Source type	Source type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→OFF	10ms or less (resistance load)	1.5ms or less (resistance load)	0	
External	Voltage	None	10.2 to 26.4VDC (ripple ratio within 5%)	×	Wiring of the power supply for driving the output transistor is required.
power supply	Current	None	15mA or less (TYP.DC24V, per common) External load current not included	×	Wiring of the power supply for driving the output transistor is required.
Surge suppre	essor	Zener diode	Zener diode	0	
Common terr arrangement	ninal	8 points/common	32 points/common (terminal block 1-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station \times 32 points)	0	
Operation inc	,	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required. The number of applicable solderless terminals inserted is within two.
Applicable wire size		0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	lderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module power	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	150mA (at 24VDC TYP.)	60mA or less (24VDC when all points are ON)	0	
External dimensions		i ———		<u> </u>	The overall size differs.
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	Pay attention to the mounting dimensions.

(10) Specifications comparison between AY81C and AJ65SBTB1-16TE

	ications	AY81C	AJ65SBTB1-16TE	Compatibility	change required, × : Not compatible Precautions for replacement
ороси	ioationo	Allere	7,0003121 TOTE	Compatibility	When seventeen or more
Number of ou	itput points	32 points	16 points	×	points are used, use two AJ65SBTB1-16TE.
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated load vo	oltage	24VDC	12/24VDC	0	
Operating loa	id voltage	04.0 += 00.4 \/D0	10.2 to 26.4VDC		
range		21.6 to 26.4VDC	(ripple ratio within 5%)	0	
Maximum loa	d current	0.5A/point 60% simultaneously ON	0.1A/point 1.6A/common	×	The maximum load current per point becomes lower. Pay attention to the selection of the load to be used. The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum inru	ush current	2A 10ms or less	1A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leakage curre	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vol	tage drop at	0.9V or less (TYP.) 0.5A	0.1V or less (TYP.) 0.1A	0	
ON		1.5V or less (MAX.) 0.5A	0.2V or less (MAX.) 0.1A	0	
Output metho	od	Source type	Source type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→ OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
External	Voltage	21.6 to 26.4VDC	10.2 to 26.4VDC (ripple ratio within 5%)	0	
power	Current	17mA (24VDC)	30mA or less (24VDC)	Δ	The current consumption increases. the current capacity needs to be reconsidered.
Surge suppre	essor	Zener diode	Zener diode	0	
Common term	ninal	32 points/common	16 points/common	0	
Number of occ	cupied stations ccupied points)	4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation ind	lication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wir	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3 RAP2-3SL TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
		1	50mA or less	0	
power supply	Current	100mA (at 24VDC TYP.)	(24VDC when all points are ON)	0	
power		100mA (at 24VDC TYP.) 170(H) × 64(W) × 80(D) mm	(24VDC when all points are ON) $54(H)\times 118(W)\times 40(D) \text{ mm}$	×	The overall size differs. Pay attention to the mounting dimensions.

(11) Specifications comparison between AY81C and AJ65SBTB1-32TE1

Speci	fications	AY81C	AJ65SBTB1-32TE1	Compatibility	hange required, × : Not compatible Precautions for replacement
Number of ou		32 points	32 points	0	
Insulation me		Photocoupler	Photocoupler	0	
Rated load vo		24VDC	12/24VDC	0	
Talca load ve	mage	24400	10.2 to 26.4VDC		
Operating loa	d voltage range	21.6 to 26.4VDC	(ripple ratio within 5%)	0	
Maximum loa	d current	0.5A/point 60% simultaneously ON	0.5A/point 4.8A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum inro	ush current	2A 10ms or less	1A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load to used.
Leakage curr	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum	tage draw at ON	0.9V or less (TYP.) 0.5A	0.5V or less (TYP.) 0.5A	_	
iviaximum voi	tage drop at ON	1.5V or less (MAX.) 0.5A	0.8V or less (MAX.) 0.5A	0	
Output metho	d	Source type	Source type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→ OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
	Voltage	21.6 to 26.4VDC	10.2 to 26.4VDC (ripple ratio within 5%)	0	
External power supply	Current	17mA (24VDC)	15mA or less (TYP.24VDC, per common) External load current not included	0	
Surge suppre	ssor	Zener diode	Zener diode	0	
Common terri arrangement		32 points/common	32 points/common (terminal block 1-wire type)	0	
Number of oc	cupied stations	4 stations	1 station		
(number of o	ccupied points)	(4 stations × 8 points)	(1 station × 32 points)	0	
Operation ind	ication	ON indication (LED)	ON indication (LED)	0	
External conr	ection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required. The number of applicable solderless terminals inserted is within two.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
	derless terminal	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3 RAP2-3SL TGV2-3N	×	Change in wiring is required.
I/O module power	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	100mA (at 24VDC TYP.)	60mA or less (24VDC when all points are ON)	0	
External dime	nsions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.7kg	0.26kg	0	

(12) Specifications comparison between AJ35PTF-24S and AJ65SBTB2N-16S

Specif	ications	AJ35PTF-24S	AJ65SBTB2N-16S	atible, ∆: Partial c	hange required, ×: Not compatible Precautions for replacement
Specii	ications	AJ35F1F-245	A3093B1B2N-103	Companibility	When seventeen or more
Number of ou	itnut noints	24 points	16 points	V	points are used, use two
Number of ot	itput points	24 points	To points	×	AJ65SBTB2N-16S modules.
Insulation me	thod	Photocoupler	Photocoupler	0	7.0000B1B2IV 100 III0ddics.
Rated load vo		100-240VAC,40 to 70Hz	100-240VAC, 50/60Hz±5%	0	
Maximum loa		264VAC	264VAC		
Maximum loa		0.6A/point, 2.4A/common	0.6A/point, 4.8A/common	0	
Waxiiiiuiii ioc	u current	24VAC 100mA,	50VAC 100mA,	0	
Minimum load	d voltage/	100VAC 10mA,	100VAC 10mA,	0	
current		240VAC 10mA	240VAC 10mA	O	
		20A 10ms or less,			
Maximum inr	ush current	8A 100ms or less	25A 10ms or less	0	
1 1		1.5mA (120VAC, 60Hz)	1.5mA (100VAC, 60Hz)	-	
Leakage curr	ent at OFF	3.0mA (240VAC, 60Hz)	3.0mA (200VAC, 60Hz)	0	
Maximum vol	tage drop at	1.5V or less (0.1 to 0.6A)			
ON	tage drop at	1.8V or less (50 to 100mA)	1.5V or less (at 0.6A)	0	
ON		2.0V or less (10 to 50mA)			
Response	OFF→ON	1ms or less	1ms or less	0	
time	ON→ OFF	0.5Hz+1ms or less	1/2 cycle + 1ms or less	0	
Surge suppre	essor	CR absorber (0.022 μ F+47 Ω)	CR absorber (0.01 μ F+47 Ω)	0	
		High speed type fuse 3.2A			
Fuse rating		(one fuse/common)	None	×	
Ţ.		HP-32			The fuse is not built in.*1
Fuse blown in	ndication	Available	None	×	1
					As common terminal
					arrangement changes from 8
Common terr	ninal	0 nainta/aamman	16 points/common		points/common to 16 points/
arrangement		8 points/common	(2-wire type)	Δ	common, wiring with a different
					voltage per common is not
					possible.
		Autotion	1 station		The number of occupied points
	cupied stations	4 stations	(1 station \times 32 points \times 2	×	increases. The assignment of
(number of o	ccupied points)	(4 stations × 8 points)	modules)		the entire system needs to be
O	l:4:	ON indication (LED)	ON indication (LED)		reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED) Transmission/module power	0	
		Transmission/module power	supply parts:		
		supply parts:	7-point terminal block		
External con	nection method	8-point terminal block	(M3 × 5.2 screws)		Change in wiring is required.
LAternal com	iection metriod	I/O part:	I/O part:	×	Change in wining is required.
		36-point terminal block	34-point terminal block		
		(M3 × 6 screws)	(M3 × 5.2 screws)		
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
7.100.000.00	. 0 0.20	0.73 to 211111	RAV1.25-3		
Applicable so	lderless	R1.25-3, R2-3	(Conforming to JIS C 2805)	Δ	In some cases the solderless
terminal		RAV1.25-3, RAV2-3	V2-MS3, RAP2-3SL, TGV2-3N	Δ	terminal must be changed.
1/0 1 1	Valte	4501-040170	20.4 to 26.4VDC		The operating voltage range
I/O module	Voltage	15.6 to 31.2VDC	(ripple ratio within 5%)	Δ	differs.
power	Current	200mA	85mA or less	_	
supply	Current	ZUUIIIA	(24VDC when all points are ON)	0	
					The overall size differs.
External dime	ensions	254(H) × 132(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm	×	Pay attention to the mounting
					dimensions.
Weight		0.83kg	0.35kg	0	

^{*1:} Install a fuse for each external terminal point to prevent the burnout of the external devices and modules during load shorts. In addition, when a fuse blown indication is necessary, configure an external circuit.

(13) Specifications comparison between AJ35PTF-24T and AJ65SBTB1-32T1

Number of output points 24 points 32 points ○	Specifications		O: Compatible, ∆: Partial change required, ×: Not compatible, AJ35PTF-24T AJ65SBTB1-32T1 Compatibility Precautions for replacement					
Photocoupler Pho					·	recautions for replacement		
Rated load voltage			'	·				
Operating load voltage range			· ·	· · · · · · · · · · · · · · · · · · ·	_			
Maximum load current 0.5A/point, 3.2A/common 0.5A/point, 4.8A/common ∆ Cannot be applied.			12/24400		0	Voltages exceeding 26 4VDC		
Maximum load current 0.5A/point, 3.2A/common 0.5A/point, 4.8A/common A the operating current centre module. Leaking current at OFF 0.1mA or less 1.0A 10ms or less X differs. Pay attert to the operating current centre module. Leaking current at OFF 0.1mA or less 0.1mA or less 0.1mA or less 0.2VDC or less (TYP) 0.5A 0.3VDC or less (MAX) 0.5A 0.3VDC or less (MAX) 0.5A 0.0VDC or less		u voltage	10.2 to 31.2VDC		Δ			
Maximum innush current AA 10ms or less 1.0A 10ms or less X differs. Pay attention to it selection of the load use	-	d current	0.5A/point, 3.2A/common		Δ	The maximum load current per common differs. Pay attention to the operating current of the		
Maximum voltage drop at	Maximum inru	ush current	4A 10ms or less	1.0A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.		
ON	Leaking curre	nt at OFF	0.1mA or less	0.1mA or less	0			
Description	Maximum vol	tage drop at	0.9VDC or less (TYP.) 0.5A	0.3VDC or less (TYP.) 0.5A	0			
Response time	ON		1.5VDC or less (MAX.) 0.5A	0.6VDC or less (MAX.) 0.5A	0			
time ON → OFF 2ms or less (resistance load) 1.5ms or less (resistance load) O Voltage 10.2 to 31.2VDC (ripple ratio within 5%)	Output metho	d	sink type	sink type	0			
Voltage Voltage 10.2 to 31.2VDC (ripple ratio within 5%)	Response	OFF→ON	2ms or less	0.5ms or less	0			
External power supply arrangement Number of occupied stations (a stations on both indication indication indication method (M3 × 6 screws) Fapoint terminal block (M3 × 6 screws) Fapoint terminal	time	ON→ OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0			
Power supply Current Current Cayant (24VDC TYP/common) SomA or less (24VDC) X Current consumption increases. The current capacity needs to be reconsidered.	Cutomol	Voltage	10.2 to 31.2VDC		Δ	Voltages exceeding 26.4VDC cannot be applied.		
Common terminal arrangement 8 points/common 32 points/common As common terminal arrangement changes for points/common to 32 points or more possible. Number of occupied stations (number of occupied points) Operation indication ON indication (LED) Transmission/module power supply parts: 8-point terminal block 1/O part: 36-point terminal block (M3 × 5.2 screws) 1/O part: 36-point terminal block (M3 × 5.2 screws) 1/O part: 34-point terminal block (M3 × 5.2 screws	power	Current		50mA or less (24VDC)	×	capacity needs to be		
Common terminal arrangement 8 points/common 32 points/common As common terminal arrangement changes for points/common to 32 points or more possible. Number of occupied stations (number of occupied points) Operation indication ON indication (LED) Transmission/module power supply parts: 8-point terminal block 1/O part: 36-point terminal block (M3 × 5.2 screws) 1/O part: 36-point terminal block (M3 × 5.2 screws) 1/O part: 34-point terminal block (M3 × 5.2 screws	Surge suppre	ssor	Varistor (52 to 62V)	Zener diode	0			
Commission Com		ninal	8 points/common	32 points/common	Δ	arrangement changes from 8 points/common to 32 points/ common, wiring with a different voltage per common		
Comparison Com	Number of oc	cupied stations	4 stations	1 station	_			
Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 5.2 screws) I/O part: 36-point terminal block (M3 × 5.2 screws) I/O part: 36-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws) Applicable wire size 0.75 to 2mm² Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 I/O module Power Supply Voltage 15.6 to 31.2VDC Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3	(number of oc	ccupied points)	(4 stations × 8 points)	(1 station × 32 points)	0			
Transmission/module power supply parts: 8-point terminal block	Operation ind	ication	ON indication (LED)	ON indication (LED)	0			
Applicable solderless terminal R1.25-3, R2-3 (Conforming to JIS C 2805) (Conforming to JIS C 2805) (Conforming to JIS C 2805) (V2-MS3, RAP2-3SL, TGV2-3N) (Conforming to JIS C 2805) (Conformi	External conn	ection method	supply parts: 8-point terminal block I/O part: 36-point terminal block	supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block	×	Change in wiring is required.		
Applicable solderless R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV2-3SL, TGV2-3N RAP2-3SL, TGV2	Applicable wir	re size	0.75 to 2mm ²	0.3 to 2mm ²	0			
Voltage	Applicable so		R1.25-3, R2-3	RAV1.25-3 (Conforming to JIS C 2805)		In some cases the solderless terminal must be changed.		
supply Current 130mA 65mA or less (24VDC when all points are ON) The overall size differs.		Voltage	15.6 to 31.2VDC		Δ	The operating voltage range differs.		
		Current	130mA		0			
External dimensions $254(H) \times 132(W) \times 41(D) \text{ mm}$ $54(H) \times 179(W) \times 40(D) \text{ mm}$ \times Pay attention to the mou dimensions.	External dime	nsions	254(H) × 132(W) × 41(D) mm		×	Pay attention to the mounting		
Weight 0.73kg 0.25kg O	Weight		0.73kg	0.25kg	0			

(14) Specifications comparison between AJ35TB1A-8R and AJ65SBTB2N-8R

Number of output points S po	Specif	ications	AJ35TB1A-8R	O: Comp AJ65SBTB2N-8R	eatible, ∆: Partial ch Compatibility	nange required, × : Not compatible Precautions for replacement
Photocoupler Relay	-					Troodations for replacement
Rated load voltage/current A24/DC 2A (COS φ = 1) point A24/AC 2A (COS φ = 1) point A4/AC 2A (C						methods differ, the performance of the insulation
Maximum switching voltage 250VAC, 110VDC 264VAC, 125VDC ○	Rated load ve	oltage/current	(resistance load)/point	(resistance load)/point 240VAC 2A (COS ϕ =1)/point	Δ	common differs. Pay attention to the operating current of the
None Common terminal Power Po	Minimum swi	tching load	5VDC 1mA	5VDC 1mA	0	
Mechanical life	Maximum sw	itching voltage	250VAC, 110VDC	264VAC, 125VDC	0	
Mechanical life Rated switching voltage/current load 100.000 times or more 200VAC 1.5A, 240VAC 1.5A (240VAC	Response	OFF→ON	10ms or less	10ms or less	0	
Rated switching	time	ON→OFF	12ms or less	12ms or less	0	
	Mechanical li	fe	20 million times or more	20 million times or more	0	
External power supply and power supply parts Security Securit	Electrical life		voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A ($\cos \phi = 0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A	voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A ($\cos \phi = 0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or	0	
Tequency Fequency Fermion Femology	Maximum sw	itching	3 600 times/hr	3 600 times/hr	0	
None Pipple voltage Ripple voltage 4Vp-p or less None Pipple voltage 4Vp-p or less	frequency		3,000 times/fil	3,000 times/m	O	
Supply Current 45mA (24VDC, all points ON) None — Becomes a shared common. Number of occupied stations (number of occupied points)		Voltage		None	_	
Independent common arrangement Independent common 8 points/common (2-wire type) X Becomes a shared common.	supply	Current		None	_	
Number of occupied station (number of occupied station (1 station × 8 points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3 screw) Transmission circuit part included Applicable wire size O.75 to 2mm² Applicable solderless terminal Voltage Vol	Common terr		,			December of the second community
Number of occupied stations (number of occupied points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 26-point terminal block (M3 screw) Transmission circuit part included Applicable wire size O.75 to 2mm² Applicable solderless terminal Voltage Volt	arrangement		independent common	8 points/common (2-wire type)	×	Becomes a snared common.
External connection method 26-point terminal block (M3 screw) Transmission circuit part included Applicable wire size Applicable solderless terminal Voltage Voltage Voltage Voltage Transmission circuit part included Transmission circuit part included Applicable wire size 0.75 to 2mm² 0.3 to 2mm² RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL,TGV2-3N Voltage The operating voltage range differs. The current capacity needs to be reconsidered. The current capacity needs to be reconsidered. External dimensions 55(H) × 135(W) × 50(D) mm Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) × Change in wiring is required. Change in wiring is required. The operating victories terminal block (M3 × 5.2 screws) × Change in wiring is required. In some cases, the solderless terminal must be changed. The operating voltage range differs. The current consumption increases. The current capacity needs to be reconsidered. The overall size differs. Pay attention to the mounting dimensions.	stations (num occupied poin	ber of nts)			×	increases. The assignment of the entire system needs to be
External connection method 26-point terminal block (M3 screw) Transmission circuit part included Applicable wire size 0.75 to 2mm² Applicable solderless terminal Voltage Voltage Voltage Voltage Voltage Current 70mA (at 24VDC) External dimensions 26-point terminal block (M3 x 5.2 screws) 1/O part: 18-point terminal block (M3 x 5.2 screws) A RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL,TGV2-3N Voltage Voltage Current 70mA (at 24VDC) S5(H) x 135(W) x 50(D) mm S4(H) x 118(W) x 40(D) mm A Change in wiring is required.	Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
Applicable solderless terminal R1.25-3, R2-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL,TGV2-3N	External con	nection method	(M3 screw)	supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block	×	Change in wiring is required.
Applicable solderless terminal R1.25-3, R2-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL,TGV2-3N	Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Voltage (peak voltage 31.2VDC) (ripple ratio within 5%) △ differs. The current consumption increases. The current capacity needs to be reconsidered. External dimensions 55(H) × 135(W) × 50(D) mm 54(H) × 118(W) × 40(D) mm × Pay attention to the mounting dimensions.	Applicable so terminal	lderless	R1.25-3, R2-3	(conforming to JIS C 2805)		terminal must be changed.
The current consumption increases. The current capacity needs to be reconsidered. External dimensions $ 55(H) \times 135(W) \times 50(D) \text{ mm} $ $ 85\text{mA or less} \\ (24\text{VDC when all points are ON)} $ $ 54(H) \times 118(W) \times 40(D) \text{ mm} $ $ \times $ The current consumption increases. The current capacity needs to be reconsidered. The overall size differs. Pay attention to the mounting dimensions.		Voltage			Δ	
External dimensions $55(H) \times 135(W) \times 50(D) \text{ mm}$ $54(H) \times 118(W) \times 40(D) \text{ mm}$ × Pay attention to the mounting dimensions.	I/O module power supply	Current		85mA or less	Δ	increases. The current capacity needs to be reconsidered.
Weight 0.3kg 0.25kg ○	External dime	ensions	55(H) × 135(W) × 50(D) mm		×	Pay attention to the mounting
	Weight		0.3kg	0.25kg	0	

(15) Specifications comparison between AJ35TB2-8R and AJ65SBTB2N-8R

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Number of output points S points S points C Although the insulation method insulation method Photocoupler Relay ∆ Although the insulation method differ; the performance of the insulation is the same of common differs. Pay a station of the operating ourself of the entire ourself ourself our entire ourself ourse	Specif	ications	AJ35TB2-8R	AJ65SBTB2N-8R	Compatibility	change required, × : Not compatible Precautions for replacement
Raisolation method						Precautions for replacement
24/UC 2A		<u> </u>				•
Maintainum switching load SVDC frink SVDC frink Common switching voiting 250VAC, 110VDC 264VAC, 125VDC Common services Co	Rated load vo	oltage/current	(resistance load)/point 240VAC 2A (COS ϕ =1)/point	(resistance load)/point 240VAC 2A (COS ϕ =1)/point	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire
Maximum switching voltage	Minimum swit	ching load			0	
None Common terminal arrangoment September of occupied points indication Common terminal arrangoment September of occupied points						
DN → QFF 12ms or less 12ms or less 0			·	·		
Mechanical life	•				†	
Rated switching					-	
External power supply Current Current CavVDC ± 10% Ripple voltage 4VpD or less 45mA None -	Electrical life		Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A ($\cos \phi = 0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A ($\cos \phi = 0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more	0	
Ripple voltage Ripple voltage 4Vp-p or less Supply Current 45mA (24VDC all points ON) None -	arrangement				_	
Common terminal arrangement Sepoints/common (2-wire type) Sepoints/common (2-wire type) O		Voltage	Ripple voltage 4Vp-p or less	None	-	
Applicable wire size Applicable solderless terminal Voltage Vol				None	-	
Number of occupied stations (number of occupied points) 1 station (1 station × 8 points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 26-point terminal block (M3 screw) Transmission circuit part included (M3 x 5.2 screws) Applicable wire size O.75 to 2mm² O.3 t		ninal	8 points/common (2-wire type)	8 points/common (2-wire type)	0	
Transmission/module power supply parts: 7-point terminal block (M3 screw) Transmission circuit part included Applicable wire size O.75 to 2mm² Applicable solderless terminal Voltage Voltage Voltage Voltage Voltage TomA (at 24VDC) External dimensions Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) V (M3 x 5.2 screws) A Change in wiring is required. The operating voltage range differs. The operating voltage range differs. The overall size differs. Pay attention to the mounting dimensions.	stations (num	ber of			×	increases. The assignment of the entire system needs to be
External connection method Comparison C	Operation ind	ication	ON indication (LED)	ON indication (LED)	0	
Applicable wire size 0.75 to 2mm² 0.3 to 2mm² 0.4 policable solderless terminal RAV1.25-3, R2-3 RAV1.25-3, RAV2-3 Conforming to JIS C 2805) V2-MS3, RAP2-3SL,TGV2-3N The operating voltage range differs. The current consumption increases. The current capacity needs to be reconsidered. The overall size differs. Pay attention to the mounting dimensions.	External conr	ection method	(M3 screw)	supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block	×	Change in wiring is required.
Applicable solderless terminal R1.25-3, R2-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL,TGV2-3N	Applicable wi	re size	0.75 to 2mm ²	,	0	
I/O module power supply Current (peak voltage 31.2VDC) (ripple ratio within 5%) \triangle differs. S5mA or less (24VDC when all points are ON) \triangle The current consumption increases. The current capacity needs to be reconsidered. External dimensions $55(H) \times 135(W) \times 50(D)$ mm $54(H) \times 118(W) \times 40(D)$ mm \times Pay attention to the mounting dimensions.	Applicable so		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL,TGV2-3N		terminal must be changed.
supply Current 70mA (at 24VDC)	I/O module	Voltage			Δ	' ' ' '
External dimensions $55(H) \times 135(W) \times 50(D) \text{ mm}$ $54(H) \times 118(W) \times 40(D) \text{ mm}$ × Pay attention to the mounting dimensions.	•	Current	70mA (at 24VDC)		Δ	increases. The current capacity needs to be reconsidered.
Weight 0.3kg 0.25kg	External dime	ensions	55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	Pay attention to the mounting
	Weight		0.3kg	0.25kg	0	

(16) Specifications comparison between AJ35TB1-16R and AJ65SBTB2N-16R

Specifications Maximum switching total Proceedings Proceedings Processions	Speci	fications	AJ35TB1-16R	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Related load voltage/current Photocoupler Related Photocoupler Related Photocoupler Related Photocoupler Related Photocoupler Photocou					·	r recautions for replacement
Rated load voltage-current 24/VIC.2 A (receistance load)point 24/VIC.2 A (COS ¢ = 1)point 24/VIC.2 A (COS ¢ = 1) and viets 24/VIC.2 A (COS		<u> </u>	·	·		differ, the performance of the
Response	Rated load v	roltage/current	(resistance load)/point 240VAC 2A (COS ϕ =1)/point	(resistance load)/point 240VAC 2A (COS ϕ =1)/point	Δ	The maximum load current per common differs. Pay attention to the operating current of the
Response	Minimum sw	itching load	5VDC 1mA	5VDC 1mA	0	
Response OFF − ON 10ms or less 10ms or less 0	Maximum sv	vitching voltage	250VAC, 110VDC	264VAC, 125VDC	_	
Mechanical life	Response	OFF→ ON	10ms or less			
Mechanical life	•		12ms or less	12ms or less		
Rated switching voltage/current load 100,000 times or more 200/AC 1.5A, 240/AC 1.A (COS φ = 0.7) 100,000 times or more 200/AC 1.AS, 240/AC 1.A (COS φ = 0.7) 100,000 times or more 200/AC 1.AS, 240/AC 1.A (COS φ = 0.7) 100,000 times or more 200/AC 1.AS, 240/AC 1.A (COS φ = 0.7) 100,000 times or more 24/DC 1.A 100/DC 0.1A (LR=7 ms) 100,000 times or more 24/DC 1.A 100/DC 0.1A (LR=7 ms) 100,000 times or more 24/DC 1.A 100/DC 0.1A (LR=7 ms) 100,000 times or more 24/DC 2.A (COS φ = 0.35) 100,000 times or more 24/DC 2.A (LR=7 ms) 100,000 times or more 24/DC 2.A (LR=7	Mechanical I	1	20 million times or more	20 million times or more		
Power supply Pipple voltage Ripple voltage 4Vp-p or less None	Maximum sv frequency		load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 100,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ = 0.35) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more 3,600 times/hr	load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 100,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ = 0.35) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	0	
Ripple voltage 4Vp-p or less Supply Current Supply Current Supply Current Supply Sup		Voltage	24VDC ± 10%	None	_	
Common terminal arrangement 8 points/common (2-wire type) Dispossible. The number of occupied stations (number of occupied points) Operation indication ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part 18-point terminal block (M3 × 5.2 screws) Applicable wire size O.75 to 2mm² O.75 to 2mm² O.75 to 2mm² O.75 to 3 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m	-		Ripple voltage 4Vp-p or less			
Common terminal arrangement 8 points/common (2-wire type) A points/common to 16 points/ common (2-wire type) Number of occupied stations (number of occupied points) (2 stations × 8 points) Operation indication ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3 screw) Transmission icruit part included I/O part: 18-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws) Applicable wire size O,75 to 2mm² Applicable solderless terminal I/O module power Supply arts: RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 I/O module power Supply arts: RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 I/O module power Supply arts: Applicable solderless terminal Voltage I/O part: 18-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws) Applicable solderless terminal I/O part: 18-point terminal block (M3 × 5.2 screws) Applicable wire size O,75 to 2mm² O,3 to 2mm² O,2-MS3, RAP2-3SL, TGV2-3N In some cases, the solderless terminal must be changed. V2-MS3, RAP2-3SL, TGV2-3N I/O module power Supply Current Othage I/O module power Supply Current TomA (at 24VDC) Tomage in wiring is required. In some cases, the solderless terminal must be changed. The operating voltage range differs. The operating voltage range differs. The current consumption increases. The current capacity needs to be reconsidered. The overall size differs. Pay attention to the mounting dimensions.	supply	Current	90mA (24VDC all points ON)	None	-	
Number of occupied stations (number of occupied stations (number of occupied points) Operation indication ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws) ON indication (LED) Transmission/module power supply size O.75 to 2mm² O.3 to 2mm² ORAPIIcable solderless terminal Voltage I/O module power supply Current To station 1 station (1 station × 32 points) Transmission/module power supply ON indication (LED) In some cases, the solderless terminal must be changed. In some cases, the solderless terminal indication (indication (indic			8 points/common	•	Δ	arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not
External connection method 34-point terminal block (M3 screw) Transmission circuit part included Transmission circuit part included 40 part: 18-point terminal block (M3 x 5.2 screws) I/O part: 18-point terminal block (M3 x 5.2 screws) Applicable wire size 0.75 to 2mm² Applicable solderless terminal Applicable solderless terminal Voltage Voltage Voltage Voltage Voltage Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) I/O part: 18-point terminal block (M3 x 5.2 screws) O RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N V2-MS3, RAP2-3SL, TGV2-3N The operating voltage range differs. The current consumption increases. The current capacity needs to be reconsidered. The overall size differs. Pay attention to the mounting dimensions.	stations (nur	mber of			×	increases. The assignment of the entire system needs to be
External connection method 34-point terminal block (M3 screw) Transmission circuit part included 42	Operation in	dication	ON indication (LED)	ON indication (LED)	0	
Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N The operating voltage range differs. The current consumption increases. The current capacity needs to be reconsidered. External dimensions The overall size differs. Pay attention to the mounting dimensions.		nection	(M3 screw) Transmission circuit part	supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block	×	Change in wiring is required.
Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N The operating voltage range differs. The current consumption increases. The current capacity needs to be reconsidered. External dimensions The overall size differs. Pay attention to the mounting dimensions.	Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
I/O module power supply Current (peak voltage 31.2VDC) (ripple ratio within 5%) △ differs. 120mA or less (24VDC when all points are ON) ∴ The current consumption increases. The current capacity needs to be reconsidered. External dimensions 55(H) × 166(W) × 50(D) mm 54(H) × 179(W) × 40(D) mm × Pay attention to the mounting dimensions.		olderless	R1.25-3, R2-3	RAV1.25-3 (conforming to JIS C 2805)		· ·
supplyCurrent75mA (at 24VDC) 120 mA or less (24VDC when all points are ON) \triangle increases. The current capacity needs to be reconsidered.External dimensions $55(H) \times 166(W) \times 50(D)$ mm $54(H) \times 179(W) \times 40(D)$ mm \times The overall size differs. Pay attention to the mounting dimensions.		Voltage			Δ	differs.
External dimensions $55(H) \times 166(W) \times 50(D) \text{ mm}$ $54(H) \times 179(W) \times 40(D) \text{ mm}$ × Pay attention to the mounting dimensions.	-	Current	75mA (at 24VDC)		Δ	increases. The current capacity needs to be reconsidered.
Weight 0.35kg 0.35kg	External dim	ensions	55(H) × 166(W) × 50(D) mm	54(H) × 179(W) × 40(D) mm	×	Pay attention to the mounting
	Weight		0.35kg	0.35kg	0	

(17) Specifications comparison between AJ35TB1A-8T and AJ65SBTB1-8T1

Specif	ications	AJ35TB1A-8T	AJ65SBTB1-8T1	Compatibility	nange required, x : Not compatible Precautions for replacement
Number of ou		8 points	8 points	0	
Insulation me		Photocoupler	Photocoupler		
		24VDC	<u>'</u>	0	
Rated load v			12/24VDC 10.2 to 26.4VDC	0	
Operating loa	ad voltage	19.2 to 26.4VDC		0	
range		(ripple ratio within 5%)	(ripple ratio within 5%)	_	
Maximum loa		0.3A/point	0.5A/point, 2.4A/common	0	
Maximum inr		1.0A 10ms or less	1.0A 10ms or less	0	
Leakage curr		0.1mA or less	0.1mA or less	0	
Maximum vo	tage drop at	1.5VDC or less (MAX.) 0.3A	0.3VDC or less (TYP.) 0.5A	0	
ON		, , , , ,	0.6VDC or less (MAX.) 0.5A	Ŭ	
Output metho	od	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms of less	0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
	0.1	, , ,	,		Wiring of the power supply for
	Voltage	None	10.2 to 26.4VDC	×	driving the output circuit is
External	ronago		(ripple ratio within 5%)	^	required.
power					Wiring of the power supply for
supply	Current	None	15mA or less (24VDC)	×	driving the output circuit is
	Guiront	Hone	10111/101 1000 (21120)	^	required.
Surge suppre	esor	Zener diode	Zener diode	0	required.
Common terr		Zerier diode	Zener diode	0	
arrangement		Independent common	8 points/common	×	Becomes a shared common.
arrangement					The number of occupied points
Number of o	ccupied	1 station	1 station		increases. The assignment of
stations (num	ber of			×	the entire system needs to be
occupied poi	nts)	(1 station × 8 points)	(1 station × 32 points)		reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED)		reconsidered.
Operation in	lication	ON Indication (LLD)	Transmission/module power	0	
			supply parts:		
			* * * *		
		26-point terminal block	7-point terminal block		
External coni	nection method	(M3 screw)	(M3 × 5.2 screws)	×	Change in wiring is required.
		Transmission circuit part included	I/O part:		
			10-point terminal block		
			(M3 × 5.2 screws)		
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so	Iderless	R1.25-3, R2-3	RAV1.25-3		In some cases, the solderless
terminal	iuci icss	RAV1.25-3, RAV2-3	(conforming to JIS C 2805)	Δ	terminal must be changed.
terriiriai		1000 1.25-5, 10002-5	V2-MS3, RAP2-3SL,TGV2-3N		terminar must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
power	voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
•	Current	85mA(at 24VDC)	35mA or less		
supply	Current	osina(at 24 vDC)	(24VDC when all points are ON)	0	
					The overall size differs.
External dime	ensions	55(H) × 135(W) × 50(D) mm	$54(H) \times 87.3(W) \times 40(D) \text{ mm}$	×	Pay attention to the mounting
					dimensions.
Weight		0.3kg	0.14kg	0	

(18) Specifications comparison between AJ35TB2-8T and AJ65SBTB2-8T1

Specif	ications	AJ35TB2-8T	AJ65SBTB2-8T1	Compatibility	hange required, × : Not compatible Precautions for replacement
Number of ou		8 points	8 points	0	·
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated load vo	oltage	5/12/24VDC	12/24VDC	Δ	5VDC cannot be used.
Operating loa		4.5 to 26.4VDC	10.2 to 26.4VDC	Δ	
range		(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	5VDC cannot be used.
Maximum loa	d current	0.5A/point	0.5A/point, 2.4A/common	0	
Maximum inre	ush current	2.0A 10ms or less	1.0A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leakage curr	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vol	tage drop at	0.2VDC or less (MAX.) 0.5A	0.3VDC or less (TYP.) 0.5A 0.6VDC or less (MAX.) 0.5A	0	
Output metho	od	sink type	sink type	0	
Response	OFF→ ON	2ms or less	0.5ms of less	0	
time	ON→ OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
External	Voltage	4.5 to 26.4VDC (ripple ratio within 5%)	10.2 to 26.4VDC (ripple ratio within 5%)	Δ	5VDC cannot be used.
supply	Current	20mA or less (24VDC)	17.8mA or less (24VDC)	0	
Surge suppre	essor	Zener diode	Zener diode	0	
Common terr		8 points/common (2-wire type)	8 points/common (2-wire type)	0	
	cupied stations ccupied points)	1 station (1 station × 8 points)	1 station (1 station × 32 points)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation ind	lication	ON indication (LED)	ON indication (LED)	0	
External conr	nection method	26-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	lderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module power	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	70mA (at 24VDC)	45mA or less (24VDC when all points are ON)	0	
External dime	ensions	55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.3kg	0.18kg	0	

(19) Specifications comparison between AJ35TB1-16T and AJ65SBTB1-16T1

					nange required, × : Not compatible
Speci	ications	AJ35TB1-16T	AJ65SBTB1-16T1	Compatibility	Precautions for replacement
Number of o	utput points	16 points	16 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated load v	oltage	24VDC	12/24VDC	0	
Operating loa	ad voltage	19.2 to 26.4VDC	10.2 to 26.4VDC	_	
range		(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum loa	d current	0.1A/point, 1.6A/common	0.5A/point, 3.6A/common	0	
Maximum inr	ush current	0.4A 10ms or less	1.0A 10ms or less	0	
Leakage cur	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo			0.3VDC or less (TYP.) 0.5A	Ŭ	
ON	g	1.5VDC or less (MAX.) 0.1A	0.6VDC or less (MAX.) 0.5A	0	
Output meth	nd	sink type	sink type	0	
		2ms or less	0.5ms or less		
Response	OFF→ON			0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
External	Voltage	None	10.2 to 26.4VDC (ripple ratio within 5%)	×	Wiring of the power supply for driving the output circuit is required.
power supply	Current	None	30mA or less (24VDC)	×	Wiring of the power supply for driving the output circuit is required.
Surge suppre	essor	Zener diode	Zener diode	0	
Common ter	minal	40	10	_	
arrangement		16 points/common	16 points/common	0	
Number of or stations (nun occupied poi	ber of	2 stations (2 stations × 8 points)	1 station (1 station × 32 points)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External con	nection method	26-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	130mA or less (at 24VDC)	50mA or less (24VDC when all points are ON)	0	
External dim	ensions	55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.3kg	0.18kg	0	

(20) Specifications comparison between AJ35TB1-16T and AJ65BTB1-16T

Specit	fications	AJ35TB1-16T	AJ65BTB1-16T	Compatibility	nange required, × : Not compatible Precautions for replacement
Number of or		16 points	16 points	O	
Insulation me		Photocoupler	Photocoupler	0	
Rated load v		24VDC	12/24VDC	0	
Operating loa		19.2 to 26.4VDC	10.2 to 28.8VDC	0	
range	ad voilage	(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Turigo		(hppie ratio within 670)	0.5A/point		
Maximum loa	nd current	0.1A/point, 1.6A/common	4A/1 common (Ta = 45°C)	0	
			2.8A/1 common (Ta = 55°C)	O	
Maximum inr	ush current	0.4A 10ms or less	4.0A 10ms or less	0	
Leakage curi		0.1mA or less	0.1mA or less	0	
Maximum vo			0.9VDC or less (TYP.) 0.5A	0	
ON		1.5VDC or less (MAX.) 0.1A	1.5VDC or less (MAX.) 0.5A	0	
Output metho	od	sink type	sink type	0	
Response	OFF→ON	2ms or less	2ms or less	0	
time					
une	ON→OFF	2ms or less (resistance load)	2ms or less (resistance load)	0	\A/:-i
	Valtage	None	10.2 to 28.8VDC		Wiring of the power supply for
External	Voltage	None	(ripple ratio within 5%)	×	driving the output circuit is
power			100mA or less		required.
supply			(TYP.24VDC per common)		Wiring of the power supply for
зирріу	Current	None	External load current not	×	driving the output circuit is
			included		required.
Surge suppre	essor	Zener diode	Zener diode	0	
Common teri			8 points/common		
arrangement		16 points/common	(terminal block 1-wire type)	Δ	
Nb C .					The number of occupied points
Number of o	•	2 stations	1 station		increases. The assignment of
stations (nun		(2 stations × 8 points)	(1 station × 32 points)	×	the entire system needs to be
occupied poi	nts)				reconsidered.
Operation inc	dication	ON indication (LED)	ON indication (LED)	0	
			07 - sint to main all blook		The existing terminal block of
		26-point terminal block	27-point terminal block		the AJ35TB1-16T can be used
External con	nection method	(M3 screw)	(M3.5 screw)	Δ	by using wiring conversion
		Transmission circuit part included	Transmission circuit and module power supply terminal included		adapter *1. Note that wiring to
			power supply terminal included		the CTR+ terminal is required.
Applicable w	re size	0.75 to 2mm ²	0.75 to 2mm ²	0	
					The existing terminal block of
			RAV1.25-3.5		the AJ35TB1-16T can be used
Applicable so	olderless	R1.25-3, R2-3	(conforming to JIS C 2805)	Δ	by using wiring conversion
terminal		RAV1.25-3, RAV2-3	RAV2-3.5		adapter *1. Note that wiring to
					the CTR+ terminal is required.
1/0 mg = 1:-1 =	\/altag=	15.6 to 31.2VDC	15.6 to 28.8VDC		The operating voltage range
I/O module	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
power	Current	130mA or loss (at 24\/DC\	80mA or less	6	
supply	Current	130mA or less (at 24VDC)	(at 24VDC TYP.)	0	
					The overall size differs.
External dime	ensions	55(H) × 135(W) × 50(D) mm	65(H) × 151.9(W) × 46(D) mm *2	×	Pay attention to the mounting
					dimensions.
Weight		0.3kg	0.34kg	×	

^{*1:} The A6ADP-1MC16T, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter can be used. For the mounting image, refer to *2 of Section 1.2.

^{*2:} When using the A6ADP-1MC16T, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter, the external dimensions are increased by 5.1mm (height) and 28.5mm (depth).

(21) Specifications comparison between AJ35TB2-16T and AJ65SBTB2-16T1

Speci	ications	AJ35TB2-16T	AJ65SBTB2-16T1	Compatibility	hange required, × : Not compatible Precautions for replacement
Number of or		16 points	16 points	0	
Insulation me		Photocoupler	Photocoupler	0	
Rated load v		24VDC	12/24VDC	0	
Operating loa		19.2 to 26.4VDC	10.2 to 26.4VDC	0	
range	ia voltage	(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum loa	nd current	0.1A/point, 1.6A/common	0.5A/point, 3.6A/common	0	
Maximum inr		0.4A 10ms or less	1.0A 10ms or less	0	
Leakage curi		0.1mA or less	0.1mA or less	0	
Maximum vo		0.1111/1 01 1000	0.3VDC or less (TYP.) 0.5A	Ŭ	
ON	iago ai op at	1.5VDC or less (MAX.) 0.1A	0.6VDC or less (MAX.) 0.5A	0	
Output metho	od	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time					
unic	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	No. 1 611
	Valtage	None	10.2 to 26.4VDC		Wiring of the power supply for
External	Voltage	None	(ripple ratio within 5%)	×	driving the output circuit is
power					required. Wiring of the power supply for
supply	Current	None	24.2mA or less (24VDC)		driving the output circuit is
	Current	None	24.2111A 01 1633 (24VDG)	×	required.
Surge suppre	esor	Zener diode	Zener diode	0	required.
Common teri		16 points/common	16 points/common	0	
arrangement		(2-wire type)	(2-wire type)	0	
		(= 3,p=)	(= 3,p =)		The number of occupied points
Number of o	•	2 stations	1 station		increases. The assignment of
stations (nun		(2 stations × 8 points)	(1 station × 32 points)	×	the entire system needs to be
occupied poi	nts)	(= 10.000)	(100000)		reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
			Transmission/module power		
			supply parts:		
		34-point terminal block	7-point terminal block		
External con	nection method	(M3 screw)	(M3 × 5.2 screws)	×	Change in wiring is required.
		Transmission circuit part included	I/O part:		
			34-point terminal block		
			(M3 × 5.2 screws)		
Applicable w	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
A I'	I.I. d	D4.05.0. D0.0	RAV1.25-3		1
Applicable so	olderless	R1.25-3, R2-3	(conforming to JIS C 2805)	Δ	In some cases, the solderless
terminal		RAV1.25-3, RAV2-3	V2-MS3, RAP2-3SL,TGV2-3N	_	terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
power	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
supply	Current	130mA (at 24VDC)	55mA or less	0	
cappiy	Junent	1001111 ((dt 24 v DO)	(24VDC when all points are ON)	J	
					The overall size differs.
External dim	ensions	55(H) × 166(W) × 50(D) mm	54(H) × 179(W) × 40(D) mm	×	Pay attention to the mounting
14/ 1 1		0.0=:	0.0=:		dimensions.
Weight		0.35kg	0.25kg	0	1

(22) Specifications comparison between AJ35TC1-32T and AJ65SBTCF1-32T

Specif	ications	AJ35TC1-32T	O: Comp AJ65SBTCF1-32T	eatible, ∆: Partial chatible, Compatibility	nange required, x : Not compatible Precautions for replacement
Number of ou		32 points	32 points		Trecautions for repracement
Insulation me		'	· ·	0	
		Photocoupler	Photocoupler	0	
Rated load v		24VDC	12/24VDC	0	
Operating loa	id voitage	19.2 to 26.4VDC	10.2 to 26.4VDC	0	
range	-d	(ripple ratio within 5%)	(ripple ratio within 5%)		
Maximum loa		0.1A/point, 2A/common	0.1A/point, 3.2A/common	0	
Maximum inr		0.4A 10ms or less	1.0A 10ms or less	0	
Leakage curr		0.1mA or less	0.1mA or less	0	
Maximum vol	tage drop at	1.5VDC or less (MAX.) 0.1A	0.085VDC or less (TYP.) 0.1A 0.2VDC or less (MAX.) 0.1A	0	
Output metho	od	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
External power	Voltage	None	10.2 to 26.4VDC (ripple ratio within 5%)	×	Wiring of the power supply for driving the output circuit is required.
supply	Current	None	50mA or less (24VDC)	×	Wiring of the power supply for driving the output circuit is required.
Surge suppre	essor	Zener diode	Zener diode	0	
Common terr		32 points/common	32 points/common	0	
Number of or					
stations (num	•	4 stations	1 station	0	
occupied poi		(4 stations × 8 points)	(1 station × 32 points)		
Operation inc		ON indication (LED)	ON indication (LED)	0	
External con	nection method	Transmission circuit: 8-point terminal block (M3 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
		I/O part: 40-pin connector	I/O part: 40-pin connector	0	The existing connector can be attached without change.
Applicable wi	re size	Terminal block: 0.75 to 2mm ² 40-pin connector:0.3mm ²	Terminal block: 0.3 to 2mm^2 40 pin connector: 0.3mm^2 or less (A6CON1, A6CON4) 0.2 to 0.08mm^2 (for A6CON2) From 0.08mm^2 twisted line, ϕ 0.25mm (for A6CON3)	0	
Accessory		1 external wiring connector	None	×	40-pin connectors for external wiring are sold separately.
Applicable so terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
I/O module	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
power		55mA(at 24V)	60mA or less	Δ	The current consumption increases. The current capacity needs to be
supply	Current	50(a. 2 · · ·)	(24VDC when all points are ON)		reconsidered.
supply External dime		55(H) × 166(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	' '

5.2.3 I/O Module Specifications Comparison

(1) Specifications comparison between AX10Y10C and AJ65SBTB2N-16A+ AJ65SBTB2N-16R

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Speci	fications	AX10Y10C input specifications	AJ65SBTB2N-16A	Compatibility	nange required, × : Not compatible Precautions for replacement
Number of input points		16 points	16 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated input voltage		100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input	current	Approx. 6mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	0	
		05 4- 420 (4.0	85 to 132VAC		
Operating vo	Itage range	85 to 132VAC	(50/60Hz±3%, distortion rate	0	
		(50/60Hz ± 5%)	5% within)		
			100% simultaneously ON		
Maximum nu	mber of	100% simultaneously ON	(at 110VAC)	0	
simultaneous	s input points	(at 110VAC)	60% simultaneously ON		
			(at 132VAC)		
Inrush currer	nt	Max. 200mA, within 1ms	Max. 200mA, within 1ms	0	
ON 11 16	211	(at 132VAC)	(at 132VAC)		
ON voltage/		80V or more/5mA or more	80V or more/5mA or more	0	
OFF voltage	OFF current	30V or less/1mA or less	30V or less/1.7mA or less	0	
Input impeda	ince	Approx. 18k Ω (60Hz),	Approx. 15k Ω (60Hz),	0	
		Approx. 21k Ω (50Hz)	Approx. 18k Ω (50Hz)		
Response	OFF→ON	15ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
time	ON→OFF	30ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
Common ter	minal	16 points/common	16 points/common	0	
arrangement		•	(2-wire type)		
	fications	AX10Y10C output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of o	utput points	16 points	16 points	0	
					Although the insulation methods differ, the
Insulation me	ethod	Photocoupler	Relay	Δ	performance of the insulation
					is the same.
		24VDC 2A	24VDC 2A		
		(resistance load)/point	(resistance load)/point		
Rated load v	oltage/current	240VAC 2A (COS Ω =1)/point	240VAC 2A (COS ϕ =1)/point	0	
		4A/common	8A/common		
Minimum sw	itching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv	vitching voltage	250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical I	ife	20 million times or more	20 million times or more	0	
		Rated switching	Rated switching		
		voltage/current load	voltage/current load		
		100,000 times or more	100,000 times or more		
		200VAC 1.5A, 240VAC 1A	200VAC 1.5A, 240VAC 1A		
		(COS ϕ =0.7) 100,000 times or	(COS ϕ =0.7) 100,000 times or		
Electrical life		more	more	0	
		200VAC 1A, 240VAC 0.5A	200VAC 1A, 240VAC 0.5A		
		(COS $\phi = 0.35$) 100,000 times	(COS $\phi=$ 0.35) 100,000 times		
		or more	or more		
		24VDC 1A, 100VDC 0.1A	24VDC 1A, 100VDC 0.1A		
		(L/R=7 ms) 100,000 times or	(L/R=7 ms) 100,000 times or		
Mavin	itahina	more	more		
Maximum sw frequency	nterling	3,600 times/hr	3,600 times/hr	0	
				1	i

 \bigcirc : Compatible, $\,_{\triangle}\!:$ Partial change required, $\,\times$: Not compatible

Specif	ications	AX10Y10C output specifications	AJ65SBT	B2N-16A	Compatibility	Precautions for replacement
External		24VDC± 10%		ne		
power	Voltage	Ripple voltage 4Vp-p or less	INC	orie	_	
supply	Current	92mA (24VDC, all points ON)	No	ne	_	
Common terminal arrangement		8 points/common	(2-wire	/common e type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.
Specif	ications	AX10Y10C	AJ65SBTB 2N-16A	AJ65SBTB 2N-16R	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	lication	ON indication (LED)	ON indication (LED)		0	
External conr	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so	lderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		×	Change in wiring is required.
I/O madula	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
I/O module power supply	Current	74mA (at 24VDC TYP.)	40mA or less (24VDC when all points are ON)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dimensions		170(H) × 64(W) × 80(D) mm	54(H) × 179(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.66kg	0.25kg	0.35kg	0	

(2) Specifications comparison between AX10Y22C and AJ65SBTB2N-16A+ AJ65SBTB2N-16S

		O: Compatible, △: Partial change required, ×: Not compa					
	ications	AX10Y22C input specifications	AJ65SBTB2N-16A	Compatibility	Precautions for replacement		
Number of input points		16 points	16 points	0			
Insulation method		Photocoupler	Photocoupler	0			
Rated input v	roltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0			
Rated input of	urrent	Approx. 6mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	0			
		85 to 132VAC	85 to 132VAC				
Operating vo	Itage range	(50/60Hz±5%)	(50/60Hz \pm 3%, distortion rate	0			
		(50/00112 ± 570)	5% within)				
			100% simultaneously ON				
Maximum nu		60% simultaneously ON	(at 110VAC)	0			
simultaneous	input points	(at 110VAC)	60% simultaneously ON				
			(at 132VAC)				
Inrush curren	t	Max. 200mA, within 1ms	Max. 200mA, within 1ms	0			
011 - 11 16	N	(at 132VAC)	(at132VAC)				
ON voltage/C		80V or more/5mA or more	80V or more/5mA or more	0			
OFF voltage/	OFF current	30V or less/1mA or less	30V or less/1.7mA or less	0			
Input impeda	nce	Approx. 18k Ω (60Hz), Approx.	Approx. 15k Ω (60Hz), Approx.	0			
		21k Ω (50Hz)	18k Ω (50Hz)				
Response	OFF→ON	15ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0			
time	ON→OFF	30ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0			
Common terr	ninal	40 into /	16 points/common	_			
arrangement		16 points/common	(2-wire type)	0			
Specif	fications	AX10Y22C output specifications	AJ65SBTB2N-16S	Compatibility	Precautions for replacement		
Number of ou	utput points	16 points	16 points	0			
Insulation me	thod	Photocoupler	Photocoupler	0			
Rated load ve	oltage	100-240VAC, 40 to 70Hz	100-240VAC,50/60Hz \pm 5%	0			
Maximum loa	id voltage	264VAC	264VAC	0			
Maximum loa	d current	0.3A/point 75% simultaneously ON	0.6A/point 4.8A/common	0			
NAi-sia-sua- I	- 1	18VAC 10mA,	50VAC 100mA,				
Minimum loa		100VAC 10mA,	100VAC 10mA,	0			
voltage/curre	iii.	240VAC 10mA	240VAC 10mA				
Maximum inr	ush current	20A 10ms or less	25A, 10ms or less	0			
Leakage curr	ent at OFF	Approx.1.5mA(120VAC,60Hz) Approx.3.0mA(240VAC,60Hz)	1.5mA (100VAC, 60Hz) 3.0mA (200VAC, 60Hz)	0			
		1.5V or less (100 to 300mA)	0.01111 (1200 1710, 00112)				
Maximum vo	tage drop at	1.8V or less (50 to 100mA)	1.5V or less (at 0.6A)	0			
ON		2.5V or less (10 to 50mA)	(2000)				
Response	OFF→ON	1ms or less	1ms or less	0			
time	ON→ OFF	0.5Hz+1ms or less	1/2 cycle + 1ms or less	0			
Surge suppre	essor	CR absorber (0.01 μ F+68 Ω)	CR absorber (0.01 μ F+47 Ω)	0			
Common terminal arrangement		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not		
					possible.		

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Speci	fications	AX10Y22C	AJ65SBTB 2N-16A	AJ65SBTB 2N-16S	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	(1 station ×	ation 32 points × 2 ules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indica	tion (LED)	0	
External con	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	supply 7-point teri (M3 × 5. I/O 34-point ter	module power parts: minal block 2 screws) part: minal block 2 screws)	×	Change in wiring is required.
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable setterminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	(conforming t	1.25-3 o JIS C 2805) -3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
power supply	Current	116mA (at 24V TYP.)	40mA or less (24VDC when all points are ON)	85mA or less (24VDC with all points ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.68kg	0.25kg	0.35kg	0	

(3) Specifications comparison between AX40Y10C and AJ65SBTB1-16D+ AJ65SBTB2N-16R

Specif	ications	AX40Y10C input specifications	AJ65SBTB1-16D	Compatibility	hange required, × : Not compatible Precautions for replacement
Specifications Number of input points		16 points	16 points	Ompatibility	r recautions for replacement
Insulation method		Photocoupler	Photocoupler	0	
Rated input voltage		12VDC/24VDC	24VDC		12VDC cannot be used.
Rated input of		Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ Ο	12000 darmet be deed.
reated input o	unent	10.2 to 31.2VDC	19.2 to 26.4VDC	0	<u> </u>
Operating vo	tage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu simultaneous		100% simultaneously ON (at 26.4VDC)	100% simultaneously ON	0	
ON voltage/C		8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/		4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistar		Approx. 3.3k Ω	Approx. 3.3k Ω	0	
Input method		Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	Δ	The second times differ
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	Δ	The response times differ.
Common terr	ninal	16 points/common	16 points/common	0	
	ications	AX40Y10C output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of ou	itput points	16 points	16 points	0	
Insulation me		Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
		24VDC 2A	24VDC 2A		
Rated load		(resistance load)/point	(resistance load)/point		
voltage/curre	nt	240VAC 2A(COS $\phi=$ 1)/point	240VAC 2A (COS $\phi=$ 1)/point	0	
		4A/common	8A/common		
Minimum swi	tching load	5VDC 1mA	5VDC 1mA	0	
Maximum sw	itching voltage	250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical li	fe	20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1 A (COS $\phi=0.7$) 100000 times or more 200VAC 1A, 240VAC 0.5A (COS $\phi=0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1 A ($\cos\phi=0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos\phi=0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos\phi=0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos\phi=0.35$) 100,000 times or more	0	
Maximum sw frequency	itching	3,600 times/hr	3,600 times/hr	0	
External	Voltage	24VDC ± 10%	None		
power	Voltage	Ripple voltage 4Vp-p or less	None	_	
supply	Current	92mA (24VDC all points ON)	None	-	
Surge suppre	essor	None	None	0	
Common terminal arrangement		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.

Specif	fications	AX40Y10C	AJ65SBTB1-16D	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of oc stations (num occupied poi	nber of	4 stations (4 stations × 8 points)	(1 station ×	ation 32 points × 2 ules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	dication	ON indication (LED)	ON indica	tion (LED)	0	
Operation indication External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	re size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
power supply	Current	72mA (at 24V TYP.)	35mA or less (24VDC) when all points are ON)	120mA or less (24VDC) when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 118(W) × 40(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.18kg	0.35kg	0	

(4) Specifications comparison between AX40Y10C and AJ65DBTB1-32DR

		○: Compatible, △: Partial change required, ×: Not compa						
Specifications		AX40Y10C input specifications	AJ65DBTB1-32DR input specifications	Compatibility	Precautions for replacement			
Number of input points		16 points	16 points	0				
Insulation method		Photocoupler	Photocoupler	0				
Rated input v	roltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.			
Rated input of	urrent	Approx. 3mA/Approx. 7mA	Approx. 5mA	Δ	Rated input current is smaller. * 1			
Operating vo	Itage range	10.2 to 31.2VDC (ripple ratio within 5%)	20.4 to 31.2VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.			
Maximum nu simultaneous		100% simultaneously ON (at 26.4VDC)	100% (at 26.4VDC)	0				
ON voltage/C		8V or more/2mA or more	15V or more/3mA or more	^	12VDC cannot be used.			
OFF voltage/		4V or less/1mA or less	5V or less/1.5mA or less	Δ	12VDC cannot be used.			
Of F Voltage/	Of F Current	TV OI 1633/ TITA OI 1633	37 of less/1.5mA of less	Δ	Input resistance becomes			
Input resistar	nce	Approx. 3.3k Ω	Approx. 4.7k Ω	Δ	higher. *1			
Input method		Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0				
Response	OFF→ON	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0				
time	ON→ OFF	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0				
Common terr		, ,	16 points/common (2 points)					
arrangement		16 points/common	(terminal block 1-wire type)	0				
		AX40Y10C output	AJ65DBTB1-32DR output					
Specif	ications	specifications	specifications	Compatibility	Precautions for replacement			
Number of ou	utput points	16 points	16 points	0				
Insulation me	thod	Photocoupler	Photocoupler	0				
		24VDC 2A	24VDC 2A					
Data d Janet	-	(resistance load)/point	(resistance load)/point					
Rated load vi	oltage/current	240VAC 2A(COS $\phi = 1$)/point	240VAC 2A (COS $\phi=1$)/point	0				
		4A/common (2A/terminal)	4A/common (2A/terminal)					
Minimum swi	tching load	5VDC 1mA	5VDC 1mA	0				
Maximum sw	itching voltage	250VAC, 110VDC	264VAC, 125VDC	0				
Response	OFF→ON	10ms or less	10ms or less	0				
time	ON→ OFF	12ms or less	12ms or less	0				
Mechanical li		20 million times or more	20 million times or more	0				
- Woonamourn		Rated switching	Rated switching					
		voltage/current load	voltage/current load					
		100,000 times or more	100,000 times or more					
		200VAC 1.5A, 240VAC 1 A	200VAC 1.5A, 240VAC 1 A					
		$(COS \phi = 0.7) 100,000 \text{ times or}$	$(COS \phi = 0.7) 100,000 \text{ times or}$					
		more	more					
Electrical life		200VAC 1A, 240VAC 0.5A	200VAC 1A, 240VAC 0.5A	0				
		$(COS \phi = 0.35) 100,000 \text{ times}$	$(COS \phi = 0.35) 100,000 \text{ times}$					
		or more	or more					
		24VDC 1A, 100VDC 0.1A	24VDC 1A, 100VDC 0.1A					
		(L/R=7 ms) 100,000 times or	(L/R=7 ms) 100,000 times or					
		more	more					
Maximum switching frequency		3,600 times/hr	3,600 times/hr	0				
External		24VDC± 10%	24VDC ± 10%					
power	Voltage	Ripple voltage 4Vp-p or less	Ripple voltage 4Vp-p or less	0				
			90mA (24VDC all points ON)	0				
supply	Current	92mA (24VDC all points ON)						
		None 92mA (24VDC all points ON)	None None					
Surge suppre	essor		, , , , ,	0				

O: Compatible, △: Partial change required, ×: Not compatible

Speci	fications	AX40Y10C	AJ65DBTB1-32DR	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	
Operation inc	dication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	0	The number of applicable solderless terminals inserted is within two.
Applicable w	ire size	0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable so	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) RAV2-3.5	0	
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	72mA (at 24V TYP.)	60mA or less (24VDC, when all points are ON)	0	
External dime	ensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.65kg	0.65kg	0	

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32D.

(5) Specifications comparison between AX40Y10C and AJ65SBTB32-16DR

		○: Compatible, △: Partial change required, ×: Not comp						
Specifications		AX40Y10C input specifications	AJ65SBTB32-16DR input specifications	Compatibility	Precautions for replacement			
Number of in	put points	16 points	8 points	×	When nine or more points are used, use two AJ65SBTB32-16DR modules.			
Insulation me	thod	Photocoupler	Photocoupler	0				
Rated input v	roltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.			
Rated input o	urrent	Approx. 3mA/Approx. 7mA	Approx. 7mA	0				
Operating vol	Itage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.			
Maximum nui		100% simultaneously ON (at 26.4VDC)	100%	0				
ON voltage/C	N current	8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.			
OFF voltage/	OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.			
Input resistan	nce	Approx. 3.3k Ω	Approx. 3.3k Ω	0				
Input method		Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0				
Response	OFF→ON	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0				
time	ON→ OFF	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0				
Common terr			8 points/common	Ü				
arrangement		16 points/common	(terminal block 3-wire type)	0				
-		AX40Y10C output	AJ65SBTB32-16DR output	0				
Specif	ications	specifications	specifications	Compatibility	Precautions for replacement			
Number of ou	utput points	16 points	8 points	×	When nine or more points are used, use two AJ65SBTB32-16DR modules.			
Insulation me	ethod	Photocoupler	Relay	Δ	Although the insulation method differs, the insulation performance is the same.			
Rated load		24VDC 2A (resistance load)/point	24VDC 2A (resistance load)/point	0				
voltage/curre	nt	240VAC 2A(COS $\phi=$ 1)/point	240VAC 2A (COS $\phi=$ 1)/point					
		4A/common (2A/terminal)	4A/common					
Minimum swi	tching load	5VDC 1mA	5VDC 1mA	0				
Maximum sw	itching voltage	250VAC, 110VDC	264VAC, 125VDC	0				
Response	OFF→ON	10ms or less	10ms or less	0				
time	ON→OFF	12ms or less	12ms or less	0				
Mechanical li	fe	20 million times or more	20 million times or more	0				
		Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1 A (COS $\phi = 0.7$) 100,000 times or	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1 A (COS $\phi = 0.7$) 100,000 times or					
Electrical life		more 200VAC 1A, 240VAC 0.5A (COS $\phi=0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	more 200VAC 1A, 240VAC 0.5A (COS $\phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	0				
Maximum sw	itching	3,600 times/hr	3,600 times/hr	0				
frequency	itoriing	3,000 times/iii						
	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	None	-				
frequency External	-	24VDC ± 10%	None None	-				
frequency External power	Voltage Current	24VDC ± 10% Ripple voltage 4Vp-p or less		- - 0				

Speci	fications	AX40Y10C	AJ65SBTB32-16DR	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 4 modules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required. The number of applicable solderless terminals inserted is within two.
Applicable w	ire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	72mA (at 24V TYP.)	85mA or less (24VDC, when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.28kg	0	



(6) Specifications comparison between AX40Y50C and AJ65SBTB1-32DT2

○: Compatible, △: Partial change required, ×: Not on						
Specif	ications	AX40Y50C input specifications	AJ65SBTB1-32DT2 input specifications	Compatibility	Precautions for replacement	
Number of input points		16 points	16 points	0		
Insulation me	thod	Photocoupler	Photocoupler	0		
Rated input v	oltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.	
Rated input of	urrent	Approx.3mA/Approx.7mA	Approx. 7mA	0		
0		10.2 to 31.2VDC	19.2 to 26.4VDC		10)/D0	
Operating vo	rage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.	
Maximum nu	mber of	60% simultaneously ON	1000/ simultanequals ON	_		
simultaneous	input points	(at 26.4VDC)	100% simultaneously ON	0		
ON voltage/C	N current	8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.	
OFF voltage/	OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.	
Input resistar	ice	Approx. 3.3k Ω	Approx. 3.3k Ω	0		
-		Positive common	Positive common			
Input method		(sink type)	(sink type)	0		
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0		
time	ON→ OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0		
	ON→OFF	Toms or less (at 24 v DC)	1.3113 01 less (at 24 v b c)	U	As input common and output	
Common terr	minal		32 points/common		common are shared, wiring a	
	ııııaı	16 points/common	32 points/common (Common shared by I/O)	Δ	, ,	
arrangement					different voltage for each	
		A VAOVEOC output	A ICECRIDA 22DT2 output		common is not possible.	
Specif	ications	AX40Y50C output specifications	AJ65SBTB1-32DT2 output specifications	Compatibility	Precautions for replacement	
Number of ou	itaut points	16 points	16 points			
Insulation me		Photocoupler	Photocoupler	0		
		12VDC/24VDC	24VDC	0	12)/DC connet be used	
Rated load vo		12VDC/24VDC		Δ	12VDC cannot be used.	
Operating loa	id voitage	10.2 to 31.2VDC	19.2 to 26.4VDC	Δ	12VDC cannot be used.	
range		0.3A/point 75% simultaneously	(ripple ratio within 5%)			
Maximum loa	d current	O.SA/point 75% simultaneously	0.5A/point, 3.6A/common	0		
Maximum inr	uch current	1.2A 10ms or less	1.0A, 10ms or less	0		
			<u> </u>	0		
Leakage curr		0.1mA or less	0.1mA or less	0		
Maximum vol	tage drop at	0.9VDC or less (TYP.) 0.3A	0.3VDC or less (TYP.) 0.5A	0		
	.d	1.5VDC or less (MAX.) 0.3A	0.6VDC or less (MAX.) 0.5A			
Output metho		sink type	sink type	0		
Response	OFF→ON	2ms or less	0.5ms or less	0		
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0		
External	Voltage	10.2 to 31.2VDC	19.2 to 26.4VDC	_	12VDC cannot be used.	
power	voltage	10.2 to 01.2 100	(ripple ratio within 5%)	Δ	12 V D G Garmet De accu.	
supply	Current	64mA (24VDC)	30mA or less (24VDC)	0		
Surge suppressor		Zener diode	Zener diode	0		
Common terminal arrangement		16 points/common	32 points/common (I/O shared)	Δ	As input common and output common are shared, wiring a different voltage for each common is not possible.	

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Specifications		AX40Y50C	AJ65SBTB1-32DT2	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	
Operation inc	dication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	74mA (at 24V TYP.)	60mA or less (24VDC when all points are ON)	0	
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.25kg	0	

(7) Specifications comparison between AX40Y50C and AJ65DBTB1-32DT1

				oatible, <u>∆</u> : Partial cl	hange required, \times : Not compatible
Speci	fications	AX40Y50C input specifications	AJ65DBTB1-32DT1 input specifications	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input v	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of	current	Approx.3mA/Approx.7mA	Approx. 5mA	Δ	Rated input current is smaller.*1
Operating vo	Itage range	10.2 to 31.2VDC (ripple ratio within 5%)	20.4 to 31.2VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu	mber of	60% simultaneously ON	100%	_	
simultaneous	input points	(at 26.4VDC)	(at 26.4VDC)	0	
ON voltage/0	ON current	8V or more/2mA or more	15V or more/3mA or more	Δ	12VDC cannot be used.
OFF voltage	OFF current	4V or less/1mA or less	5V or less/1.5mA or less	Δ	12VDC cannot be used.
Input resistar	nce	Approx. 3.3k Ω	Approx. 4.7k Ω	0	Input resistance becomes higher.*1
Input method	I	Positive common (sink type)	Positive common (sink type)	0	
Response	OFF→ON	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0	
Common terr	minal	16 points/common	16 points/common (2 points) (terminal block 1-wire type)		
Speci	fications	AX40Y50C output specifications	AJ65DBTB1-32DT1 output specifications	Compatibility	Precautions for replacement
Number of o	utput points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated load v	oltage	12VDC/24VDC	12VDC/24VDC	0	
Operating loa	ad voltage	10.2 to 31.2VDC	10.2 to 31.2VDC (ripple ratio within 5%)	0	
Maximum loa	ad current	0.3A/point 75% simultaneously ON	0.5A/point, 4A/common (2A/terminal)	0	
Maximum inr	ush current	1.2A 10ms or less	1.2A, 10ms or less	0	
Leakage cur	rent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	Itage drop at	0.9VDC or less (TYP.) 0.3A 1.5VDC or less (MAX.) 0.3A	0.3VDC or less (TYP.) 0.5A 0.6VDC or less (MAX.) 0.5A	0	
Output meth	od	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→ OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
External	Voltage	10.2 to 31.2VDC	10.2 to 31.2VDC (ripple ratio within 5%)	0	
power supply Current		64mA (24VDC)	30mA or less (24VDC, when all points are ON) External load current not included	0	
Surge suppre	essor	Zener diode	Zener diode	0	
Common terrarrangement		16 points/common	16 points/common (2 points) (terminal block 1-wire type)	0	

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Speci	Specifications AX40Y50C		AJ65DBTB1-32DT1	Compatibility	Precautions for replacement
Number of or stations (nun occupied poi	nber of	4 stations 1 station (4 stations × 8 points) (1 station × 32 points)		0	
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included 50-point terminal block (M3.5 × 7 screws) Transmission circuit part included		0	The number of applicable solderless terminals inserted is within two.
Applicable w	ire size	0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable so	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	R1.25-3.5 (conforming to JIS C 2805) RAV2-3.5	0	
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	74mA (at 24V TYP.) 55mA or less (24VDC when all points an		0	
External dim	ensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.65kg	0.65kg	0	

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32DT1.

(8) Specifications comparison between AX80Y10C and AJ65SBTB1-16D+ AJ65SBTB2N-16R

O : Com	notible A · D	lartial abanga	roquired v :	Not compatible
O. Com	palible, 🛆 . F	artial Change	required, x.	Not compatible
_				

Specif	ications	AX80Y10C input specifications	AJ65SBTB1-16D	Compatibility	nange required, × : Not compatible Precautions for replacement
Number of input points		16 points	16 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated input v	roltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	0	
		10.2 to 31.2VDC	19.2 to 26.4VDC		40) (50)
Operating vo	itage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu simultaneous		100% simultaneously ON (at 26.4VDC)	100% simultaneously ON	0	
ON voltage/C	N current	8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/	OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistar	nce	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
		Positive/negative common	Positive/negative common		
Input method	l	shared type	shared type	0	
		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common terr		16 points/common	16 points/common	0	
_	fications	AX80Y10C output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of ou	utput points	16 points	16 points	0	
Insulation me		Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
		24VDC 2A	24VDC 2A		
Rated load		(resistance load)/point	(resistance load)/point		
voltage/curre	nt	240VAC 2A (COS ϕ =1)/point	240VAC 2A (COS ϕ =1)/point	0	
		4A/common	8A/common		
Minimum swi	tching load	5VDC 1mA	5VDC 1mA	0	
Maximum sw	itching voltage	250VAC, 110VDC	264VAC, 125VDC	264VAC, 125VDC	
Response	OFF→ON	10ms or less	10ms or less		
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical li	fe	20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS $\phi=0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A (COS $\phi=0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 100,000 times or more	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS $\phi=0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A (COS $\phi=0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 100,000 times or more	0	
Maximum switching frequency		3,600 times/hr	3,600 times/hr	0	
External power	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	None	_	
supply Current		92mA (24VDC all points ON)	None	_	
Surge suppre	essor	None	None	0	
Common terr arrangement		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.

 $\bigcirc \colon \mathsf{Compatible}, \ \ \underline{\wedge} \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

Specif	fications	AX80Y10C	AJ65SBTB1-16D	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of oc stations (num occupied poi	nber of	4 stations (4 stations × 8 points)	(1 station ×	ation 32 points × 2 ules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	dication	ON indication (LED)	ON indica	tion (LED)	0	
External con	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	I/O part: 18-point terminal block	Transmission/ module power supply parts 7 points terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	ire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		×	Change in wiring is required.
I/O modulo	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
I/O module power supply	Current	72mA (at 24V TYP.)	35mA or less (24VDC when all points are ON)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dimensions		170(H) × 64(W) × 80(D) mm	54(H) × 118(W) × 40(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.18kg	0.35kg	0	

(9) Specifications comparison between AX80Y10C and AJ65DBTB1-32DR

				atible, ∆: Partial cl	hange required, \times : Not compatible
Speci	fications	AX80Y10C input specifications	AJ65DBTB1-32DR input specifications	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated input v	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of		Approx.3mA/Approx.7mA	Approx. 5mA	Δ	Rated input current is smaller.
Operating vo	Itage range	10.2 to 31.2VDC (ripple ratio within 5%)	20.4 to 31.2VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu	mher of	100% simultaneously ON	100%		
simultaneous		(at 26.4VDC)	(at 26.4VDC)	0	
ON voltage/0		8V or more/2mA or more	15V or more/3mA or more	^	12VDC cannot be used.
OFF voltage		4V or less/1mA or less	5V or less/1.5mA or less	Δ .	12VDC cannot be used.
Of F Voltage	Or i current	TV 01 less/ IIIIA 01 less	37 of less/1.5mA of less	Δ	Input resistance becomes
Input resistar	nce	Approx. 3.3k Ω	Approx. 4.7k Ω	Δ	higher.*1
		Positive/negative common	Positive/negative common		
Input method	l	shared type	shared type	0	
		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0	
Common terr	minal	40	16 points/common (2 points)	_	
arrangement		16 points/common	(terminal block 1-wire type)	0	
		AX80Y10C output	AJ65DBTB1-32DR output	0	Barrellian (and the same)
Speci	fications	specifications	specifications	Compatibility	Precautions for replacement
Number of o	utput points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
		24VDC 2A	24VDC 2A		
		(resistance load)/point	(resistance load)/point		
Rated load v	oltage/current	240VAC 2A (COS ϕ =1)/point	240VAC 2A (COS φ =1)/point	0	
		4A/common	4A/common (2A/terminal)		
Minimum sw	itching load	5VDC 1mA	5VDC 1mA	0	
	vitching voltage	250VAC, 110VDC	264VAC, 125VDC	0	
	1	10ms or less	10ms or less		
Response	OFF→ON			0	
time	ON→OFF	12ms or less	12ms or less	0	
		Rated switching	Rated switching		
		voltage/current load	voltage/current load		
		100,000 times or more	100,000 times or more		
		200VAC 1.5A, 240VAC 1 A	200VAC 1.5A, 240VAC 1 A		
		(COS $\phi = 0.7$) 100,000 times or	(COS $\phi=$ 0.7) 100,000 times or		
Electrical life		more	more	0	
Licotifical file		200VAC 1A, 240VAC 0.5A	200VAC 1A, 240VAC 0.5A	O	
		(COS $\phi = 0.35$) 100,000 times	(COS $\phi = 0.35$) 100,000 times		
		or more	or more		
		24VDC 1A, 100VDC 0.1A	24VDC 1A, 100VDC 0.1A		
		(L/R=7 ms) 100,000 times or	(L/R=7 ms) 100,000 times or		
		more	more		
Maximum switching		3,600 times/hr	3,600 times/hr		
frequency		0,000 times/m	0,000 times/m	0	
External		24VDC ± 10%	24VDC ± 10%		
External	Voltage	Ripple voltage 4Vp-p or less	Ripple voltage 4Vp-p or less	0	
power	Current	02mA (24)/DC all s sists ON	90mA or less	_	
supply	Current	92mA (24VDC all points ON)	(24VDC all points ON)	0	
Surge suppre	essor	None	None	0	
			Ü		
Common ter	illiai	8 points/common	8 points/common (terminal block 1-wire type)		

 $\bigcirc \colon \mathsf{Compatible}, \ \ \triangle \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \mathsf{x} \colon \mathsf{Not} \ \mathsf{compatible}$

Specit	fications	AX80Y10C	AJ65DBTB1-32DR	Compatibility	Precautions for replacement
Number of oo stations (num occupied poin	nber of	4 stations 1 station (4 stations × 8 points) (1 station × 32 points)		0	
Operation inc	dication	ON indication (LED)	ON indication (LED)	0	
		50-point terminal block	50-point terminal block		The number of applicable
External con	nection method	(M3.5 × 7 screws)	(M3.5 × 7 screws)	0	solderless terminals inserted is
		Transmission circuit part included	Transmission circuit part included		within two.
Applicable wi	re size	0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable so terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	R1.25-3.5 (conforming to JIS C 2805) RAV2-3.5	0	
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	72mA (at 24V TYP.)	60mA or less (24VDC when all points are ON)	0	
External dime	ensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.65kg	0.65kg	0	

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32DR.

(10) Specifications comparison between AX80Y14CEU and AJ65SBTB1-16D +AJ65SBTB2N-16R

		A VOOVA 40 FILL in must	O: Comp	hange required, × : Not compatible	
Speci	fications	AX80Y14CEU input specifications	AJ65SBTB1-16D	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input	oltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	0	
Operating vo	Itage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu		60% simultaneously ON (at 26.4VDC)	100% simultaneously ON	0	
ON voltage/0		8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage		4V or less/1mA or less	6V or less/1.7mA or less		12VDC cannot be used.
Input resistar		Approx. 3.3k Ω	Approx. 3.3k Ω	Ο Ο	12120 0011110(20 00001
Input method		Positive/negative common shared type (sink/source shared type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→ OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common ter arrangement		16 points/common	16 points/common	0	
Speci	fications	AX80Y14CEU output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of o	utput points	12 points	16 points	0	
Insulation me	ethod	Photocoupler	Relay $ riangle$		Although the insulation methods differ, the performance of the insulation is the same.
Rated load v	oltage/current	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 5A/common	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 8A/common	0	
Minimum sw	itching load	5VDC 10mA	5VDC 1mA	0	
Maximum sw	vitching voltage	264VAC 125VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→ OFF	12ms or less	12ms or less	0	
Mechanical I		20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 200,000 times or more 200VAC 2A, 240VAC 1.8A (COS $\phi=0.7$)200,000 times or more 200VAC 1.1A,	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS $\phi=0.7$) 100000 times or more 200VAC 1A, 240VAC 0.5A	Δ	Reduce the exchange intervals of the modules as Mechanical/
		$240 \text{VAC } 0.9 \text{A}$ (COS $\phi = 0.35$)200,000 times or more 24 VDC 1.1A, 100 VDC 0.1A (L/R=7ms) 200,000 times or more	$(\cos \phi = 0.35) \ 100,000 \ {\rm times}$ or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more		half.
Maximum sw frequency	ritching	3,600 times/hr	3,600 times/hr	0	
External power	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	None	-	
supply	Current	118mA (24VDC all points ON)	None	_	
Surge suppre	essor	None	None		

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Specif	ications	AX80Y14C specific		AJ65SBT	B2N-16R	Compatibility	Precautions for replacement
Common terr arrangement		8 points/common 4 points/common			16 points/common (2-wire type)		As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.
Dielectric withstand voltage		AC external batch-Relay drive power supply-internal 5V circuit	AC2,830Vrms/ 3 cycle (elevation 2,000m)	Between AC external terminal batch and ground	AC2,830Vrms/ 3 cycle (elevation 2,000m)	0	
		Relay drive power supply, internal 5V circuit	500VDC/ minute	Between DC external batch and ground	500VDC/ minute	0	
Insulation resistance		10M Ω or m insulation resi		insulation res 10M Ω Between DC ex ground 500\ insulation res	/DC with the istance tester or more ternal batch and /DC with the	0	
Specif	ications	AX80Y14CEU		AJ65SBTB1-16D	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of oc stations (num occupied poin	nber of	4 stations (4 stations × 8 points)		1 station (1 station × 32 points × 2 modules)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	dication	ON indicat	ion (LED)	ON indication (LED)		0	reconsidered.
	nection method	Transmission circuit part included		block (M3 × 5.2 screws)	I/O part: 34-point terminal block (M3 × 5.2 screws)	х	Change in wiring is required.
Applicable wi	re size	0.75 to	2mm ²		2mm ²	0	
Applicable so terminal	olderless	R1.25-3.5 RAV1.25-3.5		(conforming to	1.25-3 o JIS C 2805) -3SL, TGV2-3N	×	Change in wiring is required.
	Voltage	15.6 to 3	1.2VDC	20.4 to 2 (ripple ratio	26.4VDC within 5%)	Δ	The operating voltage range differs.
I/O module power supply	Current	73mA (at 2	24V TYP.)	35mA or less (24VDC when all points are ON)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dime	ensions	170(H) × 64(W		54(H) × 118(W) × 40(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65	ikg	0.18kg	0.35kg	0	

(11) Specifications comparison between AX80Y80C and AJ65SBTB1-16D+ AJ65SBTB1-16TE

					nange required, × : Not compatible
	ications	AX80Y80C input specifications	AJ65SBTB1-16D	Compatibility	Precautions for replacement
Number of in		16 points	16 points O		
Insulation method		Photocoupler	Photocoupler	0	
Rated input v	roltage	12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of	urrent	Approx. 3mA/Approx. 7mA	Approx. 7mA	0	
Operating vo	Itage range	10.2 to 31.2VDC	19.2 to 26.4VDC	Δ	12VDC cannot be used.
		(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	.2.20 000120 0000.
Maximum nu		60% simultaneously ON	100% simultaneously ON	0	
simultaneous		(at 26.4VDC)	,	Ů	
ON voltage/0		8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/	OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistar	ice	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
		Positive/negative common	Positive/negative common		
Input method		shared type	shared type	0	
		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	Δ	The reasone time -
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	Δ	The response times differ.
Common teri		, ,	, ,		
arrangement		16 points/common	16 points/common	0	
_	ications	AX80Y80C output specifications	AJ65SBTB1-16TE	Compatibility	Precautions for replacement
Number of or	utput points	16 points	16 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated load v	oltage	24VDC	12/24VDC	0	
Operating loa	ad voltage	01.01.00.000	10.01.00.000		
range		21.6 to 26.4VDC	10.2 to 26.4VDC	0	
		0.5A/point, 60% simultaneously ON	0.1A/point 1.6A/common		The maximum load current per
Maximum loa	d current			×	point becomes lower. Pay
IVIAXIIIIUIII IUd	iu current				attention to the selection of the
					load to be used.
					The inrush current value
Maximum inr	ush current	2A 10ms or less	1A 10ms or less	×	differs. Pay attention to the
					selection of the load used.
Leakage curi		0.1mA or less	0.1mA or less	0	
Maximum vo	tage drop at	0.9VDC or less (TYP.) 0.5A	0.1VDC or less (TYP.) 0.1A	0	
ON		1.5VDC or less (MAX.) 0.5A	0.2VDC or less (MAX.) 0.1A		
Output metho	od	Source type	Source type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
	Voltage	21.6 to 26.4 \(\text{IDC}\)	10.2 to 26.4VDC		
External	Voltage	21.6 to 26.4VDC	(ripple ratio within 5%)	0	
power supply Current					The current consumption
		10mA (24VDC)	30mA or less (24VDC)		increases. The current
Supply	Ourient	10111/1 (24780)	30m/ 01 1633 (24VBO)	Δ	capacity needs to be
					reconsidered.
Surge suppre		Zener diode	Zener diode	0	
Common teri	ninal	16 points/common	16 points/common	0	
arrangement					1

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Speci	fications	AX80Y80C	AJ65SBTB1-16D	AJ65SBTB1-16D AJ65SBTB1-		Precautions for replacement
Number of o stations (nur occupied poi	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indica	tion (LED)	0	
External con	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	(M3.5 × 7 screws) (M3 × 5.2 screws) × Chan		Change in wiring is required.	
Applicable w	vire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC		20.4 to 26.4VDC (ripple ratio within 5%)		The operating voltage range differs.
power supply	Current	82mA (at 24V TYP.)	35mA or less (24VDC when all points are ON) ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	ensions	170(H) × 64(W) × 80(D) mm	() (V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.1	вкд	0	

(12) Specifications comparison between AX80Y80C and AJ65SBTB1-32DTE1

				atible, <u>∆</u> : Partial cl	hange required, ×: Not compatible
Specif	fications	AX80Y80C input specifications	AJ65SBTB1-32DTE1 input specifications	Compatibility	Precautions for replacement
Number of input points		16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input v	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	0	
Operating vo	Itage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu simultaneous		60% simultaneously ON (at 26.4VDC)	100%	0	
ON voltage/C		8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/		4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistar		Approx. 3.3k Ω	Approx. 3.3k Ω	0	
Input method		Positive/negative common shared type (sink/source shared type)	Negative common (Source type)	Δ	A positive common input method is not supported.
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→ OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common terr	minal	16 points/common	32 points/common (terminal block 1-wire type)	Δ	Input and output shares common.
-	fications	AX80Y80C output specifications	AJ65SBTB1-32DTE1 output specifications	Compatibility	Precautions for replacement
Number of ou	utput points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler O		
Rated load v	oltage	24VDC	24VDC	0	
Operating loa	ad voltage	21.6 to 26.4VDC	19.2 to 26.4VDC (ripple ratio within 5%)	0	
Maximum loa	ad current	0.5A/point, 60% simultaneously ON	0.5A/point 3.6A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum inr	ush current	2A 10ms or less	1A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leakage curr	rent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	Itage drop at	0.9VDC or less (TYP.) 0.5A 1.5VDC or less (MAX.) 0.5A	0.5VDC or less (TYP.) 0.5A 0.8VDC or less (MAX.) 0.5A	0	
Output metho	od	Source type	Source type	0	
Response			0.5ms or less	0	
time	ON→ OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
Voltage External		21.6 to 26.4VDC	19.2 to 26.4VDC (ripple ratio within 5%)	0	
power	Current	10mA (24VDC)	10mA or less (TYP.24VDC, per common) External load current not included	0	
Surge suppre	essor	Zener diode	Zener diode	0	
Common terr		16 points/common	32 points/common (terminal block 1-wire type)	Δ	Input and output shares common.

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Speci	Specifications AX80Y80C AJ65SBTB1-32DTE1		Compatibility	Precautions for replacement	
Number of o stations (nur occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External con	nection method	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required. The number of applicable solderless terminals inserted is within two.
Applicable w	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable se	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power	Current	82mA (at 24V TYP.)	50mA or less (24VDC when all points are ON)	0	
External dim	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.26kg	0	



(13) Specifications comparison between AJ35PTF-28AR and AJ65SBTB2N-16A + AJ65SBTB2N-16R

Specifi	cations	AJ35PTF-28AR input specifications	AJ65SBTB2N-16A	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input v	oltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input of	current	10mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	Δ	Rated input current is smaller.*1
		85 to 132VAC	85 to 132VAC		
Operating vol	Itage range	(50/60Hz ± 5%)	(50/60Hz ± 3%, distortion rate within 5%)	0	
Maximum nu simultaneous		100% simultaneously ON	100% simultaneously ON (at 110VAC) 60% simultaneously ON (at 132VAC)	Δ	Use within specification range.
Inrush curren	nt	Max. 300mA, within 0.3ms (132VAC)	Max. 200mA, within 1ms (132VAC)	0	
ON voltage/C	ON current	80V or more/6mA or more	80V or more/5mA or more	0	
OFF voltage/	OFF current	40V or less/4mA or less	30V or less/1.7mA or less	Δ	OFF current has been reduced.*1
Input impeda	nce	Approx. $10k \Omega$ (60Hz), Approx. $12k \Omega$ (50Hz)	Approx. $15k \Omega$ (60Hz), Approx. $18k \Omega$ (50Hz)	Δ	Input impedance has increased.*1
Response	OFF → ON	15ms or less (6ms TYP.)	20ms or less (100VAC, 60Hz)	0	
time	ON → OFF	25ms or less (16ms TYP.) 20ms or less (100VAC, 60Hz)		0	
Common terr arrangement		16 points/common	16 points/common (2-wire type)	0	

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Specifications		AJ35PTF-28AR output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of ou	utput points	12 points	16 points	0	
Insulation me	ethod	Photocoupler	Relay isolation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
	oltage/current	24VDC 2A (resistance load)/ point 240VAC 2A (COS ϕ = 1)/point 5A/common	24VDC 2A (resistance load)/ point 240VAC 2A (COS ϕ = 1)/point 8A/common	Δ	Use caution on the common current.
Minimum swi	•	5VDC 1mA	5VDC 1mA	0	
Maximum sw voltage	ritching	264VAC, 125VDC	264VAC, 125VDC	0	
Response	OFF → ON	10ms or less	10ms or less	0	
time	ON → OFF	12ms or less	12ms or less	0	
Mechanical li	fe	20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 200000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ = 0.7) 200000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ = 0.35) 200000 times or more 24VDC 1A, 100VDC 0.1A (L/R = 7 ms) 200000 times or more	Rated switching voltage/current load 100000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ = 0.7) 100000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ = 0.35) 100000 times or more 24VDC 1A, 100VDC 0.1A (L/R = 7 ms) 100000 times or more	Δ	Reduce the exchange intervals of the modules as Mechanical/Electrical Life is cut to about half.
Maximum sw frequency	ritching	3600 times/hr	3600 times/hr	0	
External power	Voltage	age 24VDC ± 10% None Ripple voltage 4Vp-p or less		-	
supply Current		110mA (24VDC, all points ON)	None	-	
Surge suppre	essor	None	None	0	
Common terminal arrangement		8 points/common, 3 points/ common, 1-point independent contact	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 3 commons to 16 points/ common, wiring with a different voltage per common is not possible.

 $\bigcirc \colon \mathsf{Compatible}, \ \ \underline{\wedge} \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

Speci	fications	AJ35PTF-28AR	AJ65SBTB2N- 16A	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of o stations (nu occupied po	mber of	4 stations (4 stations × 8 points)	points × 2	station × 32 2 modules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	ndication	ON indication (LED)		tion (LED)	0	
External cor method	nnection	Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable v	wire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable s	solderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	28 V2-I RAP2	forming to JIS C 05) MS3, 2-3SL, 2-3N,	Δ	In some cases, the solderless terminal must be changed.
I/O	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
module power supply	Current	120mA	40mA or less (24VDC when all points are ON)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External din	nensions	254(H) × 132(W) × 41(D) mm	() (V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.78kg	0.25kg	0.35kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB2N-16A.

(14) Specifications comparison between AJ35PTF-56AR and AJ65SBTB2N-16A+ AJ65SBTB2N-16R

Specif	ications	AJ35PTF-56AR input specifications	AJ65SBTB2N-16A	Compatibility	Precautions for replacement
Number of in	put points	32 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16A modules.
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input of	urrent	10mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	Δ	Rated input current has been reduced.*1
Operating vo	Itage range	85 to 132VAC (50/60Hz±5%)	85 to 132VAC (50/60Hz± 3%, distortion rate 5% within)	0	
Maximum nu simultaneous		100% simultaneously ON	100% simultaneously ON (at 110VAC) 60% simultaneously ON (at 132VAC)	Δ	Use within specification range.
Inrush curren	t	Max. 300mA, within 0.3ms (132VAC)	Max. 200mA, within 1ms (132VAC)	0	
ON voltage/C	N current	80V or more/6mA or more	80V or more/5mA or more	0	
OFF voltage/	OFF current	40V or less/4mA or less	30V or less/1.7mA or less	Δ	OFF current has been reduced. *1
Input impeda	nce	Approx. $10k \Omega$ (60Hz), Approx. $12k \Omega$ (50Hz)	Approx. $15k \Omega$ (60Hz), Approx. $18k \Omega$ (50Hz)	Δ	Input impedance has increased. *1
Response	onse OFF→ON 15ms or less (6ms TYP.) 20ms or less (100VAC, 60Hz)		0		
time	ON→OFF	25ms or less (16ms TYP.)	20ms or less (100VAC, 60Hz)	0	
Common terr		16 points/common	16 points/common (2-wire type)	0	

 \bigcirc : Compatible, $\,_{\triangle}\!:$ Partial change required, $\,\times$: Not compatible

O. Companie, A. Fartial change required,					
Specif	ications	AJ35PTF-56AR output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of or	utput points	24 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16R modules.
Insulation me	thod	Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load v	oltage/current	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 5A/common	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 8A/common	Δ	Use caution on the common current.
Minimum swi	tching load	5VDC 1mA	5VDC 1mA	0	
Maximum sw	itching voltage	264VAC, 125VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→ OFF	12ms or less	12ms or less	0	
Mechanical li	fe	20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 200,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A ($\cos \phi = 0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more	Δ	Reduce the exchange intervals of the modules as Mechanical/ Electrical Life is cut to about half.
Maximum sw frequency	itching	3,600 times/hr	3,600 times/hr	0	
External power	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	None	-	
supply	pply Current 220mA (24VDC, all points ON) None		_		
Surge suppre	essor	None	None	0	
Common terminal arrangement		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Speci	fications	AJ35PTF-56AR	AJ65SBTB2N- 16A	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of or stations (num occupied poi	nber of	8 stations (8 stations × 8 points)	1 station (1 station × 32 points × 4 modules)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indica	tion (LED)	0	
External con	nection method	Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws) 2 pieces	supply 7-point teri (M3 × 5. I/O 34-point ter	module power r parts: minal block 2 screws) part: minal block 2 screws)	×	Change in wiring is required.
Applicable w	ire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
power supply	Current	150mA	40mA or less 120mA or less (24VDC when all points are ON) ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	ensions	254(H) × 190(W) × 41(D) mm	, , ,	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		1.2kg	0.25kg	0.35kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB2N-16A.



(15) Specifications comparison between AJ35PTF-28AS and AJ65SBTB2N-16A + AJ65SBTB2N-16S

Specifications		AJ35PTF-28AS input specifications	AJ65SBTB2N-16A	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input v	oltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input of	current	10mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	Δ	Rated input current is smaller.*1
		85 to 132VAC	85 to 132VAC		
Operating vo	Itage range	(50/60Hz ± 5%)	(50/60Hz ± 3%, distortion rate within 5%)	0	
Maximum nu simultaneous		100% simultaneously ON	100% simultaneously ON (at 110VAC) 60% simultaneously ON (at 132VAC)	Δ	Use within specification range.
Inrush curren	nt	Max. 300mA, within 0.3ms (132VAC)	Max. 200mA, within 1ms (132VAC)	0	
ON voltage/C	ON current	80V or more/6mA or more	80V or more/5mA or more	0	
OFF voltage/	OFF current	40V or less/4mA or less	30V or less/1.7mA or less	Δ	OFF current has been reduced.*1
Input impeda	nce	Approx. 10k Ω (60Hz), Approx. 12k Ω (50Hz)	Approx. $15k \Omega$ (60Hz), Approx. $18k \Omega$ (50Hz)	Δ	Input impedance has increased.*1
Response	OFF → ON	15ms or less (6ms TYP.)	20ms or less (100VAC, 60Hz)	0	
time	ON → OFF	25ms or less (16ms TYP.)	20ms or less (100VAC, 60Hz)	0	
Common terr arrangement		16 points/common	16 points/common (2-wire type)	0	

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Specifications		AJ35PTF-28AS output specifications	AJ65SBTB2N-16S	Compatibility	Precautions for replacement
Number of o	utput points	12 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated load v	oltage	100-240VAC, 40 to 70Hz	100-240VAC, 50/60Hz ± 5%	0	
Maximum loa	ad voltage	264VAC	264VAC	0	
Maximum loa	ad current	0.6A/point, 2.4A/common	0.6A/point, 4.8A/common	0	
Minimum loa	d voltage/	24VAC 100mA, 100VAC 10mA, 240VAC 10mA	50VAC 100mA, 100VAC 10mA, 240VAC 10mA	0	
Maximum ini	rush current	20A 10ms or less, 8A 100ms or less	25A 10ms or less	0	
Leakage cur	rent at OFF	1.5mA (132VAC, 60Hz) 3.0mA (264VAC, 60Hz)	1.5mA (100VAC, 60Hz) 3.0mA (200VAC, 60Hz)	0	
Maximum vo	ltage drop at	1.5V or less (0.1 to 0.6A) 1.8V or less (50 to 100mA) 2.0V or less (10 to 50mA)	1.5V or less (at 0.6A)	0	
Response	OFF → ON	1ms or less	1ms or less	0	
time	ON → OFF	0.5Hz + 1ms or less	1/2 cycle + 1ms or less	0	
Surge suppre	essor	CR absorber (0.022 μ F + 47 Ω)	CR absorber (0.01 μ F + 47 Ω)	0	
Fuse rating		High speed type fuse 3.2A (one fuse /common) HP-32	None	×	The fuse is not built in.*2
Fuse blown i	ndication	Available	None	×	
Common ter arrangement		8 points/common 4 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 2 commons to 16 points/ common, wiring with a different voltage per common is not possible.

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Speci	fications	AJ35PTF-28AS	AJ65SBTB2N- 16A	AJ65SBTB2N- 16S	Compatibility	Precautions for replacement
Number of c stations (nu occupied po	mber of ints)	4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)		tion (LED)	0	
External cor method	nection	Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable s terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	V2-N RAP2	05) MS3,	Δ	In some cases, the solderless terminal must be changed.
I/O	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
module power supply	40mA or less		0			
External din	ensions	254(H) × 132(W) × 41(D) mm	, , , ,	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.25kg	0.35kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB2N-16A.

^{*2:} Install a fuse for each external terminal point to prevent the burnout of the external devices and modules during load shorts. In addition, when a fuse blown indication is necessary, configure an external circuit.

(16) Specifications comparison between AJ35PTF-56AS and AJ65SBTB2N-16A+ AJ65SBTB2N-16S

			O: Comp	oatible,	nange required, × : Not compatible
Specifi	ications	AJ35PTF-56AS input specifications	AJ65SBTB2N-16A	Compatibility	Precautions for replacement
Number of inp	out points	32 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16A modules.
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input c	urrent	10mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	Δ	Rated input current has been reduced.*1
Operating vol	tage range	85 to 132VAC (50/60Hz±5%)	85 to 132VAC (50/60Hz±3%, distortion rate 5% within)	0	
Maximum nur simultaneous		60% simultaneously ON	100% simultaneously ON (at 110VAC) 60% simultaneously ON (at 132VAC)	Δ	Use within specification range.
Inrush current	t	Max. 300mA, within 0.3ms (132VAC)	Max. 200mA, within 1ms (132VAC)	0	
ON voltage/O	N current	80V or more/6mA or more	80V or more/5mA or more	0	
OFF voltage/0	OFF current	40V or less/4mA or less	30V or less/1.7mA or less	Δ	OFF current has been reduced. *1
Input impedar	nce	Approx. $10k \Omega$ (60Hz), Approx. $12k \Omega$ (50Hz)	Approx. 15k Ω (60Hz), Approx. 18k Ω (50Hz)	Δ	Input impedance has increased. *1
Response	OFF→ON	15ms or less (6ms TYP.)	20ms or less (100VAC, 60Hz)	0	
time	ON→OFF	35ms or less (16ms TYP.)	20ms or less (100VAC, 60Hz)	0	
Common term		16 points/common	16 points/common (2-wire type)	0	
Specifi	ications	AJ35PTF-56AS output	AJ65SBTB2N-16S	Compatibility	Precautions for replacement
Number of ou	tput points	specifications 24 points	16 points	×	When seventeen or more points are used, use two
Insulation me		Photocoupler	Photocoupler	0	AJ65SBTB2N-16S modules.
Rated load vo		100 to 240VAC, 40 to 70Hz		0	
Maximum loa		264VAC	100-240VAC, 50/60Hz ± 5% 264VAC	0	
Maximum loa		0.6A/point, 2.4A/common	0.6A/point, 4.8A/common	0	
Minimum load	1	24VAC 100mA, 100VAC 10mA, 240VAC 10mA	50VAC 100mA100VAC 10mA,	0	
voltage/currer		20A 10ms or less	240VAC 10mA 25A 10ms or less	0	
		8A 100ms or less 1.5mA (132VAC, 60Hz)	1.5mA (100VAC, 60Hz)		
Leakage curre	ent at OFF	3.0mA (264VAC, 60Hz) 1.5V or less (0.1 to 0.6A)	3.0mA (200VAC, 60Hz)	0	
Maximum vol	tage drop at	1.8V or less (50 to 100mA) 2.0V or less (10 to 50mA)	1.5V or less (at 0.6A)	0	
Response	OFF→ON	1ms or less	1ms or less	0	
time	ON→OFF	0.5Hz+1ms or less	1/2 cycle + 1ms or less	0	
Surge suppre		CR absorber (0.022 μ F+47 Ω)	CR absorber (0.01 μ F+47 Ω)	0	
Fuse rating Fuse blown indication		High speed type fuse 3.2A (one fuse /common) HP-32	None	×	The fuse is not built in.*2
		Available	None	×	
Common terminal arrangement		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.

Specifi	ications	AJ35PTF-56AS	AJ65SBTB2N- 16A	AJ65SBTB2N- 16S	Compatibility	Precautions for replacement
Number of oc stations (num occupied poir	ber of	8 stations (8 stations × 8 points)	1 station (1 station × 32 points × 4 modules)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation ind	ication	ON indication (LED)	ON indica	tion (LED)	0	
External conn	ection method	Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws) 2 pieces	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable wir	re size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so terminal	Iderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
power supply	Current	230mA	40mA or less (24VDC when all points are ON) 85mA or less (24VDC when all points are ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dime	ensions	254(H) × 190(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm		×	The overall size differs. Pay attention to the mounting dimensions.
Weight		1.1kg	0.25kg	0.35kg	0	<u> </u>

^{*1:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB2N-16A.

^{*2:} Install a fuse for each external terminal point to prevent the burnout of the external devices and modules during load shorts.

In addition, when a fuse blown indication is necessary, configure an external circuit.

(17) Specifications comparison between AJ35PTF-28DS and AJ65SBTB1-16D+ AJ65SBTB2N-16S

○: Compatible, △: Partial change required, ×: Not compatible AJ35PTF-28DS input AJ65SBTB1-16D **Specifications** Compatibility Precautions for replacement specifications Number of input points 16 points 16 points 0 Insulation method Photocoupler Photocoupler 0 Rated input voltage 12/24VDC 24VDC 12VDC cannot be used. Δ Rated input current Approx. 3mA/Approx. 7mA Approx. 7mA 0 10.2 to 31.2VDC 19.2 to 26.4VDC 12VDC cannot be used. Operating voltage range Δ (ripple ratio within 5%) (ripple ratio within 5%) Maximum number of 100% simultaneously ON 100% simultaneously ON 0 simultaneous input points ON voltage/ON current 9.5V or more/2.6mA or more 14V or more/3.5mA or more 12VDC cannot be used. Δ OFF voltage/OFF current 12VDC cannot be used. 6V or less/1.0mA or less 6V or less/1.7mA or less Λ Input resistance Approx. 3.4k Ω Approx. 3.3k Ω 0 Positive/negative common Positive common Input method shared type 0 (sink type) (sink/source shared type) Response OFF→ ON 10ms or less (6ms TYP.) 1.5ms or less (at 24VDC) 0 10ms or less (7.5ms TYP.) 1.5ms or less (at 24VDC) ON→ OFF 0 Common terminal 16 points/common 16 points/common 0 arrangement AJ35PTF-28DS output **Specifications** AJ65SBTB2N-16S Compatibility Precautions for replacement specifications Number of output points 12 points 16 points 0 Insulation method Photocoupler Photocoupler 0 100-240VAC, Rated load voltage 100-240VAC, 40 to 70Hz 0 $50/60Hz \pm 5\%$ Maximum load voltage 264VAC 264VAC 0 0.6A/point, 4.8A/common Maximum load current 0.6A/point, 2.4A/common 0 24VAC 100mA, 50VAC 100mA, Minimum load 100VAC 10mA, 100VAC 10mA 0 voltage/current 240VAC 10mA 240VAC 10mA 20A 10ms or less Maximum inrush current 25A 10ms or less 0 8A 100ms or less 1.5mA (132VAC, 60Hz) 1.5mA (100VAC, 60Hz) Leakage current at OFF 0 3.0mA (264VAC, 60Hz) 3.0mA (200VAC, 60Hz) 1.5V or less (0.1 to 0.6A) Maximum voltage drop at 1.8V or less (50 to 100mA) 1.5V or less (at 0.6A) 0 2.0V or less (10 to 50mA) OFF→ ON 1ms or less 1ms or less 0 Response time 0.5Hz+1ms or less 1/2 cycle + 1ms or less ON→ OFF 0 CR absorber (0.022 μ F+47 Ω) Surge suppressor CR absorber (0.01 μ F+47 Ω) 0 High speed type fuse 3.2A (one fuse /common) Fuse rating None × The fuse is not built in.*1 HP-32 None Fuse blown indication Available As common terminal arrangement changes from 2 8 points/common Common terminal 16 points/common commons to 16 points/ Δ 4 points/common (2-wire type) common, wiring with a different arrangement voltage per common is not

possible.

					atible, A. i artial cri	ange required, x . Not compatible
Speci	fications	AJ35PTF-28DS	AJ65SBTB1-16D	AJ65SBTB2N- 16S	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	(1 station × mod	ation 32 points × 2 ules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indica	tion (LED)	0	
External con	nection method	Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws)	block (M3 × 5.2	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	ire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
power supply]	Current	150mA	35mA or less (24VDC when all points are ON)	85mA or less (24VDC when all points are ON)	0	
External dimensions		254(H) × 132(W) × 41(D) mm	54(H) × 118(W) × 40(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.76kg	0.18kg	0.35kg	0	

^{*1} Install a fuse for each external terminal point to prevent the burnout of the external devices and modules during load shorts.

In addition, when a fuse blown indication is necessary, configure an external circuit.

(18) Specifications comparison between AJ35PTF-56DS and AJ65SBTB1-32D+ AJ65SBTB2N-16S

○: Compatible, △: Partial change required, ×: Not compatible AJ35PTF-56DS input AJ65SBTB1-32D **Specifications** Compatibility Precautions for replacement specifications Number of input points 32 points 32 points 0 Insulation method Photocoupler Photocoupler 0 12VDC/24VDC 24VDC 12VDC cannot be used. Rated input voltage Δ Rated input current Approx. 3mA/Approx. 7mA Approx. 7mA 0 10.2 to 31.2VDC 19.2 to 26.4VDC 12VDC cannot be used. Operating voltage range Δ (ripple ratio within 5%) (ripple ratio within 5%) Maximum number of 60% simultaneously ON 100% simultaneously ON 0 simultaneous input points ON voltage/ON current 14V or more/3.5mA or more 12VDC cannot be used. 9.5V or more/2.6mA or more Δ 12VDC cannot be used. OFF voltage/OFF current 6V or less/1.0mA or less 6V or less/1.7mA or less Λ Input resistance Approx. 3.4k Ω Approx. 3.3k Ω 0 Positive/negative common Positive common Input method shared type 0 (sink type) (sink/source shared type) Response OFF→ ON 10ms or less (6ms TYP.) 1.5ms or less (at 24VDC) 0 1.5ms or less (at 24VDC) 10ms or less (7.5ms TYP.) ON→ OFF 0 Common terminal 16 points/common 32 points/common 0 arrangement AJ35PTF-56DS output **Specifications** AJ65SBTB2N-16S Compatibility Precautions for replacement specifications When seventeen or more Number of output points 24 points 16 points points are used, use two AJ65SBTB2N-16S modules. Insulation method Photocoupler Photocoupler 0 100-240VAC Rated load voltage 100-240VAC, 40 to 70Hz 0 $50/60Hz \pm 5\%$ Maximum load voltage 264VAC 264VAC \bigcirc Maximum load current 0.6A/point, 2.4A/common 0.6A/point, 4.8A/common 0 24VAC 100mA, 50VAC 100mA, Minimum load voltage/ 100VAC 10mA. 100VAC 10mA. 0 current 240VAC 10mA 240VAC 10mA 20A 10ms or less, Maximum inrush current 25A 10ms or less \circ 8A 100ms or less 1.5mA (132VAC, 60Hz) 1.5mA (100VAC, 60Hz) Leakage current at OFF 0 3.0mA (264VAC, 60Hz) 3.0mA (200VAC, 60Hz) 1.5V or less (0.1 to 0.6A) Maximum voltage drop at 1.8V or less (50 to 100mA) 1.5V or less (at 0.6A) 0 ON 2.0V or less (10 to 50mA) 1ms or less 1ms or less OFF→ON 0 Response time 0.5Hz+1ms or less 1/2 cycle + 1ms or less ON→ OFF 0 Surge suppressor CR absorber (0.022 μ F+47 Ω) CR absorber (0.01 μ F+47 Ω) 0 High speed type fuse 3.2A Fuse rating (one fuse /common) None × The fuse is not built in.*1 HP-32 Fuse blown indication Available None × As common terminal arrangement changes from 8 Common terminal 16 points/common points/common to 16 points/ 8 points/common Δ arrangement (2-wire type) common, wiring with a different voltage per common is not

possible.

			O. Compatible, A. Fartial change required, X. Not compatit			
Speci	fications	AJ35PTF-56DS	AJ65SBTB1-32D	AJ65SBTB2N- 16S	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		8 stations (8 stations × 8 points)	(1 station ×	ation 32 points × 3 ules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indica	tion (LED)	0	
External connection method		Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws) 2 pieces	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable w	ire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC		20.4 to 26.4VDC (ripple ratio within 5%)		The operating voltage range differs.
power supply	Current	230mA	45mA or less (24VDC when all points are ON) 85mA or less (24VDC when all points are ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dimensions		254(H) × 190(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm		×	The overall size differs. Pay attention to the mounting dimensions.
Weight		1.16kg	0.25kg	0.35kg	0	

^{*1} Install a fuse for each external terminal point to prevent the burnout of the external devices and modules during load shorts. In addition, when a fuse blown indication is necessary, configure an external circuit.

(19) Specifications comparison between AJ35PTF-28DR and AJ65SBTB1-16D + AJ65SBTB2N-16R

Specifi	cations	AJ35PTF-28DR input specifications	AJ65SBTB1-16D	Compatibility	Precautions for replacement
Number of in	out points	16 points	16 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input c	urrent	Approx. 3mA/Approx. 7mA	Approx. 7mA	0	
Operating vol	tage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nur simultaneous		100% simultaneously ON	100% simultaneously ON	0	
ON voltage/O	N current	9.5V or more/2.6mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/	OFF current	6V or less/1.0mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistan	ce	Approx. 3.4k Ω	Approx. 3.3k Ω	0	
Input method		Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF → ON	10ms or less (6ms TYP.)	1.5ms or less (at 24VDC)	0	
time	ON → OFF	10ms or less (7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
Common term arrangement	ninal	16 points/common	16 points/common	0	

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

		AJ35PTF-28DR output		ange required, × : Not compatible	
Specifi	cations	specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of output points		12 points	16 points	0	
Insulation method		Photocoupler	Relay isolation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load vo	oltage/current	24VDC 2A (resistance load)/ point 240VAC 2A (COS ϕ = 1)/point 5A/common	24VDC 2A (resistance load)/ point 240VAC 2A (COS ϕ = 1)/point 8A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module.
Minimum swi	tching load	5VDC 1mA	5VDC 1mA	0	
Maximum sw voltage	itching	264VAC, 125VDC	264VAC, 125VDC	0	
Response	OFF → ON	10ms or less	10ms or less	0	
time	ON → OFF	12ms or less	12ms or less	0	
Mechanical li	fe	20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 200000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ = 0.7) 200000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ = 0.35) 200000 times or more 24VDC 1A, 100VDC 0.1A (L/R = 7 ms) 200000 times or more	Rated switching voltage/current load 100000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ = 0.7) 100000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ = 0.35) 100000 times or more 24VDC 1A, 100VDC 0.1A (L/R = 7 ms) 100000 times or more	Δ	Reduce the exchange intervals of the modules as Mechanical/Electrical Life is cut to about half.
Maximum sw frequency	ritching	3600 times/hr	3600 times/hr	0	
External power	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	None	-	
supply	Current	110mA (24VDC, all points ON)	None	-	
Surge suppressor		None	None	0	
Common terminal arrangement		8 points/common, 3 points/ common, 1-point independent contact	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 3 commons to 16 points/ common, wiring with a different voltage per common is not possible.

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Specif	fications	AJ35PTF-28DR	AJ65SBTB1- 16D	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of o stations (nur occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indica	tion (LED)	0	
External con method	nection	Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		x	Change in wiring is required.
Applicable w	vire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable s terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	28 V2-I RAP2	forming to JIS C 05) MS3, 2-3SL, 2-3N,	Δ	In some cases, the solderless terminal must be changed.
I/O	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
module power supply	Current	120mA	35mA or less 120mA or (24VDC less (24VDC when all points are ON) ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	ensions	254(H) × 132(W) × 41(D) mm 0.76kg	54(H) × 118(W) × 40(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		U./6Kg	0.18kg	0.35kg	0	

(20) Specifications comparison between AJ35PTF-56DR and AJ65SBTB1-32D+ AJ65SBTB2N-16R

Speci	fications	AJ35PTF-56DR input specifications	AJ65SBTB1-32D	Compatibility	Precautions for replacement
Number of in	put points	32 points	32 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input v	oltage	12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	0	
Operating vo	Itage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu simultaneous		60% simultaneously ON	100% simultaneously ON	0	
ON voltage/0	ON current	9.5V or more/2.6mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/	OFF current	6V or less/1.0mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistar	nce	Approx. 3.4k Ω	Approx. 3.3k Ω	0	
Input method	ı	Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
Common terminal arrangement		16 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/ common, wiring with a different voltage per common is not possible.

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

		1	U. Comp	alibie, 🛆 . Farilai G	nange required, × : Not compatible
Speci	ications	AJ35PTF-56DR output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of output points		24 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16R modules.
Insulation me	ethod	Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load v	oltage/current	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 5A/common	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 8A/common		The maximum load current per common differs. Pay attention to the operating current of the entire module.
Minimum swi	tching load	5VDC 1mA	5VDC 1mA	0	
Maximum sw	itching voltage	264VAC, 125VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical li	fe	20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 200,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A ($\cos \phi = 0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more	Δ	Reduce the exchange intervals of the modules as Mechanical/ Electrical Life is cut to about half.
Maximum sw frequency	itching	3,600 times/hr	3,600 times/hr	0	
External power	Voltage	24VDC±10% Ripple voltage 4Vp-p or less	None	-	
supply	Current	220mA (24VDC, all points ON)	None	-	
Surge suppre	essor	None	None	0	
Common terminal arrangement		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Speci	fications	AJ35PTF-56DR	AJ65SBTB1-32D	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of oc stations (num occupied poi	nber of	8 stations (8 stations × 8 points)	1 station (1 station × 32 points × 3 modules)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation inc	dication	ON indication (LED)	ON indica	tion (LED)	0	
External connection method		Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws) 2 pieces	supply 7-point terr (M3 × 5.	minal block 2 screws) part: minal block	×	Change in wiring is required.
Applicable w	ire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 2 (ripple ratio	26.4VDC within 5%)	Δ	The operating voltage range differs.
power supply	Current	150mA	45mA or less (24VDC when all points are ON) (200 ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dime	ensions	254(H) × 190(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm		×	The overall size differs. Pay attention to the mounting dimensions.
Weight		1.16kg	0.25kg	0.35kg	0	

(21) Specifications comparison between AJ35PTF-28DT and AJ65SBTB1-32DT2

 \bigcirc : Compatible, $\,\triangle$: Partial change required, $\,\times$: Not compatible

Specifications		AJ35PTF-28DT input specifications	AJ65SBT1-32DT2 input specifications	Compatibility	Precautions for replacement
Number of input points		16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input v	roltage	12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of	current	3mA/7mA	Approx. 7mA	0	
Operating vo	Itage range	10.2 to 31.2VDC	19.2 to 26.4VDC	Δ	12VDC cannot be used.
Maximum nu simultaneous		(ripple ratio within 5%) 100% simultaneously ON	(ripple ratio within 5%) 100% simultaneously ON	0	
ON voltage/C		9.5V or more/2.6mA or more	14VDC or more/ 3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/		6V or less/1.0mA or less	6VDC or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistar				0	12 V D G Garmot De deca.
•		Approx. 3.4k Ω Positive common (sink type)	Approx. 3.3k Ω		
Input method	1	Positive common (sink type)	Positive common (sink type)	0	
Response	OFF → ON	10ms or less (6ms TYP.)	1.5ms or less (at 24VDC)	0	
time	ON → OFF	10ms or less (7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
Common terr	ninal		32 points/common		Use the same power supply
arrangement		16 points/common	(Common to input/output)	Δ	for the input and output sides.
Specifications		AJ35PTF-28DT output specifications	AJ65SBT1-32DT2 output specifications	Compatibility	Precautions for replacement
Number of ou	utput points	12 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated load vo	oltage	12/24VDC	24VDC	Δ	12VDC cannot be used.
Operating loa	ad voltage	10.2 to 31.2VDC	19.2 to 26.4VDC (ripple ratio within 5%)		12VDC cannot be used.
Maximum loa	ad current	0.5A/point, 3.2A/common	0.5A/point, 3.6A/common	0	
Maximum inr	ush current	4.0A 10ms or less	1.0A 10ms or less	Δ	The inrush current value differs. Pay attention to the selection of the load used.
Leakage curr	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vol	Itage drop at	0.9VDC or less (TYP.) 0.5A 1.5VDC or less (MAX.) 0.5A	0.3VDC or less (TYP.) 0.5A, 0.6VDC or less (MAX.) 0.5A	0	
Output metho	ad .	Sink type	` '	0	
<u> </u>	OFF →	2ms or less	Sink type 0.5ms or less	0	
Response time	ON → OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
		10.2 to 31.2VDC	19.2 to 26.4VDC		The operating voltage range
External power supply	Voltage	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	differs.
	Current	23mA (24VDC TYP./common)	30mA or less (24VDC, when all points are ON) External load current not included	Δ	The current consumption increases. The current capacity needs to be reconsidered.
Surge suppressor		Varistor (52 to 62V)	Zener diode	0	
Common terr		8 points/common, 4 points/	32 points/common		Use the same power supply
arrangement		common	(Common to input/output)	Δ	for the input and output sides.

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Specifications AJ35PTF		AJ35PTF-28DT	AJ65SBT1-32DT2	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
External connection method		Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wi	re size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	lderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N,	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	110mA or less	60mA or less (24VDC when all points are ON)	0	
External dimensions		254(H) × 132(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.25kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB2N-16A.

(22) Specifications comparison between AJ35PTF-56DT and AJ65SBTB1-32D+ AJ65SBTB1-32T1

			O: Comp	patible, △: Partial cl	hange required, × : Not compatible
Speci	fications	AJ35PTF-56DT input specifications	AJ65SBTB1-32D	Compatibility	Precautions for replacement
Number of input points		32 points	32 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated input	voltage	12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	0	
Operating vo	oltage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu simultaneous	ımber of s input points	60% simultaneously ON	100% simultaneously ON	0	
ON voltage/0	ON current	9.5V or more/2.6mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage	OFF current	6V or less/1.0mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resista	nce	Approx. 3.4k Ω	Approx. 3.3k Ω	0	
Input method	d	Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
Common ter arrangement		16 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/ common, wiring with a different voltage per common is not possible.
Speci	fications	AJ35PTF-56DT output specifications	AJ65SBTB1-32T1	Compatibility	Precautions for replacement
Number of o	utput points	24 points	32 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated load v		12VDC/24VDC	12VDC/24VDC	0	
Operating lo	ad voltage	10.2 to 31.2VDC	10.2 to 26.4VDC (ripple ratio within 5%)	Δ	Voltages exceeding 26.4VDC cannot be applied.
Maximum loa	ad current	0.5A/point, 3.2A/common	0.5A/point, 4.8A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum in	rush current	4.0A 10ms or less	1.0A 10ms or less	Δ	The inrush current value differs. Pay attention to the selection of the load used.
Leakage cur	rent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	oltage drop at	0.9VDC or less (TYP.) 0.5A 1.5VDC or less (MAX.) 0.5A	0.3VDC or less (TYP.) 0.5A 0.6VDC or less (MAX.) 0.5A	0	
Output meth	od	sink type	sink type	0	
Response	OFF→ON	2.0ms or less	0.5ms or less	0	
time	ON→OFF	2.0ms or less (resistance load)	1.5ms or less (resistance load)	0	
	Voltage	10.2 to 31.2VDC	10.2 to 26.4VDC		Voltages exceeding 26.4VDC
External	- C.iugo	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	cannot be applied.
power supply Current		23mA (24VDC TYP./common)	50mA or less (24VDC)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
Surge suppr	essor	Varistor (52 to 62V)	Zener diode	0	
Common ter arrangement		8 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/ common, wiring with a different voltage per common is not possible.

				○: Compa	atible, △: Partial ch	ange required, ×: Not compatible
Speci	fications	AJ35PTF-56DT	AJ65SBTB1-32D	AJ65SBTB1-32T1	Compatibility	Precautions for replacement
Number of o stations (nun occupied poi	mber of	8 stations (8 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indica	tion (LED)	0	
External connection method		Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws) 2 pieces	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 2 (ripple ratio	26.4VDC within 5%)	Δ	The operating voltage range differs.
power supply	Current	160mA	45mA or less 65mA or less (24VDC when all points are ON) ON)		0	
External dimensions		254(H) × 190(W) × 41(D) mm	54(H) × 179(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		1.09kg	0.25kg	0.25kg	0	

(23) Specifications comparison between AJ35TB1-16AR and AJ65SBTB2N-8A+ AJ65SBTB2N-8R

○: Compatible, △: Partial change required, ×: Not compatible AJ35TB1-16AR input AJ65SBTB2N-8A **Specifications** Compatibility Precautions for replacement specifications Number of input points 8 points 8 points 0 Insulation method Photocoupler Photocoupler 0 Rated input voltage 100-120VAC, 50/60Hz 100-120VAC, 50/60Hz 0 Rated input current Approx. 6mA (100VAC, 60Hz) Approx. 7mA (100VAC, 60Hz) 0 85 to 132VAC 85 to 132VAC Operating voltage range $(50/60Hz \pm 3\%, distortion rate)$ 0 $(50/60Hz \pm 5\%)$ 5% within) 100% simultaneously ON (at Maximum number of 100% simultaneously ON 110VAC), 60% simultaneously ON Use within specification range. Δ simultaneous input points (at 132VAC) Max. 200mA, within 1ms Inrush current 0 (132VAC) ON voltage/ON current 80V or more/5mA or more 80V or more/5mA or more 0 30V or less/1mA or less OFF voltage/OFF current 30V or less/1.7mA or less 0 Approx. 18k Ω (60Hz), Approx. $15k \Omega$ (60Hz), Input impedance 0 Approx. 21k Ω (50Hz) Approx. 18k Ω (50Hz) 15ms or less (100VAC, 60Hz) 20ms or less (100VAC, 60Hz) OFF→ ON 0 Response time 30ms or less (100VAC, 60Hz) 20ms or less (100VAC, 60Hz) ON→ OFF 0 Common terminal 8 points/common 8 points/common (2-wire type) 0 arrangement AJ35TB1-16AR output AJ65SBTB2N-8R Compatibility Precautions for replacement **Specifications** specifications Number of output points 8 points 8 points \bigcirc Although the insulation methods differ, the Insulation method Photocoupler Relay isolation Δ performance of the insulation is the same 24VDC 2A 24VDC 2A The maximum load current per Rated load (resistance load)/point (resistance load)/point common differs. Pay attention Δ voltage/current 240VAC 2A (COS ϕ =1)/point 240VAC 2A (COS ϕ =1)/point to the operating current of the 5A/common 4A/common entire module. Minimum switching load 5VDC 1mA 5VDC 1mA 0 250VAC, 110VDC Maximum switching voltage 264VAC, 125VDC 0 10ms or less 10ms or less OFF→ ON 0 Response time ON→ OFF 12ms or less 12ms or less 0 20 million times or more 20 million times or more Mechanical life \bigcirc Rated switching Rated switching voltage/current load voltage/current load 100,000 times or more 100,000 times or more 200VAC 1.5A, 240VAC 1A 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 100,000 times or (COS ϕ =0.7) 100,000 times or more more Electrical life 0 200VAC 1A, 240VAC 0.5A 200VAC 1A, 240VAC 0.5A (COS $\phi = 0.35$) 100,000 times (COS $\phi=$ 0.35) 100,000 times or more 24VDC 1A, 100VDC 0.1A 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or (L/R=7 ms) 100,000 times more or more Maximum switching 3,600 times/hr 3 600 times/hr 0 frequency External 24VDC ± 10% Voltage None power Ripple voltage 4Vp-p or less supply Current 45mA (24VDC, all points ON) None Surge suppressor None None 0 Common terminal

8 points/common (2-wire type)

0

8 points/common

arrangement

Speci	fications	AJ35TB1-16AR	AJ65SBTB2N-8A	AJ65SBTB2N-8R	Compatibility	Precautions for replacemen
Number of occupied stations (number of occupied points)		2 stations (2 stations × 8 points)	(1 station ×	ation 32 points × 2 ules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indica	tion (LED)	0	
External connection method		34-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable w	ire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable so	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 2 (ripple ratio	26.4VDC within 5%)	Δ	The operating voltage range differs.
power supply	Current	nt 62mA (at 24V) 35mA or less (24VDC when all points are ON) ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.	
External dimensions		55(H) × 166(W) × 50(D) mm	54(H) × 118(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.35kg	0.20kg	0.25kg	0	

(24) Specifications comparison between AJ35TB1-16DR and AJ65SBTB1-8D+ AJ65SBTB2N-8R

			O · Com	natible A : Portiol of	nange required, \times : Not compatible
Sneci	fications	AJ35TB1-16DR input	AJ65SBTB1-8D	Compatibility	Precautions for replacement
		specifications	A3033B1B1-0D	Compatibility	Frecautions for replacement
Number of in		8 points	8 points	0	
Insulation me		Photocoupler	Photocoupler	0	
Rated input		24VDC	24VDC	0	
Rated input of	current	Approx. 7mA	Approx. 7mA	0	
Operating vo	oltage range	19.2 to 26.4VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	0	
Maximum nu	umber of s input points	100% simultaneously ON	100% simultaneously ON	0	
ON voltage/0		14V or more/3.5mA or more	14V or more/3.5mA or more	0	
	/OFF current	6V or less/1.7mA or less	6V or less/1.7mA or less	0	
Input resistar		Approx. 3.3k Ω	Approx. 3.3k Ω	0	
put roolotus		Positive/negative common	Positive/negative common	Ŭ	
Input method	1	shared type	shared type	0	
putou.ou	-	(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	1	
Common ter		Torns or less (at 24VDC)	1.3iiis of less (at 24VDC)	0	
arrangement		8 points/common	8 points/common	0	
Speci	fications	AJ35TB1-16DR output specifications	AJ65SBTB2N-8R	Compatibility	Precautions for replacement
Number of o	utput points	8 points	8 points	0	
Insulation me	ethod	Photocoupler	Relay $ riangle$		Although the insulation methods differ, the performance of the insulation is the same.
		24VDC 2A	24VDC 2A		The maximum load current per
		(resistance load)/point	(resistance load)/point		common differs. Pay attention
Rated load v	roltage/current	rent 240VAC 2A (COS ϕ =1)/point 240VAC 2A (COS ϕ =1)/point		Δ	to the operating current of the
		5A/common	4A/common		entire module.
Minimum sw	itching load	5VDC 1mA	5VDC 1mA	0	
Maximum sw	vitching voltage	250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical I	1	20 million times or more	20 million times or more	0	
Weenamear		Rated switching voltage/current load	Rated switching voltage/current load		
		100,000 times or more	100,000 times or more		
		200VAC 1.5A, 240VAC 1A	200VAC 1.5A, 240VAC 1A		
		$(\cos \phi = 0.7) 100,000 \text{ times or}$	$(\cos \phi = 0.7) 100,000 \text{ times or}$		
		more	more		
Electrical life	•	200VAC 1A, 240VAC 0.5A	200VAC 1A, 240VAC 0.5A	0	
		$(\cos \phi = 0.35) 100,000 \text{times}$	$(\cos \phi = 0.35) 100,000 \text{times}$		
		or more	or more		
		24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or (L/R=7 ms) 100,000 times or			
		more	more		
Maximum sw	vitching			_	
frequency		3,600 times/hr	3,600 times/hr	0	
External	Voltage	24VDC± 10%	None	_	
power		Ripple voltage 4Vp-p or less			
supply	Current	45mA (24VDC, all points ON)	None	_	
Surge suppre		None	None	0	
Common ter	minal	8 points/common	8 points/common (2-wire type)	0	

arrangement

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

					inpatible, \triangle . Partial change required, \times : Not compatit	
Speci	fications	AJ35TB1-16DR	AJ65SBTB1-8D	AJ65SBTB 2N-8R	Compatibility	Precautions for replacement
Number of o stations (nun occupied poi	nber of	2 stations (2 stations × 8 points)	(1 station ×	ation 32 points × 2 ules)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indica	ition (LED)	0	
External con	nection method	34-point terminal block (M3 screw) Transmission circuit part included	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 10-point terminal block (M3 × 5.2 screws)	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	ire size	0.75 to 2mm ²	0.3 to	2mm ²	0	
Applicable so terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	(conforming	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)		26.4VDC within 5%)	Δ	The operating voltage range differs.
power	Current	62mA (at 24VDC)	30mA or less (24VDC when all points are ON)	85mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	ensions	55(H) × 166(W) × 50(D) mm	54(H) × 87.3(W) × 40(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.35kg	0.14kg	0.25kg	0	

(25) Specifications comparison between AJ35TB1-16DT and AJ65SBTB1-16DT2

○: Compatible, △: Partial change required, ×: Not compatible

			hange required, × : Not compatib		
Speci	fications	AJ35TB1-16DT input specifications	AJ65SBTB1-16DT2 input specifications	Compatibility	Precautions for replacement
Number of in	put points	8 points	8 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated input v	/oltage	24VDC	24VDC	0	
Rated input	current	Approx. 7mA	Approx. 7mA	0	
Operating vo	ltago rango	19.2 to 26.4VDC	19.2 to 26.4VDC	0	
Operating vo	ilage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum nu simultaneous		100% simultaneously ON	100% simultaneously ON	0	
ON voltage/0	ON current	14V or more/3.5mA or more	14V or more/3.5mA or more	0	
OFF voltage	OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input resistar	nce	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
Input method	ı	Positive/negative common shared type (sink/source shared type)	Positive common (sink type)	Δ	A negative common current cannot be used.
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common ter	minal	8 points/common	8 points/common	0	
Speci	fications	AJ35TB1-16DT output specifications	AJ65SBTB1-16DT2 output specifications	Compatibility	Precautions for replacement
Number of o	utput points	8 points	8 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated load v	oltage	24VDC	24VDC	0	
Operating loa	ad voltage	19.2 to 26.4VDC	19.2 to 26.4VDC	_	
range		(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum loa	ad current	0.3A/point, 2.4A/common	0.5A/point, 2.4A/common	0	
Maximum inr	rush current	3.0A 10ms or less	1.0A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leakage cur	rent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	Itage drop at	1.5VDC or less (MAX.) 0.3A	0.3VDC or less (TYP.) 0.5A 0.6VDC or less (MAX.) 0.5A	0	
Output meth	od	sink type	sink type	0	
Response	OFF→ON			0	
time			0		
External	Voltage	19.2 to 26.4VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	0	
supply	Current			0	
Surge suppre		Zener diode	Zener diode	0	
Common ter	minal	8 points/common	8 points/common	0	

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Specifications		AJ35TB1-16DT	AJ65SBTB1-16DT2	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		2 stations (2 stations × 8 points)	1 station (1 station × 32 points)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External connection method		34-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable seterminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	61mA (at 24VDC)	50mA or less (24VDC when all points are ON)	0	
External dim	ensions	55(H) × 166(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.35kg	0.18kg	0	

(26) Specifications comparison between AJ35TC1-32DT and AJ65SBTCF1-32DT

O: Compatible, △: Partial change required, ×: Not compatible

O: Compatible, △: Partial change required, ×: Not compat						
Speci	fications	AJ35TC1-32DT input specifications	AJ65SBTCF1-32DT input specifications	Compatibility	Precautions for replacement	
Number of in	put points	16 points	16 points	0		
Insulation me	ethod	Photocoupler	Photocoupler	0		
Rated input v	/oltage	24VDC	24VDC	0		
Rated input of	current	Approx. 5mA	Approx. 5mA	0		
Operating vo	ltago rango	19.2 to 26.4VDC	19.2 to 26.4VDC	0		
Operating vo	ilage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0		
Maximum nu simultaneous		100% simultaneously ON	100% simultaneously ON	0		
ON voltage/0	ON current	17.5V or more/3.5mA or more	14V or more/3.5mA or more	0		
OFF voltage	OFF current	6V or less/1.7mA or less	6V or less/1.7mA or less	0		
Input resistar	nce	Approx. 4.7k Ω	Approx. 4.7k Ω	0		
		Positive/negative common	Positive/negative common			
Input method	I	shared type	shared type	0		
		(sink/source shared type)	(sink/source shared type)			
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0		
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0		
Common terr	minal	16 points/common	16 points/common	0		
Speci	fications	AJ35TC1-32DT output specifications	AJ65SBTCF1-32DT output specifications	Compatibility	Precautions for replacement	
Number of o	utput points	16 points	16 points	0		
Insulation me	ethod	Photocoupler	Photocoupler	0		
Rated load v	oltage	24VDC	12VDC/24VDC	0		
Operating loa	ad voltage	19.2 to 26.4VDC	10.2 to 26.4VDC			
range		(ripple ratio within 5%)	(ripple ratio within 5%)	0		
Maximum loa	ad current	0.1A/point, 1.6A/common	0.1A/point, 1.6A/common	0		
Maximum inr	ush current	0.4A 10ms or less	1.0A 10ms or less	0		
Leakage curi	rent at OFF	0.1mA or less	0.1mA or less	0		
Maximum vo	Itage drop at	1.5VDC or less (MAX.) 0.1A	0.085VDC or less (TYP.) 0.1A 0.2VDC or less (MAX.) 0.1A	0		
Output metho	od	sink type	sink type	0		
Response	OFF→ON	2.0ms or less	0.5ms or less	0		
time	ON→OFF	2.0ms or less (resistance load)	1.5ms or less (resistance load)	0		
External	Voltage	None	10.2 to 26.4VDC (ripple ratio within 5%)	×	Wiring of the power supply for driving the output circuit is required.	
power supply	Current	None	None 30mA or less (24VDC)		Wiring of the power supply for driving the output circuit is required.	
Surge suppre	essor	Zener diode	Zener diode	0		
Common terrangement		16 points/common	16 points/common	0		

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Specif	ications	AJ35TC1-32DT	AJ65SBTCF1-32DT	Compatibility	Precautions for replacement
Number of oc stations (num occupied poin	ber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	
Operation inc	lication	ON indication (LED)	ON indication (LED)	0	
External con	nection method	Transmission circuit: 8-point terminal block (M3 screw)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
		I/O part: 40-pin connector	I/O part: 40-pin connector	0	The existing connector can be attached without change.
Applicable wi	re size	Terminal block: 0.75 to 2mm ² FCN connector: 0.3mm ²	Terminal block: 0.3 to 2mm² FCN connector: 0.3mm² or less (for A6CON1, A6CON4) 0.2 to 0.08mm² (for A6CON2) Twisted wire of 0.08mm², \$\phi\$ 0.25mm (for A6CON3)	0	
Accessory		1 external wiring connector	None	None x	
Applicable so	Iderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
supply	Current	137mA (at 24VDC)	7mA (at 24VDC) 50mA or less (24VDC when all points are ON)		
External dime	ensions	55(H) × 166(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.25kg	0.15kg	0	

(27) Specifications comparison between AJ35PTF-128DT and AJ65SBTCF1-32D + AJ65SBTCF1-32T

O: Compatible, △: Partial change required, ×: Not compatible

Specifi	ications	AJ35PTF-128DT input specifications	AJ65SBTCF1-32D input specifications	Compatibility	Precautions for replacement
Number of in	put points	64 points	32 points	×	When 33 or more points are used, use two AJ65SBTCF1-32D modules.
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input v	voltage	12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input of	current	4mA/Approx. 9mA	Approx. 5mA	Δ	Rated input current is smaller.*1
Operating vo	ltage range	10.2 to 26.4VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu simultaneous		100% simultaneously ON (64 points are divided into four groups and I/O refresh is performed to each of the four groups.)	100% simultaneously ON	0	
ON voltage/C	N current	8V or more/2.3mA or more	14VDC or more/ 3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/	OFF current	4V or less/0.5mA or less	6VDC or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistar	nce	Approx. 2.4k Ω	Approx. 4.7k Ω Δ		Input impedance has increased.*1
Input method	ı	Positive common (sink type) Dynamic scan method (64 points are divided into four groups and I/O refresh is performed to each of the four groups.)	Positive/negative shared type (sink/source shared type)	Δ	The I/O refresh method is changed.
Response	OFF → ON	107ms or less*2	1.5ms or less (at 24VDC)	Δ	The I/O refresh method is changed, and the response
time	ON → OFF	107ms or less*2	1.5ms or less (at 24VDC)	Δ	time changes.
Common terr arrangement		16 points/common (common pin: 1A17, 1B17, 2A17, 2B17)	32 points/common (FCN connector 1-wire type)	Δ	As common terminal arrangement changes from 16 points/common to 32 points/common, wiring with a different voltage per common is not possible.

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Specifications		AJ35PTF-128DT output specifications	AJ65SBTCF1-32T output specifications	Compatibility	Precautions for replacement	
Number of ou	utput points	64 points	32 points	×	When 33 or more points are used, use two AJ65SBTCF1-32T modules.	
Insulation me	ethod	Photocoupler	Photocoupler	0		
Rated load v	oltage	12/24VDC	12/24VDC	0		
Operating loa	ad voltage	10.2 to 31.2VDC	10.2 to 26.4VDC (ripple ratio within 5%)	Δ	Voltages exceeding 26.4VDC cannot be applied.	
Maximum loa	ad current	0.1A/point, 2A/common	0.1A/point, 32A/common	0		
Maximum inr	ush current	0.4A, 100ms or less	1.0A, 10ms or less	0		
Leakage curr	rent at OFF	0.1mA or less	0.1mA or less	0		
Maximum vo ON	ltage drop at	2.5VDC 100mA 1.75VDC 5mA 1.7VDC 1mA	0.1VDC or less (TYP.) 0.1A, 0.2VDC or less (MAX.) 0.1A	0		
Output metho	od	Static method of sink type	Sink type	Δ	The I/O refresh method is changed.	
Response	OFF → ON	(2 + I/O refresh time × 5) ms or less*2	0.5ms or less	Δ	The I/O refresh method is	
time	ON → OFF	(2 + I/O refresh time × 5) ms or less*2	1.5ms or less (resistance load)	Δ	changed, and the response time changes.	
External	Voltage	10.2 to 31.2VDC	10.2 to 26.4VDC (ripple ratio within 5%)	Δ	Voltages exceeding 26.4VDC cannot be applied.	
power supply	Current	40mA or less (TYP.24VDC, 1 common ON)	50mA or less (TYP.24VDC, per common) External load current not included	0		
Surge suppre	essor	Clamp diode	Zener diode	0		
Common terr arrangement		32 points/common (common pin: TB5, TB7)	32 points/common (FCN connector 1-wire type)	0		

 $\bigcirc \colon \mathsf{Compatible}, \ \ \underline{\wedge} \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

		1	AJ65SBTCF1	AJ65SBTCF1	1	
Specifi	cations	AJ35PTF-128DT	-32D	-32T1	Compatibility	Precautions for replacement
Number of oc stations (num occupied poir	ber of	4 stations (number of required I/O points: 128 points)	1 station (1 station × 32 points × 4 modules)		0	The number of modules is changed, and the number of occupied points does not change.
Operation inc	lication	ON indication (LED) 32-point switching display with switches	ON indica	ition (LED)	0	
External conr method	Transmission/module power supply parts: External connection method Transmission/module power supply part: 8-point terminal block I/O part: Four 40-pin connectors (soldering) Communication part, module power supply part; 7-point two-piece terminal block M3 × 5.2 screws I/O power supply part, I/O part: 40-pin connector		ipply part: ce terminal block 2 screws bly part, I/O part:	×	Change in wiring is required.	
Applicable wi	re size	Terminal block: 0.75 to 2mm ² 40-pin connector: 0.3mm ²	0.2 to 0.08mm ²		0	
Transmission communication module power Applicable so terminal	on part, er supply part	R1.25-3, R2-3 RAV1.25-3, RAV2-3	28 V2-I RAP: TGV	forming to JIS C 05) MS3, 2-3SL '2-3N 26.4VDC	Δ	In some cases, the solderless terminal must be changed.
	Voltage	15.6 to 31.2VDC		within 5%)	Δ	The operating voltage range differs.
I/O module power supply	Current	200mA	45mA or less 60mA or less (24VDC when all points are ON) ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dime	ensions	250(H) × 190(W) × 41(D) mm	54(H) × 118(W) × 40(D) mm		×	The shape and the number of modules differ. Pay attention to the mounting dimensions.
Weight		1.05kg	0.15kg		_	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTCF1-32D.

^{*2:} For details on the response time, refer to the MELSECNET/MINI-S3 Master Module Type AJ71PT32-S3, AJ71T32-S3, A1SJ71T32-S3 User's Manual.

5.3 Precautions for Replacement of I/O Module

(1) Wiring

(a) Wire gauge and size of solderless terminals

As CC-Link supports compact modules and terminal blocks, the wire gauge and size of the solderless terminals applicable to terminal blocks differ from those that can be used on the MELSECNET/MINI-S3, A2C(I/O).

For this reason, when replacing the existing system with CC-Link, use wires and solderless terminals that meet the CC-Link specifications.

(b) Input method

Contents of the "Input method" item in the "Specifications" column for input modules and I/O modules in Section 5.2 are described below.

Positive common (Sink type) : means that DC power + is connected to the common terminal.

Negative common (Source type): means that DC power - is connected to the common terminal.

Positive/negative common shared type (Sink/source shared type):

means that either DC power + or DC power - is connected to the common terminal.

(c) Using wiring conversion adapter

When installing a MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter to the CC-Link remote I/O module (AJ65BTB1-16D, AJ65BTB2-16D or AJ65BTB1-16T), the external dimensions are increased by 5.1mm (height) and 28.5mm (depth).

If the connected cable is not long enough, wiring to the CC-Link remote I/O module cannot be made.

(2) External wiring connector

(a) Purchasing external wiring connectors

At the CC-Link 32-point connector type I/O module, the external wiring connector is not included in the package. The external wiring connector (A6CON_□) must be purchased separately.

(3) Tightening module mounting screws and terminal block screws

Tighten module mounting screws and terminal block screws within the range described below. Tightening screws too much may cause damage to the module case. For details, refer to each product manual.

(a) CC-Link system compact type remote I/O module

For terminal block type, one-touch connector type, and FCN connector type remote I/O module

Screw	Tightening torque range
Module mounting screw (M4 screw with plain washer finished round)	78 to 108N•cm
Terminal block screw (M3 screw)	59 to 88N•cm
Terminal block mounting screw (M3.5 screw)	68 to 98N•cm

(b) CC-Link system remote I/O module (A2C shape)

Screw	Tightening torque range
Module mounting screw (M4 screw with plain washer finished round)	78 to 108N•cm
Terminal block screw (M3.5 screw)	68 to 92N•cm
Terminal block mounting screw (M4 screw)	102 to 138N•cm

(c) CC-Link system remote I/O module

Screw	Tightening torque range
Module mounting screw (M4 screw)	78 to 118N•cm
Terminal block screw (M3.5 screw)	59 to 88N•cm
Terminal block mounting screw (M4 screw)	78 to 118N•cm

(d) Wiring conversion adapter

Screw	Tightening torque range
Adapter, Terminal block mounting screw (M4 screw)	78 to 118N•cm
CTL + terminal screw (M3 screw)	49 to 78.4N•cm

(4) Precautions for input module (specifications change)

(a) The rated input current

Some CC-Link modules support a smaller rated input current than MELSECNET/MINI-S3,A2C(I/O) modules do. Confirm the specifications of the sensors or switches to be connected before use.

(b) The rated voltage value

CC-Link's DC input module is dedicated for use at 24VDC.

Confirm the specifications of the sensors or switches to be connected before use.

(c) The common terminal arrangement

Use caution when using voltages that differ depending on each common as the common terminal arrangement may differ between the CC-Link and the MELSECNET/MINI-S3, A2C(I/O).

(5) Precautions for output module (specifications change)

(a) The output current values

Some CC-Link modules support a smaller output current than MELSECNET/MINI-S3,A2C(I/O) modules do. Before using an output module having a smaller output current on CC-Link, confirm the specifications on the load side.

(b) The common terminal arrangement

Use caution when using voltages that differ depending on each common as the common terminal arrangement may differ between the CC-Link and the MELSECNET/MINI-S3, A2C(I/O).

(c) The common maximum load current

Sometimes the maximum load current per common differs between CC-Link and MELSECNET/ MINI-S3,A2C(I/O). Check the maximum load current per common before use.

6

REPLACING ANALOG I/O MODULE

6.1 List of Alternative Analog I/O Module Models

MELSECNET/MINI-S3, A2C models to be discontinued			Replacement to CC-Link
Product name	Model name	Model name	Remarks (restrictions)
		AJ65BT-64AD	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Required (2 modules necessary) 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: 4CH/module 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required
Analog input module	A68ADC	AJ65SBT2B-64AD AJ65SBT-64AD	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Required (2 modules necessary) 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: 4CH/module, negative current conversion not possible 5) Change in functional specifications: An averaging processing function of the AJ65SBT-64AD can handle only a moving averaging processing. 6) Change in dimensions for mounting the panel: Required
		AJ65VBTCU- 68ADVN	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Voltage input only 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required

MELSECNET/MINI-S3, A2C models to be discontinued			Replacement to CC-Link
Product name	Model name	Model name	Remarks (restrictions)
Analog input module	A68ADC	AJ65VBTCU-68ADIN	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Current input only 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required
		AJ65SBT2B-64DA AJ65BT-64DAV	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in resolution 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required
Analog output module	A64DAVC	AJ65SBT-62DA	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Required (2 modules necessary) 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in resolution 5) Change in functional specifications: 2CH/module 6) Change in dimensions for mounting the panel: Required
		AJ65VBTCU- 68DAVN	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: 8CH/module 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required

6 REPLACING ANALOG I/O MODULE

MELSECNET/MINI-S3, A2C models to be discontinued			Replacement to CC-Link
Product name	Model name	Model name	Remarks (restrictions)
Analog output module		AJ65SBT2B-64DA AJ65BT-64DAI	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Upward compatible 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required
	A64DAIC	AJ65SBT-62DA	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Required (2 modules necessary) 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in resolution 5) Change in functional specifications: 2CH/module 6) Change in dimensions for mounting the panel: Required
Temperature	A64RD3C	AJ65SBT2B-64RD3 AJ65BT-64RD3	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in temperature detecting output current, change in resistive values of allowable conductor 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required
input module	A64RD4C	AJ65BT-64RD4	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in temperature detecting output current, change in resistive values of allowable conductor 5) Changes in functional specifications: Change in the specifications of the line breakage detection function 6) Change in dimensions for mounting the panel: Required

6.2 List of Alternative Master Module Models

6.2.1 Comparisons of analog input module

- (1) Comparisons between A68ADC and AJ65BT-64AD
 - (a) Performance specifications comparisons

	O: Compatible, △: Partial change required, ×: Not compatible					
Item	A68ADC	AJ65B	T-64AD	Compati- bility	Precautions for replacement	
	Voltage: -10 to 0 to +10VDC (input resistance $30K \Omega$) Current: +4 to +20mA (input resistance 250Ω)	Voltage: -10 to 0 to +10VDC (input resistance 1M Ω)				
Analog input	Select via input terminal * Current input can also be used as -20 to 0 to +20mA.	Current: -20 to 0 to +20mA (input resistance 250 Ω) (select via input terminal)		0		
Digital output	16bits signed binary (data part 11bits) -2048 to 2047	_	ned binary rt 12bits)	0		
I/O characteristics	Analog input Digital output +10V +2000 +5V or +20mA +1000 0V or +4mA ± 0 -5V or -12mA -1000 -10V -2000	Analog input value -10 to 10V or -20 to 20mA 0 to 10V or 0 to 20mA 0 to 5V or 0 to 20mA 1 to 5V or	Digital output value 0 to 4000 or -2000 to 2000 0 to 4000 or -2000 to 2000 0 to 4000 or -2000 to 2000 0 to 4000 or	Δ	Precautions are needed as gain values are different.	
			-2000 to 2000 Resolution 5mV or 20 μA	_		
Maximum resolution	Voltage 5mV (1/2000) Current 20 μA (1/1000)	0 to 10V or 0 to 20mA 0 to 5V or 0 to 20mA	2.5mV or 10 μA 1.25mV or 5 μA	0		
		1 to 5V or 4 to 20mA	1mV or 4 μA			
Overall accuracy	Within \pm 1% (\pm 20) (accuracy relative to maximum value)	± 1%	(±40)	0		
Maximum conversion speed	Max. 2.5ms/channel	1ms/channel		0		
Absolute maximum input	Voltage ±	15V, current ± 30mA		0		
Analog input	8 channels/module	4 channe	ls/module	×	Please consider replacing by using two or more AJ65BT-64AD modules.	
Insulation method	Photocoupler isolation between input terminal and programmable controller power supply (non-isolated between channels)	Photocoupler isolation between power supply/communication system and analog (non-isolated between channels)		0		

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Item	A68ADC	ADC AJ65BT-64AD		Precautions for replacement
Number of occupied I/O stations (number of points)	4 stations (4 stations × 8 points)	2 stations (2 stations × 32 points) (RX/RY 32 points each, RWr/RWw 8 points each)	bility ×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Connected terminal	47-point terminal block	27-point terminal block	×	
Applicable wire size	0.75 to 2mm ² (applica	0	Change in wiring is	
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3.5, RAV2-3.5		required.
24VDC internal current consumption	0.3A	0.3A 0.12A		
Weight	1.01kg 0.35kg		0	
External dimensions	170(H) × 100(W) × 80(D)mm	65(H) × 151.9(W) × 63(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

O: Compatible, △: Partial change required, ×: Not compatible

Item	A68ADC	AJ65BT-64AD	Compati- bility	Precautions for replacement
Averaging processing A/D conversion system	A/D conversion is performed according to set times or set processing time on a channel, which is specified for the averaging processing to be performed on by the programmable controller CPU. After the conversion, the maximum and minimum values are removed, and the remaining total is averaged and the results are stored in the buffer memory.	A/D conversion is performed according to the preset number of times or preset time on each channel, the A/D conversion data obtained during that time is averaged, and the average value is stored to the remote register as a digital output value.	0	
Specification of channel to use	The A68ADC has an 8 channels of the A/D conversion circuit. Execution/non-execution of the A/D conversion can be specified on each of those channels. With the programmable controller CPU, the channel to execute A/D conversion on is specified to address 0 (specification of channel to use) of the buffer memory.	Enable (execute)/disable (do not execute) A/D conversion is specified on each channel. (default: execution on all channels disabled) By making unused channels conversion prohibited, sampling time can be shortened.	0	
Offset/gain setting	Changes the I/O conversion characteristics.	Changes the I/O conversion characteristics. For that, offset/gain settings can be configured for each channel without a aid of a various register.	0	



(c) Programmable controller CPU I/O signal comparisons

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

A68ADC			AJ65BT-64AD				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description
X(n+0) to X(n+3)	Use prohibited	Y(n+0) to Y(n+3)	Use prohibited	RXn0	CH1 A/D Conversion completed flag	RYn0	Offset/gain value selection
X(n+4)	Communication error detection flag indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal *1	RXn1	CH2 A/D Conversion completed flag	RYn1	Voltage/current selection
X(n+5)	A68ADC reset switch ON detection flag	Y(n+5)	Reset signal for reset switch ON detection flag	RXn2	CH3 A/D Conversion completed flag		-
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RXn3	CH4 A/D Conversion completed flag	RYn2 to	Use prohibited
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal *1	RXn4 to RX(n+1)7	Use prohibited	RY(n+1)7	
X(n+8) to	Use prohibited			RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data processing complete flag
X(n+17)		Y(n+8)		RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag
X(n+18)	A/D conversion READY	to Y(n+1F)	Use prohibited	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag
X(n+19) to X(n+1F)	Use prohibited			RX(n+1)B RX(n+1)C to RX(n+1)F	Remote READY Use prohibited	RY(n+1)B to RY(n+1)F	Use prohibited

^{*1:} The signal contents differ when a version B A68ADC is combined with a version B A2CCPU.

(d) Buffer memory addresses comparisons

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memories and sequence programs, refer to the User's Manual.

	A68ADC			AJ65BT-64AD	
Address	Name	Read/write	Address	Name	Read/write
0	Specification of channel to use		RWwm	Averaging processing specification	
1	Averaging processing specification		RWwm+1	CH1 Averaging time, count	
2	CH1 Averaging time, count		RWwm+2	CH2 Averaging time, count	
3	CH2 Averaging time, count		RWwm+3	CH3 Averaging time, count	w
4	CH3 Averaging time, count		RWwm+4	CH4 Averaging time, count	VV
5	CH4 Averaging time, count	R/W	RWwm+5	Data format	
6	CH5 Averaging time, count		DW/wm+6	A/D conversion enable/disable	
0	CHS Averaging time, count	RWwm+6		specification	
7	CH6 Averaging time, count		RWwm+7	Use prohibited	_
8	CH7 Averaging time, count		RWrn	CH1 Digital output value	
9	CH8 Averaging time, count		RWrn+1	CH2 Digital output value	
10	CH1 Digital output value		RWrn+2	CH3 Digital output value	R
11	CH2 Digital output value		RWrn+3	CH4 Digital output value	
12	CH3 Digital output value		RWrn+4	Error code	
13	CH4 Digital output value	R	RWrn+5		
14	CH5 Digital output value		RWrn+6	Use prohibited	-
15	CH6 Digital output value		RWrn+7		
16	CH7 Digital output value				
17	CH8 Digital output value				
18	Write data error code	R/W	1		
19	A/D conversion completed flag	R]		



(2) Comparisons between A68ADC and AJ65SBT-64AD

(a) Performance specifications comparisons

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

		○: Compatible, △: Partial of the compatible			
Item	A68ADC	AJ65SBT-64AD	Compati- bility	Precautions for replacement	
Analog input	Voltage: -10 to 0 to +10VDC (input resistance $30K\Omega$) Current: +4 to +20mA (input resistance 250Ω) Select via input terminal * Current input can also be used as -20 to 0 to +20mA.	Voltage: -10 to 0 to +10VDC (input resistance 1M Ω) Current: 0 to +20mA (input resistance 250 Ω)	Δ	Negative current cannot be converted.	
Digital output	16bits signed binary (data part 11bits) -2048 to 2047	16bits signed binary (-4096 to +4095)	0		
I/O characteristics	Analog input Digital output +10V +2000 +5V or +20MA +1000 0V or +4mA ± 0 -5V or -12mA -1000 -10V -2000	Analog input range output Ambient Temperature Ambient Temperature 25 ± 5 °C -10 to +10V User range setting 1 (-10 to +10V) (-10	Δ	Precautions are needed as gain values are different.	
Maximum resolution	Voltage 5mV (1/2000) Current 20 µA (1/1000)	User range setting 2 (0 to 5V) (± 16 digits*) (± 8 digits*) (± 8 digits*)	0		
Overall accuracy	Within \pm 1% (\pm 20) (accuracy relative to maximum value)	User range setting 3 (0 to 20mA) *: Digit is the digital value.	0		
May conversion speed	Maximum 2.5ms/channel	Factory-set: -10 to +10V. 2.5ms/channel 1ms/channel			
Max. conversion speed Absolute maximum		15V, current± 30mA	0		
Number of analog input points	8 channels/module	4 channels/module	×	Consider replacing by using two or more AJ65SBT- 64AD modules.	
Insulation method	Photocoupler isolation between input terminal and programmable controller power supply (non-isolated between channels)	Between communication line and all analog inputs: Photocoupler isolation between power line and all analog inputs: Photocoupler isolation (non-isolated between channels)	0		
Number of occupied I/O stations (number of points)	4 stations (4 stations × 8 points)	1 station (1 station × 32 points) (RX/RY 32 points each, RWr/RWw 4 points each)	×	The number of occupied stations has been changed.	
Connected terminal	47-point terminal block	Communication part, module communication part: 7-point two-piece terminal block (M3 screw) I/O part: 18-point direct-mount terminal block (M3 screw)	×		
Applicable wire size	0.75 to 2mm ² (applicable tightening torque 7kg • cm)	0.3 to 0.75mm ²	×	Change in wiring is required.	
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	 RAV1.25-3 (conforming to JIS C 2805) [Applicable wire size: 0.3 to 1.25mm²] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm²] 	×		
24VDC internal current	0.3A	0.09A	0		
consumption Weight	1.01kg	0.20kg	0		
External dimensions	170(H) × 100(W) × 80(D)mm	50(H) × 118(W) × 40(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.	

(b) Functional comparisons

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

		O: Compatible, ∆: Partial		
Item	A68ADC	AJ65SBT-64AD	Compati- bility	Precautions for replacement
Averaging processing A/D conversion system	A/D conversion is performed according to set times or set processing time on a channel, which is specified for the averaging processing to be performed on by the programmable controller CPU. After the conversion, the maximum and minimum values are removed, and the remaining total is averaged and the results are stored in the buffer memory.	Digital output values for the specified number of times, which have been obtained by measuring at each sampling period, are averaged.	Δ	Averaging processing performed on the AJ65SBT-64AD is movement averaging processing.
Specification of channel to use	The A68ADC has 8 channels of an A/D conversion circuit. Execution/non-execution of the A/D conversion can be specified on each of those channels. With the programmable controller CPU, the channel to execute A/D conversion on is specified to address 0 (specification of channel to use) of the buffer memory.	Enable (execute)/disable (do not execute) A/D conversion is specified on each channel. By making unused channels conversion prohibited, sampling period can be shortened.	0	
Switching function of input range	_	Sets the analog input range on each channel and changes the I/O conversion characteristics. The following eight input ranges can be selected: Input range	-	
Offset/gain setting	Changes the I/O conversion characteristics.	Changes the I/O conversion characteristics. For that, offset/gain settings can be configured for each channel without a aid of a various register.	0	

(c) Programmable controller CPU I/O signal comparisons

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	А	68ADC		AJ65SBT-64AD				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0)		Y(n+0)			CH1 A/D		CH1 Specified flag of	
to	Use prohibited	to	Use prohibited	RXn0	Conversion	RYn0	movement averaging	
X(n+3)		Y(n+3)			complete flag		processing	
X(n+4)	Communication error detection flag indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal ^{*1}	RXn1	CH2 A/D Conversion complete flag	RYn1	CH2 Specified flag of movement averaging processing	
	A68ADC reset		December 1		CH3 A/D		CH3 Specified flag of	
X(n+5)	switch ON	Y(n+5)	Reset signal of reset	RXn2	Conversion	RYn2	movement averaging	
	detection flag		switch ON detection flag		complete flag		processing	
					CH4 A/D		CH4 Specified flag of	
				RXn3	Conversion	RYn3	movement averaging	
					completed flag		processing	
				RXn4	CH1 Range error			
				IXXII I	flag			
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RXn5	CH2 Range error			
					flag			
				RXn6	CH3 Range error flag			
				RXn7	CH4 Range error flag			
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset	RXn8 to RXnB	Use prohibited	RYn4 to RY(n+1)7	Use prohibited	
X(n+8) to	Use prohibited			RXnC	E ² PROM write error flag			
X(n+17)				RXnD				
X(n+18)	A/D conversion READY			RxnE	Use prohibited			
				RXnF	Test mode flag			
				RX(n+1)0				
				to	Use prohibited			
		Y(n+8)		RX(n+1)7				
X(n+19)	Use prohibited	to Y(n+1F)	Use prohibited	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data setting complete flag	
to X(n+1F)	Use prohibited			RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag	
				RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag	
				RX(n+1)B	Remote READY	RY(n+1)B		
				RX(n+1)C		to	Use prohibited	
				to	Use prohibited	RY(n+1)F	,	
				RX(n+1)F				

^{*1:} The signal contents differ when a version B A68ADC is combined with a version B A2CCPU.

(d) Buffer memory addresses comparisons

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A68ADC			AJ65SBT-64AD	
Address	Name	Read/write	Address	Name	Read/write
0	Specification of channel to use		RWwm	A/D conversion enable/disable	
0	Specification of charmer to use		KVVWIII	specification	
1	Averaging processing specification		RWwm+1	Input range setting	W
2	CH1 Averaging time, count		RWwm+2	Number of movement averaging	
2	Citi Averaging time, count		KVVWIII+2	processing setting	
3	CH2 Averaging time, count	R/W	RWwm+3	Use prohibited	_
4	CH3 Averaging time, count	TK/VV	RWrn	CH1 Digital output value	
5	CH4 Averaging time, count		RWrn+1	CH2 Digital output value	R
6	CH5 Averaging time, count		RWrn+2	CH3 Digital output value	
7	CH6 Averaging time, count		RWrn+3	CH4 Digital output value	
8	CH7 Averaging time, count				
9	CH8 Averaging time, count				
10	CH1 Digital output value				
11	CH2 Digital output value				
12	CH3 Digital output value				
13	CH4 Digital output value	R			
14	CH5 Digital output value	K			
15	CH6 Digital output value]			
16	CH7 Digital output value				
17	CH8 Digital output value	1			
18	Write data error code	R/W			
19	A/D conversion completed flag	R			



(3) Comparisons between A68ADC and AJ65SBT2B-64AD

(a) Performance specifications comparisons

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Voltage: -10 to 0 to +10VDC	current i. i. ns are s gain
Current: +4 to +20mA	ns are s gain
Digital output Contact Contac	s gain
Analog input	s gain
Maximum resolution Current 20 μ A (1/1000) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Overall accuracy $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
speed Maximum 2.5ms/channel 200 µs/channel O Absolute maximum input Voltage ± 15V, current ± 30mA	
Absolute maximum input Voltage ± 15V, current ± 30mA	
Number of analog input points 8 channels/module 4 channels/module 4 channels/module × Consider by using t more AJ6 64AD more AJ6	wo or 5SBT2B-
Photocoupler isolation between input terminal and programmable controller power supply (non-isolated between channels) Between communication line and all analog inputs: Photocoupler isolation between power line and all analog inputs: Photocoupler isolation (non-isolated between channels)	
Number of occupied I/O stations (number of points) 1 station (1 station × 32 points) (RX/RY 32 points each, RWr/RWw 4 points of points) (RX/RY 32 points each, RWr/RWw 4 points of points)	
Connected terminal 47-point terminal block Communication part: 7-point two-piece terminal block (M3 screw) I/O part: 18-point two-piece terminal block (M3 screw) screw)	
Applicable wire size 0.75 to 2mm ² (applicable tightening torque 7kg • cm) 0.3 to 2.0mm ² Change ir is required	_
Applicable solderless terminal V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A V2-S3, V2-YS3A V2-S3, V2-YS3A PAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm²]	
24VDC internal 0.3A 0.12A	
Weight 1.01kg 0.25kg O	

 $\bigcirc \colon \mathsf{Compatible}, \ \ \underline{\wedge} \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

Item	A68ADC	AJ65SBT2B-64AD	Compati- bility	Precautions for replacement
External dimensions	170(H) × 100(W) × 80(D) mm	50(H) × 122(W) × 54(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.



(b) Functional comparisons

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Item	A68ADC	AJ65SBT2B-64AD	Compati- bility	Precautions for replacement
Averaging processing A/D conversion system	A/D conversion is performed according to set times or set processing time on a channel, which is specified for the averaging processing to be performed on by the programmable controller CPU. After the conversion, the maximum and minimum values are removed, and the remaining total is averaged and the results are stored in the buffer memory.	Selects whether to perform the sampling processing or averaging processing (count average/time average/moving average) on each channel.	0	
Specification of channel to use	The A68ADC has the A/D conversion circuits of 8 channels. Execution/non-execution of the A/D conversion can be specified on each of those channels. With the programmable controller CPU, the channel to execute A/D conversion on is specified to address 0 (specification of channel to use) of the buffer memory.	Selects whether to enable or disable A/D conversion on each channel. By making unused channels A/D conversion prohibited, conversion cycle can be shortened.	0	
Input range setting function	-	Selects the analog input range to be used from the factory default ranges (4 to 20mA, 0 to 20mA, 1 to 5V, 0 to 5V, -10 to 10V) and the user range (user range setting) and changes the I/O conversion characteristics.	-	
Offset/gain setting	Changes the I/O conversion characteristics.	Corrects an error of a digital output value.	0	
Transmission speed auto-tracking function	-	Automatically sets the transmission speed according to the settings of the master module when the AJ65SBT2B-64AD is powered on.	_	

(c) Programmable controller CPU I/O signal comparisons

I/O signals are different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

A68ADC				AJ65SBT2B-64AD				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0) to X(n+3)	Use prohibited	Y(n+0) to Y(n+3)	Use prohibited	RXn0	CH1 A/D Conversion complete flag	RYn0	CH1 A/D conversion enable/disable setting	
X(n+4)	Communication error detection flag indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal* ¹	RXn1	CH2 A/D Conversion complete flag	RYn1	CH2 A/D conversion enable/disable setting	
X(n+5)	A68ADC reset switch ON detection flag	Y(n+5)	Reset signal of reset switch ON detection flag	RXn2	CH3 A/D Conversion complete flag	RYn2	CH3 A/D conversion enable/disable setting	
	Use prohibited			RXn3	CH4 A/D Conversion complete flag	RYn3	CH4 A/D conversion enable/disable setting	
		Y(n+6)		RXn4	Use prohibited	RYn4	CH1 Input range setting (0th bit)	
						RYn5	CH1 Input range setting (1st bit)	
X(n+6)			Use prohibited	to RXn9		RYn6	CH1 Input range setting (2nd bit)	
				IVAII9		RYn7	CH2 Input range setting (0th bit)	
						RYn8	CH2 Input range setting (1st bit)	
				RXnA	Hordware error floa	RYn9	CH2 Input range setting (2nd bit)	
				RAHA	Hardware error flag	RYnA	CH3 Input range setting (0th bit)	
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal*1	RXnB	User range read error flag	RYnB	CH3 Input range setting (1st bit)	

6 REPLACING ANALOG I/O MODULE

A68ADC				AJ65SBT2B-64AD				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+8)				RXnC	Flash memory write error flag	RYnC	CH3 Input range setting (2nd bit)	
to X(n+17)	Use prohibited			RXnD	Number of offset/gain settings excess flag	RYnD	CH4 Input range setting (0th bit)	
X(n+18)	A/D conversion READY			RxnE	Use prohibited	RYnE	CH4 Input range setting (1st bit)	
				RXnF	Test mode flag	RYnF	CH4 Input range setting (2nd bit)	
		Y(n+8) to	Use prohibited	RX(n+1)0 to RX(n+1)7	Use prohibited	RY(n+1)0 to RY(n+1)7	Use prohibited	
X(n+19) to		Y(n+1F) e prohibited		RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data setting complete flag	
X(n+1F)	Ose prombited			RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag	
				RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag	
				RX(n+1)B	Remote READY	RY(n+1)B		
				RX(n+1)C to RX(n+1)F	Use prohibited	to RY(n+1)F	Use prohibited	

^{*1} The signal contents differ when a version B A68ADC is combined with a version B A2CCPU.

(d) Buffer memory addresses comparisons

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A68ADC		AJ65SBT2B-64AD		
Address	Name	Read/write	Address	Name	Read/write
0	Specification of channel to use		RWwm	CH1 Average processing setting	
1	Averaging processing specification		RWwm+1	CH2 Average processing setting] w
2	CH1 Averaging time, count		RWwm+2	CH3 Average processing setting	
3	CH2 Averaging time, count		RWwm+3	CH4 Average processing setting	1
4	CH3 Averaging time, count		RWrn	CH1 Digital output value	
5	CH4 Averaging time, count	R/W	RWrn+1	CH2 Digital output value	R
6	CH5 Averaging time, count		RWrn+2	CH3 Digital output value	
7	CH6 Averaging time, count		RWrn+3	CH4 Digital output value	1
8	CH7 Averaging time, count		m, n: The addre	ess assigned to the master station by a stati	on number
9	CH8 Averaging time, count				
10	CH1 Digital output value		1		
11	CH2 Digital output value				
12	CH3 Digital output value				
13	CH4 Digital output value] R			
14	CH5 Digital output value				
15	CH6 Digital output value				
16	CH7 Digital output value				
17	CH8 Digital output value				
18	Write data error code	R/W	1		
19	A/D conversion completed flag	R			



(4) Comparisons between A68ADC and AJ65VBTCU-68ADVN/AJ65VBTCU-68ADIN

(a) Performance specifications comparisons

\circ	Compatible	∧ · Partial	change required.	×	 Not compatible
· ().	. Cumpatible,	/\ .	Change required,		. Not compatible

Item	A68ADC	AJ65VBTCU-68ADVN AJ65VBTCU-68ADIN	Compati- bility replacement
Analog input	Voltage: -10 to 0 to +10VDC (input resistance 30K Ω) Current: +4 to +20mA (input resistance 250 Ω) Select via input terminal * Current input can also be used as -20 to 0 to +20mA.	Voltage: Current: $ -10 \text{ to } +10 \text{VDC} \qquad 0 \text{ to } +20 \text{mA} $ (input resistance $ 1 \text{M } \Omega \text{)} \qquad 250 \Omega \text{)} $	Voltage and current cannot be mixed, △ and negative current cannot be converted.
Digital output	16bits signed binary (data part 11bits) -2048 to 2047	16bits signed binary (-4096 to +4095) 16bits signed binary (-96 to +4095)	0
I/O characteristics	Analog input Digital output +10V +2000 +5V or +20mA +1000 0V or +4mA ± 0 -5V or-12mA -1000 -10V -2000	Analog input range	Precautions are ∩ needed as gain values are different.
Maximum resolution	Voltage 5mV (1/2000) Current 20 μ A (1/1000)	Note 1 to 5V User range setting 2 (0 to 5V) (± 12 digits*) (± 8 digits*)	0
Overall accuracy	Within \pm 1% (\pm 20) (accuracy relative to maximum value)	P O T O 20mA	0
Maximum conversion speed	Maximum 2.5ms/channel	*: Digit is the digital value. 1ms/channel	0
Absolute maximum input	Voltage ±	15V, current ± 30mA	0
Number of analog input points	8 ch	annels/module	0
Insulation method	Photocoupler isolation between input terminal and programmable controller power supply (non-isolated between channels)	Isolated Isolation Dielectric withstand voltage	0
Number of occupied I/O stations (number of points)	4 stations (4 stations × 8 points)	When set to Ver.1 remote device station (Ver.1 compatible slave station): 3 stations (3 stations × 32 points) (RX/RY 32 points each, RWr/RWw 12 points each) When set to Ver.2 remote device station (Ver.2 compatible slave station): 1 station (1 station × 32 points) (Expanded cyclic setting: 4X) (RX/RY 32 points each, RWr/RWw 16 points each)	When Ver.1 remote device station is set, the number of occupied points increases. The assignment of the entire system needs to be reconsidered.

 \bigcirc : Compatible, $\,\triangle$: Partial change required, $\,\times$: Not compatible

Item	A68ADC	AJ65VBTCU-68ADVN		AJ65VBTCU-68ADIN	Compati- bility	Precautions for replacement
Connected terminal	47-point terminal block					
Applicable wire size	0.75 to 2mm ² (applicable tightening torque 7kg • cm)	One-touch connector for communication ϕ CC-Link dedicated cable 0.5mm² (AWG#20) [ϕ 2.2 to 3.0]				
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	One-touch connector for power supply/FG	0.	eld wire 0.5mm²(AWG#20) 66 to 0.98mm²(AWG#18) [\$\phi\$ 2.2 to 3.0] e diameter 0.16mm or more	×	Change in wiring is required.
		One-touch connector for analog I/O	¢	φ 1.0 to 1.4 (A6CON-P214), 1.4 to 2.0 (A6CON-P220) [Applicable wire size: 0.14 to 0.2mm²] 1 to 1.4 (A6CON-P514), φ 1.4 to 2.0 (A6CON-P520) [Applicable wire size: 0.3 to 0.5mm²]		
24VDC internal current consumption	0.3A	0.1A			0	
Weight	1.01kg	0.17kg			0	
External dimensions	170(H) × 100(W) × 80(D)mm	115(H) × 41(W) × 67(D)mm			×	The overall size differs. Pay attention to the mounting dimensions.



(b) Functional comparisons

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Item	A68ADC	AJ65VBTCU-68ADVN/ AJ65VBTCU-68ADIN	Compati- bility	Precautions for replacement
Averaging processing A/D conversion system	A/D conversion is performed according to set times or set processing time on a channel, which is specified for the averaging processing to be performed on by the programmable controller CPU. After the conversion, the maximum and minimum values are removed, and the remaining total is averaged and the results are stored in the buffer memory.	A/D conversion is performed according to set times or set processing time on a channel, which is specified for the averaging processing to be performed on. After the conversion, the results are stored in the remote register.	0	
Specification of channel to use	The A68ADC has 8 channels of an A/D conversion circuit. Execution/non-execution of A/D conversion can be specified on each of those channels. With the programmable controller CPU, the channel to execute A/D conversion on is specified to address 0 (specification of channel to use) of the buffer memory.	Enable (execute)/disable (do not execute) A/D conversion is specified on each channel. By making unused channels conversion prohibited, sampling period can be shortened.	0	
Offset/gain setting	Changes the I/O conversion characteristics.			

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	A68	ADC		AJ65VBTCU-68ADVN/AJ65VBTCU-68ADIN				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0) to	Use prohibited	Y(n+0) to	Use prohibited	RXn0	CH1 A/D Conversion complete flag			
X(n+3)	Ose prombited	Y(n+3)	ose prombited	RXn1	CH2 A/D Conversion completed flag			
	Communication error detection flag			RXn2	CH3 A/D Conversion completed flag			
X(n+4)	indicating that execution of the	Y(n+4)	Error detection reset	RXn3	CH4 A/D Conversion completed flag			
A(II+4)	FROM and TO instructions resulted in a communication error	1 (1174)	signal ^{*1}	RXn4	CH5 A/D Conversion completed flag	EV. 0		
V(- , 5)	A68ADC reset switch ON detection flag Y(n+5)	V/- : 5\	Reset switch ON	RXn5	CH6 A/D Conversion completed flag	RYn0 to	Use prohibited	
X(n+5)		Y (N+5)	5) detection flag reset signal	RXn6	CH7 A/D Conversion completed flag	RY(n+1)7		
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RXn7	CH8 A/D Conversion completed flag			
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset	RXn8 to RXnB	Use prohibited			
X(n+8)				RXnC	E ² PROM write error flag			
to X(n+17)	Use prohibited			RXnD to RX(n+1)7	Use prohibited			
X(n+18)	A/D conversion READY	Y(n+8)	Use prohibited	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data processing complete flag	
	KLADI	Y(n+1F)	Ose prombited	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag	
Y/n+10\				RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag	
X(n+19) to X(n+1F)	Use prohibited			RX(n+1)B RX(n+1)C to RX(n+5)F	Remote READY Use prohibited	RY(n+1)B to RY(n+5)F	Use prohibited	

^{*1:} The signal contents differ when a version B A68ADC is combined with a version B A2CCPU.

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A68ADC		AJ65VBTCU-68ADVN/AJ65VBTCU-68ADIN		
Address	Name	Read/write	Address	Read/write	
0	Specification of channel to use		RWwm+0	A/D conversion enable/disable	
0	opecification of charmer to use		TXVVIII O	specification	
1	Averaging processing specification		RWwm+1	CH1 to 4 input range setting	
2	CH1 Averaging time, count		RWwm+2	CH5 to 8 input range setting	
3	CH2 Averaging time, count		RWwm+3	Averaging processing specification	
4	CH3 Averaging time, count	R/W	RWwm+4	CH1 Averaging time, count	
5	CH4 Averaging time, count		RWwm+5	CH2 Averaging time, count	W
6	CH5 Averaging time, count		RWwm+6	CH3 Averaging time, count	
7	CH6 Averaging time, count		RWwm+7	CH4 Averaging time, count	
8	CH7 Averaging time, count		RWwm+8	CH5 Averaging time, count	
9	CH8 Averaging time, count		RWwm+9	CH6 Averaging time, count	
10	CH1 Digital output value		RWwm+A	CH7 Averaging time, count	1
11	CH2 Digital output value		RWwm+B	CH8 Averaging time, count	
12	CH3 Digital output value		RWrn+0	CH1 Digital output value	
13	CH4 Digital output value	R	RWrn+1	CH2 Digital output value	
14	CH5 Digital output value	K	RWrn+2	CH3 Digital output value	
15	CH6 Digital output value		RWrn+3	CH4 Digital output value	
16	CH7 Digital output value		RWrn+4	CH5 Digital output value	R
17	CH8 Digital output value		RWrn+5	CH6 Digital output value	
18	Write data error code	R/W	RWrn+6	CH7 Digital output value	
19	A/D conversion completed flag	R	RWrn+7	CH8 Digital output value	
-			RWrn+8	Error code	
			RWrn+9		
			to	Use prohibited	_
			RWrn+B		

6.2.2 Analog output module comparison

(1) Comparisons between A64DAVC and AJ65BT-64DAV

(a) Performance specifications comparisons

		O: Compatible, △: Par		ired, x: Not compatible
Item	A64DAVC	AJ65BT-64DAV	Compati- bility	Precautions for replacement
Digital input	(1) 16-bit signed binary value (2) Setting range: Set resolution Setting range 1/4000 -4000 to 4000 1/8000 -8000 to 8000 1/12000 -12000 to 12000	16bits signed binary (valid bits: 12 bits) -2048 to +2047	×	The setting range has been changed.
Analog output	-10 to 0 to 10VDC (external load resistance: 2k Ω to 1M Ω)	Voltage: -10 to +10VDC (external load resistance: $2k \Omega$ to $1M \Omega$)	0	
I/O characteristics	Digital value resolution	Digital input value	Δ	The digital input range is different.
Maximum resolution of digital value	0.83mV (1/12000)	5mV (1/2000)	×	The maximum resolution is different.
Overall accuracy (accuracy of maximum value)	±1.	0		
Maximum conversion speed	Within 25ms/4 channels (1 channel is same period of time)	Max. 1ms/channel (4ms/4 channels)	0	
Number of analog output points	4 ch	annels/module	0	
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolated between channels)	Between output channels: Non-isolated Between external power supply and analog output: Transformer insulation	0	
Number of occupied I/O stations (number of points)	4 stations (4 stations × 8 points)	2 stations (2 stations × 32 points) (RX/RY 32 points each, RWr/RWw 8 points each	h) ×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Connected terminal	47-point terminal block	27-point terminal block	×	
Applicable wire size	` ' '	e tightening torque 39 to 59N • cm)	0	Change in wiring is
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3.5 (comforting to JIS C 2805), RAV2-3.5	×	required.
24VDC internal current consumption	0.12A	0.18A	Δ	The current consumption increases. The current capacity needs to be reconsidered.
Weight	1.01kg	0.4kg	0	
External dimensions	170(H) × 100(W) × 80(D) mm	65(H) × 151.9(W) × 63(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

Item	A64DAVC	AJ65BT-64DAV	Compati- bility	Precautions for replacement
Analog output enable signal	With the analog output enable signals (Yn+18 to Yn+1B), it is possible to select the type of output values at each channel from D/A converted analog values and output offset values.	By turning the analog output enable signal ON or OFF with the sequence program, it is possible to select the type of output values at each channel from D/A converted analog values and output offset values. Note, however, that the D/A conversion time (conversion speed) is fixed regardless of the setting of the analog output enable signal.	0	
Analog output enable/disable setting	Stores the channel to disable analog output from (0V/0mA) in the buffer memory of the A64DAVC.	By writing "0" or "1" to the address of the remote register using the sequence program, it is possible to select on each channel whether to enable or disable outputs of analog values.	0	
HOLD/CLEAR setting	In preparation for the event that the programmable controller CPU enters a stop status or an error status, select HOLD or CLEAR (offset values or 0V/0mA) analog values that are stored before a stop or an error occurrence using the HOLD/CLEAR terminal.	In preparation for the event that the programmable controller CPU enters a stop status or the AJ65BT-64DAV stops D/A conversion due to an error, the HLD/CLR terminal can be used to select whether to hold or clear analog values (output offset values) that are being output from each channel right before those stops. The HLD/CLR terminal is provided on the front of the module and this selection can be made on all channels at once. (Including the case of the disconnections of link communication)	0	
Offset/gain setting	Changes the I/O conversion characteristics.	I/O conversion characteristics can be changed as desired when the detailed ones are required. To do this, short the test mode terminal to enter a test mode, and configure the offset/gain settings for each channel without a aid of a various register. Also, if detailed I/O conversion characteristics are not required, the default offset/gain values can be used by turning on the I/O signal RYn4 (offset/gain selection) to the master station.	0	

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	A64		AJ65BT-64DAV					
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
						RYn0	CH1 Enable signal flag for analog output	
			Use prohibited			RYn1	CH2 Enable signal flag for analog output	
X(n+0) to	Use prohibited	Y(n+0) to		RXn0		RYn2	CH3 Enable signal flag for analog output	
X(n+3)		Y(n+3)		to RXnF		RYn3	CH4 Enable signal flag for analog output	
					Use prohibited	RYn4	Offset/gain value selection	
	Communication error					RYn5		
	detection flag					to		
	indicating that					RYnF		
X(n+4)	execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal RX(n+1)0 to RX(n+1)7	reset signal		to	RY(n+1)0 to RY(n+1)7	Use prohibited
X(n+5)	A64DAVC reset switch ON detection flag	Y(n+5)	Reset signal for reset switch ON detection flag	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data processing complete flag	
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag	
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag	
X(n+8) to X(n+17)	Use prohibited	Y(n+8) to Y(n+17)	Use prohibited	RX(n+1)B	Remote READY	RY(n+1)B		
		Y(n+18)	CH1 Analog output enable signal	RX(n+1)C		RY(n+1)C		
X(n+18)	D/A conversion	Y(n+19)	CH2 Analog output enable signal	RX(n+1)D	Use prohibited	RY(n+1)D	Use prohibited	
A(II+10)	READY	Y(n+1A)	CH3 Analog output enable signal	RX(n+1)E	Ose prombited	RY(n+1)E		
		Y(n+1B)	CH4 Analog output enable signal	RX(n+1)F		RY(n+1)F		
X(n+19)		Y(n+1C)						
to	Use prohibited	to	Use prohibited					
X(n+1F)		Y(n+1F)						

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A64DAVC		AJ65BT-64DAV		
Address	Name	Read/write	Address	Name	Read/write
0	CH1 Digital value setting area		RWwm	CH1 Digital value setting area	
1	CH2 Digital value setting area		RWwm+1	CH2 Digital value setting area	
2	CH3 Digital value setting area]	RWwm+2	CH3 Digital value setting area	w
3	CH4 Digital value setting area]	RWwm+3	CH4 Digital value setting area	
4	CH1 Analog output disable/enable		RWwm+4	Analog output enable/disable area]
,	setting area		1000000	7 thatog output onable/alloable area	
5	CH2 Analog output disable/enable	R/W	RWwm+5		
	setting area	1000			
6	CH3 Analog output disable/enable		RWwm+6	Use prohibited	_
	setting area			ose prombted	
7	CH4 Analog output disable/enable		RWwm+7		
,	setting area		TXVVWIII 17		
8	Resolution of digital value setting area		RWrn	CH1 Set value check code	
9	Error code storage area		RWrn+1	CH2 Set value check code	
			RWrn+2	CH3 Set value check code	R
			RWrn+3	CH4 Set value check code	
			RWrn+4	Error code	
			RWrn+5		
			RWrn+6	Use prohibited	-
			RWrn+7		

(2) Comparisons between A64DAVC and AJ65SBT2B-64DA (voltage output)

(a) Performance specifications comparisons

		O: Compatible, △: Partial o	Compati-	Precautions for
Item	A64DAVC	AJ65SBT2B-64DA	bility	replacement
Digital input	(1) 16-bit signed binary value (2) Setting range: Set resolution Setting range 1/4000 -4000 to 4000 1/8000 -8000 to 8000 1/12000 -12000 to 12000	Voltage: 16bits signed binary (-12288 to 12287, -16384 to 16383, -288 to 12287) Current: 16bits signed binary (-288 to 12287)	×	The setting range has been changed.
Analog output	Voltage: -10 to +10VDC (external load resistance: 2k Ω to 1M Ω)	Voltage: -10 to +10VDC (external load resistance: 1k Ω to 1M Ω) Current: 0 to 20mA (external load resistance: 0 to 600 Ω)	0	
I/O characteristics	Digital value resolution	Digital input value Analog output range Ambient temperature Ambient temperature 25 ± 5 °C 25 ± 5 °C	Δ	The digital input range is different.
Maximum resolution of digital value	0.83mV (1/12000)		×	The maximum resolution is different.
Overall accuracy (accuracy of maximum value)	± 1.0% (± 100mV)		0	
Max. conversion speed	Within 25ms/4 channels (1 channel is same period of time)	200 μs/channel	0	
Output protection function	-	Available	0	
Number of analog output points	4 ch	annels/module	0	
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolated between channels)	Between communication line and all analog outputs: Photocoupler isolation between power supply line and all analog outputs: Transformer isolation between channels: Non-isolated	0	
Number of occupied I/O stations (number of points)	4 stations (4 stations × 8 points)	1 station (1 station × 32 points) (RX/RY 32 points each, RWr/RWw 4 points each)	0	
Connected terminal	47-point terminal block	Communication part, module communication part: 7-point two-piece terminal block (M3 screw) I/O part: 18-point two-piece terminal block (M3 screw)	×	
Applicable wire size	0.75 to 2mm ² (Applicable tightening torque 39 to 59N • cm)	0.3 to 2mm ²	0	Change in wiring is required.
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3 (conforming to JIS C 2805) [Applicable wire size: 0.3 to 1.25mm ²] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm ²]	0	

Item	A64DAVC	AJ65SBT2B-64DA	Compati- bility	Precautions for replacement
External power supply	24VDC (20.4 to 28.8VDC) Current consumption: 0.12A	24VDC (20.4 to 28.8VDC) Current consumption: 0.24A (at 24VDC) Inrush current: 2.6A 3.2ms or less	Δ	The current consumption increases. The current capacity needs to be reconsidered.
Weight	1.01kg	0.25kg	0	
External dimensions	170(H) × 100(W) × 80(D) mm	50(H) × 122(W) × 54(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

Item	A64DAVC	AJ65SBT2B-64DA	Compati- bility	Precautions for replacement
Analog output enable/disable setting	Selects whether to output D/A conversion values or offset values on each channel. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.	Selects whether to output D/A conversion values or offset values on each channel. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.	0	
Analog conversion enable/disable function	-	Selects whether to enable or disable D/A conversion on each channel. By making unused channels D/A conversion prohibited, conversion speed can be increased.	-	
Output range switching function	-	Sets the analog output range on each channel and changes the I/O conversion characteristics.	-	
HOLD/CLEAR setting	As the analog output status of the programmable controller CPU that is in RUN, at STOP, or in an error status, switching the type of output values as desired between D/A conversion values, offset values and 0V/0mA is possible.	In preparation for the event that the programmable controller CPU enters a stop status or the AJ65SBT2B-64DA stops D/A conversion due to an error, this settings can be configured to select whether to hold or clear analog values (output offset values) that are being output from each channel right before those stops.	0	
Offset/gain setting	Changes the I/O conversion characteristics.	Changes the I/O conversion characteristics as desired. For that, offset/gain settings can be configured for each channel without an aid of a various register.	0	
Transmission speed auto-tracking function	-	Automatically sets the transmission speed according to the settings of the master module when the AJ65SBT2B-64DA is powered on.	_	

I/O signals are different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

A64DAVC				AJ65SBT2B-64DA				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0) to X(n+3)	Use prohibited	Y(n+0) to Y(n+3)	Use prohibited			RYn0	CH1 Analog output enable/disable flag	
	Communication error detection flag					RYn1	CH2 Analog output enable/disable flag	
X(n+4)	indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal	RXn0	BY ₂₀ 0		RYn2	CH3 Analog output enable/disable flag
X(n+5)	A64DAVC reset switch ON	Y(n+5)	Reset signal of reset switch ON	to RXn9	Use prohibited	RYn3	CH4 Analog output enable/disable flag CH1 Range setting	
	detection flag		detection flag			RYn4	(0th bit) CH1 Range setting	
X(n+6)	Use prohibited	Y(n+6)	Use prohibited			RYn5	(1st bit)	
X(n+7)	Communication completion	Y(n+7)	Communication			RYn6	CH1 Range setting (2nd bit)	
	response signal wait flag		reset signal		RYn7	CH2 Range setting (0th bit)		
						RYn8	CH2 Range setting (1st bit)	
						RYn9	CH2 Range setting (2nd bit)	
				RXnA	Flash memory read error flag	RYnA	CH3 Range setting (0th bit)	
				RXnB	User range read error flag	RYnB	CH3 Range setting (1st bit)	
				RXnC	Flash memory write error flag	RYnC	CH3 Range setting (2nd bit)	
				RXnD,	Use prohibited	RYnD	CH4 Range setting (0th bit)	
				RXnE	Coo promotion	RYnE	CH4 Range setting (1st bit)	
				RXnF	Test mode flag	RYnF	CH4 Range setting (2nd bit)	
X(n+8) to	Use prohibited	Y(n+8) to	Use prohibited			RY(n+1)0	CH1 HOLD/CLEAR setting	
X(n+17)	occ promoned	Y(n+17)	Coo promonou			RY(n+1)1	CH2 HOLD/CLEAR setting	
						RY(n+1)2	CH3 HOLD/CLEAR setting	
						RY(n+1)3	CH4 HOLD/CLEAR setting	
				RX(n+1)0 to RX(n+1)7	Use prohibited	RY(n+1)4	CH1 Conversion enable/disable setting	
				RA(II+1)/		RY(n+1)5	CH2 Conversion enable/disable setting	
						RY(n+1)6	CH3 Conversion enable/disable setting	
						RY(n+1)7	CH4 Conversion enable/disable setting	

6 REPLACING ANALOG I/O MODULE

	A64DAVC			AJ65SBT2B-64DA			
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description
X(n+18)	D/A conversion READY	Y(n+18)	CH1 Analog output enable signal	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data setting complete flag
		Y(n+19)	CH2 Analog output enable signal	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag
X(n+19) to	Use prohibited	Y(n+1A)	CH3 Analog output enable signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag
X(n+1F)		Y(n+1B)	CH4 Analog output enable signal	RX(n+1)B	Remote READY	RY(n+1)B	Use prohibited
		Y(n+1C) to Y(n+1F)	Use prohibited	RX(n+1)C to RX(n+1)F	Use prohibited	RY(n+1)F	oss promoted

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A64DAVC		AJ65SBT2B-64DA		
Address	Name	Read/write	Address	Name	Read/write
0	CH1 Digital value setting area		RWwm	CH1 Digital input value setting	
1	CH2 Digital value setting area		RWwm+1	CH2 Digital input value setting] w
2	CH3 Digital value setting area		RWwm+2	CH3 Digital input value setting	T **
3	CH4 Digital value setting area		RWwm+3	CH4 Digital input value setting	
4	CH1 Analog output disable/enable		RWrn	CH1/CH2 Check code	
	setting area				
5	CH2 Analog output disable/enable		RWrn+1	CH3/CH4 Check code	
	setting area	R/W		Crist Crit Cites Code	R
6	CH3 Analog output disable/enable		RWrn+2	Error code	1
o o	setting area			End code	
7	CH4 Analog output disable/enable		RWrn+3	Use prohibited	
•	setting area		TXWIII 3	Use prombited	
8	Resolution of digital value setting area		m, n: The addre	ess assigned to the master station by a station	on number
- U	. toosiaasii si algaal valao ootiilig aroa		setting		
9	Error code storage area		J		

(3) Comparisons between A64DAVC and AJ65SBT-62DA

(a) Performance specifications comparisons

	İ					O: C	ompatible,	∆: Partial		ired, x: Not compatible
Item	A64I	A64DAVC AJ65SBT-62D				2DA		Compati- bility	Precautions for replacement	
Digital input	(1) 16-bit signed bin (2) Setting range: Set resolution 1/4000 1/8000 1/12000	Setting range -4000 to 4000 -8000 to 8000 -12000 to 12000			(-	e: 16bits sig -4096 to +4 t: 16bits sig (0 to 4099	095) ned binary		×	The setting range has been changed.
Analog output	-10 to 0 to 10VDC (external load resistance: 2k Ω to 1M Ω)			Voltage: -10 to +10VDC (external load resistance: $2k\Omega$ to $1M\Omega$) Current: 0 to $20mA$ (external load resistance: 0 to 600Ω)				0		
	Digital value resolution Analog output value*			Digital input value	Analog output	Ambient temperature 0 to 55 °C	Ambient temperature 25±5°C	Maximum resolution		
I/O characteristics	2000 4000 15 2000 -4000 16 -2000 -4000 17 1000 -8000	6000 +5V 0 0V -6000 -5V -12000 -10V	Voltage	-4000 to +4000	-10 to +10V User range setting 1 (-10 to +10V)	±0.4% (±40mV)	±0.2% (±20mV)	2.5mV	Δ	The digital input range is different.
Maximum resolution of digital value	* When the offset value is set to 0V and the gain value is set to 10V 0.83mV(1/12000)			0 to 4000	0 to 5V 1 to 5V User range setting 2 (0 to	±0.4% (±20mV)	±0.2% (±10mV)	1.25mV 1.0mV	×	The maximum resolution is different.
Overall accuracy (accuracy of maximum value)	± 1.0% (± 100mV)	Current	0 to 4000	0 to 20mA 4 to 20mA User range setting 3 (0 to 20mA)	±0.4% (±80 μ A)	±0.2% (±40 μ A)	5 μ A 4 μ A	0	
Maximum conversion speed		s/4 channels ne period of time)	Factory-set: -10 to +10V. 1ms/channel				0			
Absolute maximum output	-	_		\	/oltage:	± 12V, curr	ent: +21mA	Α	0	
Number of analog output points	4 channels/module			2 channels/module			×	Please consider replacing by using two or more AJ65SBT-62DA modules.		
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolation between channels)			Between communication line and all analog outputs: Photocoupler isolation between power supply line and all analog outputs: Photocoupler isolation (non-isolated between channels)			0			
Number of occupied I/O stations (number of points)	4 stations (4 sta	tions × 8 points)	1 station (1 station × 32 points) (RX/RY 32 points each, RWr/RWw 4 points each)			0				

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

Item	A64DAVC	AJ65SBT-62DA	Compati- bility	Precautions for replacement
Connected terminal	47-point terminal block	Communication part, module communication part: 7-point two-piece terminal block (M3 screw) I/O part: 18-point direct-mount terminal block (M3 screw)	×	
Applicable wire size	0.75 to 2mm ² (Applicable tightening torque 39 to 59 N • cm)	0.75 to 2mm ²	0	Change in wiring is required.
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3 (conforming to JIS C 2805) [Applicable wire size: 0.3 to 1.25mm²] V2-MS3, RAV2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm²]	0	
24VDC internal current consumption	0.12A	0.16A	Δ	The current consumption increases. The current capacity needs to be reconsidered.
Weight	1.01kg	0.20kg	0	
External dimensions	170(H) × 100(W) × 80(D)mm	50(H) × 118(W) × 40(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

Item	A64DAVC). Compatible, ∆. Partial (Compati- bility	Precautions for replacement
D/A output enable/disable function	Selects on each channel whether to output D/A conversion values or offset values. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.	Selects on each channel conversion values or offs Note, however, that the cregardless of the output of	et values. conversion speed is fixed	0	
D/A conversion enable/disable function	-	Selects whether to enabl conversion on each chan By making unused chanr prohibited, sampling peri	_		
Output range switching function	_	Sets the analog output ra changes the I/O conversion The following eight input Output range -10 to +10V 0 to 5V 1 to 5V 0 to 20mA 4 to 20mA User range setting 1 (-10 to +10V) User range setting 2 (0 to 5V) User range setting 3 (0 to 20mA)	on characteristics.	_	
HOLD/CLEAR setting	As the analog output status of the programmable controller CPU that is in RUN, at STOP, or in an error status, switching the type of output values as desired between D/A conversion values, offset values and 0V/0mA is possible.	In preparation for the event that the programmable controller CPU enters a stop status or the AJ65SBT-62DA stops D/A conversion due to an error, this settings can be configured to select whether to hold or clear analog values (output offset values) that are being output from each channel right before those stops.		0	
Offset/gain value selection	Changes the I/O conversion characteristics.	Changes the I/O convers desired. For that, offset/g configured for each chan various register.	ain settings can be	0	



I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	A64I	DAVC		AJ65SBT-62DA					
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description		
V(n i 0)		V(n10)		RXn0 to RXnB	Use prohibited	RYn0	CH1 Analog output enable/disable flag		
X(n+0) to X(n+3)	Use prohibited	Y(n+0) to Y(n+3)	Use prohibited	RXnC	E ² PROM write error flag	RYn1	CH2 Analog output enable/disable flag		
A(II+3)		1 (11+3)		RXnD RxnE	Use prohibited				
				RXnF	Test mode flag				
X(n+4)	Communication error detection flag indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal	RX(n+1)0 to RX(n+1)7	Use prohibited	RYn2 to RY(n+1)7	Use prohibited		
X(n+5)	A64DAVC reset switch ON detection flag	Y(n+5)	Reset signal for reset switch ON detection flag	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data processing complete flag		
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag		
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag		
X(n+8) to X(n+17)	Use prohibited	Y(n+8) to Y(n+17)	Use prohibited	RX(n+1)B	Remote READY				
		Y(n+18)	CH1 Analog output enable signal						
V(=140)	D/A conversion	Y(n+19)	CH2 Analog output enable signal			RY(n+1)B	Lloo wrobibited		
X(n+18)	READY	Y(n+1A)	CH3 Analog output enable signal	RX(n+1)C to	Use prohibited	to RY(n+1)F	Use prohibited		
		Y(n+1B) CH4 Analog output enable signal		RX(n+1)F					
X(n+19) to X(n+1F)	Use prohibited	Y(n+1C) to Y(n+1F)	Use prohibited						

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A64DAVC		AJ65SBT-62DA			
Address	Name	Read/write	Address	Name	Read/write	
0	CH1 Digital value setting area		RWwm	CH1 Digital value setting		
1	CH2 Digital value setting area		RWwm+1	CH2 Digital value setting	w	
2	CH3 Digital value setting area		RWwm+2	Analog output enable/disable setting	VV	
3	CH4 Digital value setting area		RWwm+3	Output range HOLD/CLEAR setting		
4	CH1 Analog output disable/enable		RWrn	CLI4 Chapte and		
4	4 setting area		RVVIII	CH1 Check code	I	
5	CH2 Analog output disable/enable	R/W	RWrn+1	CH2 Check code	R	
5	setting area	R/VV		CH2 Check code		
6	CH3 Analog output disable/enable		DWGGO	France and a		
0	setting area		RWrn+2	Error code		
7	CH4 Analog output disable/enable		DW/ + 2	l la a marabile ita d		
,	setting area		RWrn+3	Use prohibited		
8	Resolution of digital value setting area					
9	Error code storage area					



(4) Comparisons between A64DAVC and AJ65VBTCU-68DAVN

(a) Performance specifications comparisons

Item	A64DAVC	AJ65VBTCU-68DAVN	Compatibility Compatibility Compatibility Compatibility Compatible Precautions for replacement
Digital input	(1) 16-bit signed binary value (2) Setting range: Set resolution Setting range 1/4000 -4000 to 4000 1/8000 -8000 to 8000 1/12000 -12000 to 12000	16bits signed binary (-4096 to +4095)	The setting range has been changed.
Analog output	-10 to 0 to 10VDC (external load resistance: $2k \Omega$ to 1M Ω)	-10 to +10V DC (external load resistance: $2k\Omega\ \ \text{to }1M\Omega\)$	0
I/O characteristics	Digital value resolution Analog output value*	Digital input value	The digital input △ range is different.
Maximum resolution of digital value	0.83mV(1/12000)	4000 User range setting 2 (±15mV) (±10mV) 1.0mV (0 to 5V)	The maximum x resolution is different.
Overall accuracy (accuracy relative to maximum value)	± 1.0% (± 100mV)		0
Maximum conversion speed	Within 25ms/4 channels (1 channel is same period of time)	1ms/channel	0
Absolute maximum output	-	± 12V	0
Analog output points	4 channels/module	8 channels/module	The number of channels has increased.
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolated between channels)	Isolated Isolation Dielectric withstand voltage	0
Number of occupied I/O stations (number of points)	4 stations (4 stations × 8 points)	When set to Ver.1 remote device station (Ver.1 compatible slave station): 3 stations (3 stations × 32 points) (RX/RY 32 points each, RWr/RWw 12 points each) When set to Ver.2 remote device station (Ver.2 compatible slave station): 1 station (1 station × 32 points) (Expanded cyclic setting: 4X) (RX/RY 32 points each, RWr/RWw 16 points each)	When Ver.1 remote device station is set, the number of occupied points increases. The assignment of the entire system needs to be reconsidered.

Item	A64DAVC	AJ	65VBTCU-68DAVN	Compati- bility	Precautions for replacement
Connected terminal	47-point terminal block	ĺ. <u></u>			
	0.75 to 2mm ²	One-touch connector	Communication line: Ver.1.10-compatible CC-Link dedicated cable 0.5mm ² (AWG		
Applicable wire size	(Applicable tightening torque	for communication	20)[φ2.2 to 3.0], shield wire 0.5mm ² (AWG 20)		
	39 to 59 N - cm)	One-touch connector for power supply/FG	0.66 to 0.98mm ² (AWG 18)[\$\phi\$2.2 to 3.0] wire diameter 0.16mm or more		Change in wiring is
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	One-touch connector for analog I/O		×	required.
24VDC internal current consumption	0.12A	0.15A		Δ	The current consumption increases. The current capacity needs to be reconsidered.
Weight	1.01kg		0.16kg	0	
External dimensions	170(H) × 100(W) × 80(D) mm	115(H	I) × 41(W) × 67(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.



(b) Functional comparisons

○: Compatible, ∧: Partial change required, x: Not compatible

Item	A64DAVC	AJ65VBTCL	: Compatible, △: Partial : J-68DAVN	Compati- bility	Precautions for replacement
D/A output enable/disable function	Selects on each channel whether to output D/A conversion values or offset values. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.	Selects on each channel whether to output D/A conversion values or offset values. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.		0	
D/A conversion enable/disable function	-	Selects whether to enable conversion on each chann By making unused channe prohibited, sampling period	_		
Output range switching function	_	Sets the analog output range changes the I/O conversion. The following five output range Output range -10 to +10V 0 to 5V 1 to 5V User range setting 1 (-10 to +10V) User range setting 2 (0 to 5V)	on characteristics.	-	
HOLD/CLEAR setting	As the analog output status of the programmable controller CPU that is in RUN, at STOP, or in an error status, switching the type of output values as desired between D/A conversion values, offset values and 0V/0mA is possible. D/A conversion value outputs, offset value outputs and 0V/0mA outputs can be revised arbitrarily.	In preparation for the event that the programmable controller CPU enters a stop status or the AJ65VBTCU-68DAVN stops D/A conversion due to an error, this settings can be configured to select whether to hold or clear analog values (output offset values) that are being output from each channel right before those stops.		0	
Offset/gain value selection	Changes the I/O conversion characteristics.	Changes the I/O conversion desired. For that, offset/gath configured for each channing various register.	in settings can be	0	

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	A64I	DAVC		AJ65VBTCU-68DAVN						
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description			
X(n+0) to	Use prohibited	Y(n+0) to	Use prohibited	RXn0		RYn0	CH1 Analog output enable/disable flag			
X(n+3)	Ose prombited	Y(n+3)	Ose prombited	to RXnB	Use prohibited	RYn1	CH2 Analog output enable/disable flag			
	Communication error detection flag			KXIID		RYn2	CH3 Analog output enable/disable flag			
X(n+4)	indicating that execution of the	Y(n+4)	Error detection reset	RXnC	E ² PROM write error flag	RYn3	CH4 Analog output enable/disable flag			
	FROM and TO instructions resulted in a communication error		signal			RYn4	CH5 Analog output enable/disable flag			
	AGADAVC rooot	Y(n+5)		RXnD			RYn5	CH6 Analog output enable/disable flag		
X(n+5)	A64DAVC reset switch ON detection		Y(n+5)	Reset switch ON detection flag				to	Use prohibited	RYn6
	flag		RX(Use prohibited	nication reset RYn8 to	1+1)/	RYn7	CH8 Analog output enable/disable flag			
X(n+6)	Use prohibited	Y(n+6)				DVnQ				
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal		to	Use prohibited				
X(n+8)		Y(n+8)			Initial data		Initial data			
to X(n+17)	Use prohibited	to Y(n+17)	Use prohibited	RX(n+1)8	processing request flag	RY(n+1)8	processing complete flag			
		Y(n+18)	CH1 Analog output enable signal	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag			
X(n+18)	A/D conversion	Y(n+19)	CH2 Analog output enable signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset			
X(II+10)	READY	Y(n+1A)	CH3 Analog output enable signal	RX(n+1)B	Remote READY					
		Y(n+1B)	CH4 Analog output enable signal	RX(n+1)C		RY(n+1)B to	Use prohibited			
X(n+19) to	Use prohibited	Y(n+1C) to	Use prohibited	to RX(n+5)F	Use prohibited	RY(n+5)F				
X(n+1F)		Y(n+1F)								

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual

	A64DAVC			AJ65VBTCU-68DAVN		
Address	Name	Read/write	Address	Name	Read/write	
0	CH1 Digital value setting area		RWwm+0	CH1 Digital value setting		
1	CH2 Digital value setting area		RWwm+1	CH2 Digital value setting		
2	CH3 Digital value setting area		RWwm+2	CH3 Digital value setting		
3	CH4 Digital value setting area		RWwm+3	CH4 Digital value setting		
4	CH1 Analog output disable/enable setting area		RWwm+4	CH5 Digital value setting		
5	CH2 Analog output disable/enable setting area	R/W	RWwm+5	CH6 Digital value setting	W	
6	CH3 Analog output disable/enable setting area		RWwm+6	CH7 Digital value setting	VV	
7	CH4 Analog output disable/enable setting area		RWwm+7	CH8 Digital value setting		
8	Resolution of digital value setting area		RWwm+8	Analog output enable/disable setting		
9	Error code storage area		RWwm+9	CH1 to CH4 Output range setting		
			RWwm+A	CH5 to CH8 Output range setting		
			RWwm+B	HOLD/CLEAR setting		
			RWrn+0	CH1 Check code		
			RWrn+1	CH2 Check code		
			RWrn+2	CH3 Check code		
			RWrn+3	CH4 Check code		
			RWrn+4	CH5 Check code	R	
			RWrn+5	CH6 Check code		
			RWrn+6	CH7 Check code		
			RWrn+7	CH8 Check code		
			RWrn+8	Error code		
			RWrn+9			

to RWrn+B

(5) Comparisons between A64DAIC and AJ65BT-64DAI

(a) Performance specifications comparisons

): Compatible, △: Partial	Compati-	Precautions for
Item	A64I	DAIC		AJ65B	T-64DAI	bility	replacement
	(1) 16-bit signed bin (2) Setting range:	ary value		16hite eig	ned binary		
Digital input	Set resolution			1	s: 12 bits)	×	The setting range
3 ··	1/4000 1/8000	0 to 400		1	4095		has been changed.
	1/12000 0 to 12000						
	0 to 2	ľΩmΔ		Current: +4 to 20mA			
Analog output	(external load resis		600Ω)		(external load resistance: 0 to 600 Ω)		
	Digital value re		Analog	Digital input value Analog conversion value			
	1/4000 1/8000	1/12000	output value*	4000	+20mA		
	9 4000 8000	12000	+20mA	2000	+12mA +4mA		
	nt va				74IIIA		The digital input
I/O characteristics	2000 4000	6000	+12mA			Δ	range is different.
	4000 8000 2000 4000	0	+4mA				
	* When the offset va						
Maximum resolution of	and the gain value		IIA	4 114	1/4000)	×	The maximum resolution is
digital value Overall accuracy	1.5 μΑ(2000)		τ μη(different.
(accuracy relative to			+ 1	.0%(± 200 μA)		0	
maximum value)				.070(± 200 µ/1)			
Maximum conversion	Within 25ms	/4 channels		Max. 1ms/channel			
speed	(1 channel is san	ne period of t	time)	(4ms/4 channels)		0	
Analog output				nannels/module		0	
	Between the output terminal and		Between output channels: Non-isolated				
Insulation method	programmable controller power supply: Photocoupler isolation			(Between external po	wer supply and analog	0	
	(non-isolated be		nels)	output: Transf	ormer isolation)		
Number of occupied I/O stations (number of points)	4 stations (4 sta	tions × 8 poi	nts)	2 stations (2 stations × 32 points) (RX/RY 32 points each, RWr/RWw 8 points each)		×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Connected terminal	47-point ter			'	rminal block	×	
Applicable wire size	0.7	5 to 2mm ² (a	applicabl	e tightening torque 39 to 59		0	Change in wiring is
Applicable solderless terminal	V1.25-3, V V2-S3, V			(conforming t	.25-3.5 o JIS C 2805), ′2-3.5	×	required.
24VDC internal current consumption	0.1	5A		0.27A		Δ	The current consumption increases. The current capacity needs to be reconsidered.
Weight	1.0	1kg		0.	4kg	0	
External dimensions	170(H) × 100(\	V) × 80(D) m	nm	65(H) × 151.9(W) × 63(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

Item	A64DAIC	AJ65BT-64DAI	Compati- bility	
Analog output enable signal	With the analog output enable signals (Yn+18 to Yn+1B), it is possible to select the type of output values at each channel from D/A converted analog values and output offset values.	By turning the analog output enable signal ON or OFF with the sequence program, it is possible to select the type of output values at each channel from D/A converted analog values and output offset values. Note, however, that the D/A conversion time (conversion speed) is fixed regardless of the setting of the analog output enable signal.	0	
Analog output enable/disable setting	Stores the channel to disable analog output from (0V/0mA) in the buffer memory of the A64DAIC.	By writing "0" or "1" to the address of the remote register using the sequence program, it is possible to select on each channel whether to enable or disable outputs of analog values.	0	
HOLD/CLEAR setting	In preparation for the event that the programmable controller CPU enters a stop status or an error status, the HOLD/CLEAR terminal can be used to select HOLD or CLEAR (offset values or 0V/0mA) analog values that are stored before a stop or an error occurrence.	In preparation for the event that the programmable controller CPU enters a stop status or the AJ65BT-64DAI stops D/A conversion due to an error, the HLD/CLR terminal can be used to select whether to hold or clear analog values (output offset values) that are being output from each channel right before those stops. The HLD/CLR terminal is provided on the front of the module and this selection can be made on all channels at once. (Including the case of the disconnections of link communication)	0	
Offset/gain setting	Changes the I/O conversion characteristics.	I/O conversion characteristics can be changed as desired when the detailed ones are required. To do this, short the test mode terminal to enter a test mode, and configure the offset/gain settings for each channel without a aid of a various register. Also, if detailed I/O conversion characteristics are not required, the default offset/gain values can be used by turning on the I/O signal RYn4 (offset/gain selection) to the master station.	0	

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	A64I	DAIC		AJ65BT-64DAI				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0) to	Use prohibited	Y(n+0)	Use prohibited			RYn0	CH1 Analog output enable flag	
X(n+3)	Ose pronibiled	to Y(n+3)	Ose pronibiled			RYn1	CH2 Analog output enable flag	
	Communication error detection flag			RXn0		RYn2	CH3 Analog output enable flag	
	indicating that execution of the		Error dotootion	to RXnF Use prohibited RYn3 RYn4	CH4 Analog output enable flag			
X(n+4)	FROM and TO	Y(n+4)	Error detection reset signal			RYn4	Offset/gain value selection	
	in a communication					RYn5		
	error					to		
						RYnF	Use prohibited	
V(5)	A64DAIC reset	\/(···E)	Reset switch ON	RX(n+1)0		RY(n+1)0	·	
X(n+5)	switch ON detection	Y(n+5)	detection flag reset	to		to		
	flag		signal	RX(n+1)7	Initial data	RY(n+1)7	Initial data	
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RX(n+1)8	processing request	RY(n+1)8	processing complete	
7(11.0)				101(11-1)0	flag	111(1111)0	flag	
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag	
X(n+8)		Y(n+8)					Error reset request	
to X(n+17)	Use prohibited	to Y(n+17)	Use prohibited	RX(n+1)A	Error status flag	RY(n+1)A	flag	
X(n+18)	D/A conversion READY	Y(n+18)	CH1 Analog output enable signal	RX(n+1)B	Remote READY	RY(n+1)B		
		Y(n+19)	CH2 Analog output enable signal	RX(n+1)C		RY(n+1)C		
X(n+19)		Y(n+1A)	CH3 Analog output enable signal	RX(n+1)D		RY(n+1)D	Use prohibited	
to X(n+1F)	Use prohibited	Y(n+1B)	CH4 Analog output enable signal	RX(n+1)E	Use prohibited	RY(n+1)E		
		Y(n+1C) to Y(n+1F)	Use prohibited	RX(n+1)F		RY(n+1)F		

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A64DAIC		AJ65BT-64DAI			
Address	Name	Read/write	Address	Name	Read/write	
0	CH1 Digital value setting area		RWwm	CH1 Digital value setting area		
1	CH2 Digital value setting area		RWwm+1	CH2 Digital value setting area		
2	CH3 Digital value setting area		RWwm+2	CH3 Digital value setting area	W	
3	CH4 Digital value setting area		RWwm+3	CH4 Digital value setting area		
4	CH1 Analog output disable setting area	R/W	RWwm+4	Analog output enable/disable area	1	
5	CH2 Analog output disable setting area	R/VV	RWwm+5			
6	CH3 Analog output disable setting area		RWwm+6	Use prohibited	_	
7	CH4 Analog output disable setting area		RWwm+7			
8	Resolution of digital value setting area		RWrn	CH1 Set value check code		
9	Error code storage area		RWrn+1	CH2 Set value check code		
			RWrn+2	CH3 Set value check code	R	
			RWrn+3	CH4 Set value check code		
			RWrn+4	Error code		
			RWrn+5			
			RWrn+6	Use prohibited	_	
			RWrn+7			

(6) Comparisons between A64DAIC and AJ65SBT2B-64DA (current output)

(a) Performance specifications comparisons

Item	A64I	DAIC			Α	J65SBT2B-6	4DA		Compati-	Precautions for replacement
Digital input	(1) 16-bit signed bina (2) Setting range: Set resolution 1/4000 1/8000 1/12000	Setting range 0 to 4000 0 to 8000 0 to 12000		Voltage: 16bits signed binary (-12288 to 12287, -16384 to 16383,			×	The setting range has been changed.		
Analog output	0 to 2 (external load resis	20mA stance: 0 to 600 Ω)		Voltage: -10 to +10VDC (external load resistance: $1k \Omega$ to $1M \Omega$) Current: 0 to $20mA$ (external load resistance: 0 to 600Ω)				0		
I/O characteristics	Digital value resc 1/4000	1/1200 Analog output value* 12000 +20mA 6000 +12mA		Digital input value -16000 to 16000 0 to	Analog output range -10 to 10V 0 to 5V	Acct Ambient temperature 0 to 55°c ± 0.3% (±30mV) ± 0.3%	Ambient temperature 25 ± 5°C ± 0.2% (± 20mV) ± 0.2%	Maximum resolution 0.625mV 0.416mV	Δ	The digital input range is different.
Maximum	* When the offset val the gain value is set		Voltage	-12000 to 12000	User range setting 2 (-10 to 10V)	(±15mV) ±0.3% (±30mV)	(± 10mV) ± 0.2% (± 20mV)	0.333mV 0.333mV		The maximum
resolution of digital value	1.3 μ A (1/12000)				0 to 20mA 4 to			1.66 μ A 1.33 μ A	×	resolution is different.
Overall accuracy (accuracy relative to maximum value)	± 1.0% (=	± 200 ^µ A)	Current	0 to 12000 Factory-se	20mA User range setting 1 (0 to 20mA) et: -10 to +	± 0.3% (± 60 μ A)	\pm 0.2% (\pm 40 μ A)	0.95 μ A	0	
Max. conversion speed	Within 25ms (1 channel is san	s/4 channels ne period of time)		200 μ s/channel				0		
Output protection function			Available				0			
Number of analog output points		4	1 cha	annels/mo	odule				0	
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolated between channels)			Between communication line and all analog outputs: Photocoupler isolation between power supply line and all analog outputs: Transformer isolation between channels: Non-isolated			0			
Number of occupied I/O stations (number of points)	4 stations (4 sta	tions × 8 points)		1 station (1 station × 32 points) (RX/RY 32 points each, RWr/RWw 4 points each)			0			

6 REPLACING ANALOG I/O MODULE

Item	A64DAIC	AJ65SBT2B-64DA	Compati- bility	Precautions for replacement
Connected terminal	47-point terminal block	Communication part, module communication part: 7-point two-piece terminal block (M3 screw) I/O part: 18-point two-piece terminal block (M3 screw)	×	
Applicable wire size	0.75 to 2mm ² (Applicable tightening torque 39 to 59N • cm)	0.3 to 2mm ²	0	Change in wiring is required.
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3 (conforming to JIS C 2805) [Applicable wire size: 0.3 to 1.25mm ²] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm ²]		
External power supply	24VDC (20.4 to 28.8VDC) Current consumption: 0.15A	24VDC (20.4 to 28.8VDC) Current consumption: 0.24A (at 24VDC) Inrush current: 2.6A 3.2ms or less	Δ	The current consumption increases. The current capacity needs to be reconsidered.
Weight	1.01kg	0.25kg	0	
External dimensions	170(H) × 100(W) × 80(D) mm	50(H) × 122(W) × 54(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

Item	A64DAIC	AJ65SBT2B-64DA	Compati- bility	Precautions for replacement
Analog output enable/disable setting	Selects whether to output D/A conversion values or offset values on each channel. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.	Selects whether to output D/A conversion values or offset values on each channel. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.	0	
Analog conversion enable/disable function	-	Selects whether to enable or disable D/A conversion on each channel. By making unused channels D/A conversion prohibited, conversion speed can be increased.	-	
Output range switching function	_	Sets the analog output range on each channel and changes the I/O conversion characteristics.	-	
HOLD/CLEAR setting	As the analog output status of the programmable controller CPU that is in RUN, at STOP, or in an error status, switching the type of output values as desired between D/A conversion values, offset values and 0V/0mA is possible.	In preparation for the event that the programmable controller CPU enters a stop status or the AJ65SBT2B-64DA stops D/A conversion due to an error, this settings can be configured to select whether to hold or clear analog values (output offset values) that are being output from each channel right before those stops.	0	
Offset/gain setting	Changes the I/O conversion characteristics.	Changes the I/O conversion characteristics as desired. For that, offset/gain settings can be configured for each channel without an aid of a various register.	0	
Transmission speed auto- tracking function	-	Automatically sets the transmission speed according to the settings of the master module when the AJ65SBT2B-64DA is powered on.	_	



I/O signals are different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

A64DAIC				AJ65SBT2B-64DA				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0) to X(n+3)	Use prohibited	Y(n+0) to Y(n+3)	Use prohibited			RYn0	CH1 Analog output enable/disable flag	
	Communication error detection flag					RYn1	CH2 Analog output enable/disable flag	
X(n+4)	indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal		RXn0 to Use prohibited RXn9	RYn2	CH3 Analog output enable/disable flag	
X(n+5)	A64DAIC reset switch ON detection	Y(n+5)	Reset signal of reset switch ON detection	to		RYn3	CH4 Analog output enable/disable flag CH1 Range setting	
	flag		flag			RYn4	(0th bit)	
X(n+6)	Use prohibited	Y(n+6)	Use prohibited			RYn5	CH1 Range setting (1st bit)	
X(n+7)	Communication completion response	Y(n+7)	Communication			RYn6	CH1 Range setting (2nd bit)	
, , , , , , , , , , , , , , , , , , ,	signal wait flag	. (/	reset signal			RYn7	CH2 Range setting (0th bit)	
						RYn8	CH2 Range setting (1st bit)	
						RYn9	CH2 Range setting (2nd bit)	
				RXnA	Flash memory read error flag	RYnA	CH3 Range setting (0th bit)	
				RXnB	User range read error flag	RYnB	CH3 Range setting (1st bit)	
				RXnC	Flash memory write error flag	r flag RYnC (2nd	CH3 Range setting (2nd bit)	
				RXnD,	Use prohibited	RYnD	CH4 Range setting (0th bit)	
				RXnE	Coo promonos	RYnE	CH4 Range setting (1st bit)	
				RXnF	Test mode flag	RYnF	CH4 Range setting (2nd bit)	
X(n+8) to	Use prohibited	Y(n+8) to	Use prohibited			RY(n+1)0	CH1 HOLD/CLEAR setting	
X(n+17)	Coc prombled	Y(n+17)	Coc prombled			RY(n+1)1	CH2 HOLD/CLEAR setting CH3 HOLD/CLEAR	
						RY(n+1)2	setting	
						RY(n+1)3	CH4 HOLD/CLEAR setting	
				RX(n+1)0 to	Use prohibited	RY(n+1)4	CH1 Conversion enable/disable setting	
				RX(n+1)7		RY(n+1)5	CH2 Conversion enable/disable setting	
						RY(n+1)6	CH3 Conversion enable/disable setting	
						RY(n+1)7	CH4 Conversion enable/disable setting	

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	A64DAIC				AJ65SBT2B-64DA				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description		
X(n+18)	D/A conversion READY	Y(n+18)	CH1 Analog output enable signal	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data setting complete flag		
	Y(n+19)	CH2 Analog output enable signal	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag			
X(n+19)		Y(n+1A)	CH3 Analog output enable signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag		
to X(n+1F)	X(n+1F) Y(n+1C to	Y(n+1B)	CH4 Analog output enable signal	RX(n+1)B	Remote READY	RY(n+1)B			
, ,		Y(n+1C) to Y(n+1F)	Use prohibited	RX(n+1)C to RX(n+1)F	Use prohibited	to RY(n+1)F	Use prohibited		

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A64DAIC		AJ65SBT2B-64DA			
Address	Name	Read/write	Address	Name	Read/write	
0	CH1 Digital value setting area		RWwm	CH1 Digital input value setting		
1	CH2 Digital value setting area		RWwm+1	CH2 Digital input value setting	w	
2	CH3 Digital value setting area		RWwm+2 CH3 Digital input value setti		7	
3	CH4 Digital value setting area		RWwm+3	CH4 Digital input value setting		
4	CH1 Analog output disable/enable		RWrn	CH1/CH2 Check code		
-	setting area	17,0011		OTTIONE ONeck code		
5	CH2 Analog output disable/enable		RWrn+1	CH3/CH4 Check code	R	
Ŭ	setting area	R/W	TXVIII- I	Of 10/Of 14 Official code		
6	CH3 Analog output disable/enable	1	RWrn+2	Error code		
O	setting area		IXVIII 2	Elloi code		
7	CH4 Analog output disable/enable		RWrn+3	Use prohibited		
•	setting area		TXWIII 3	Ose prombited		
8	Resolution of digital value setting area		m, n: The address assigned to the master station by a station number			
9	Error code storage area		setting			

(7) Comparisons between A64DAIC and AJ65SBT-62DA

(a) Performance specifications comparisons

14	ACCIDAGO	O: Compatible, △: Partial chang	Compati-	Precautions for
Item	A64DAIC	AJ65SBT-62DA	bility	replacement
Digital input	(1) 16-bit signed binary value (2) Setting range: Set resolution Setting range 1/4000 0 to 4000 1/8000 0 to 8000 1/12000 0 to 12000	Voltage: 16-bit signed binary (-4096 to +4095) Current: 16bits signed binary (0 to 4095)	×	The setting range has been changed.
Analog output	0 to 20mA (external load resistance: 0 to 600 Ω)	Voltage: -10 to +10V DC (external load resistance: $2k\Omega\ \ \text{to }1\text{M}\Omega\)\\ 0\ \text{to }2\text{0mA}$ (external load resistance: 0 to 600 Ω)	0	
I/O characteristics	Digital value resolution Analog output value*	Digital input value	Δ	The digital input range is different.
Maximum resolution of digital value	1.3 µA(1/12000)	setting 2 (0 to 5V) 0 to 20mA 5 μ A	×	The maximum resolution is different.
Overall accuracy (accuracy relative to maximum value)	\pm 1.0%(\pm 200 μ A)	to 100	0	
Maximum conversion speed	Within 25ms/4 channels (1 channel is same period of time)	1ms/channel	0	
Number of analog output points	4 channels/module	2 channels/module	×	Please consider replacing by using two or more AJ65SBT- 62DA modules.
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolated between channels)	Between communication line and all analog outputs: Photocoupler isolation between power supply line and all analog outputs: Photocoupler isolation (non-isolated between channels)	0	
Number of occupied I/O stations (number of points)	4 stations (4 stations × 8 points)	1 station (1 station × 32 points) (RX/RY 32 points each, RWr/RWw 4 points each)	0	The number of occupied stations has been changed.

 $\bigcirc \colon \mathsf{Compatible}, \ \ \underline{\wedge} \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

Item	A64DAIC	AJ65SBT-62DA	Compati- bility	Precautions for replacement
Connected terminal	47-point terminal block	Communication part, module communication part: 7-point two-piece terminal block (M3 screw) I/O part: 18-point direct-mount terminal block (M3 screw)	×	
Applicable wire size	0.75 to 2mm ² (Applicable tightening torque 39 to 59 N ⋅ cm)	0.3 to 0.75mm ²	×	Change in wiring is
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	 RAV1.25-3 (conforming to JIS C 2805) [Applicable wire size: 0.3 to 1.25mm²] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm²] 	×	required.
24VDC internal current consumption	0.15A	0.16A	Δ	The current consumption increases. The current capacity needs to be reconsidered.
Weight	1.01kg	0.20kg	0	
External dimensions	170(H) × 100(W) × 80(D) mm	50(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.

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(b) Functional comparisons

Item	A64DAIC	AJ65SBT-62DA	e, A. Partial Change	Compati- bility	Precautions for replacement
D/A output enable/disable function	Selects on each channel whether to output D/A conversion values or offset values. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.	Selects on each channel whether to output values or offset values. Note, however, that speed is fixed regardless of the output enacetting.	t the conversion	0	
D/A conversion enable/disable function	-	Selects whether to enable or disable D/A of each channel. By making unused channels D/A conversions ampling period can be shortened.		-	
Output range switching function	_	Sets the analog output range on each cha changes the I/O conversion characteristics. The following eight output ranges can be segretary and the segretary of th	S.	_	
HOLD/CLEAR setting	As the analog output status of the programmable controller CPU that is in RUN, at STOP, or in an error status, switching the type of output values as desired between D/A conversion values, offset values and 0V/0mA is possible. D/A conversion value outputs, offset value outputs and 0V/0mA outputs can be revised arbitrarily.	In preparation for the event that the progracontroller CPU enters a stop state or the A stops D/A conversion due to an error, this configured to select whether to hold or clea (output offset values) that are being output channel right before those stops.	J65SBT-62DA settings can be ar analog values	0	
Offset/gain setting	Changes the I/O conversion characteristics.	Changes the I/O conversion characteristics that, offset/gain settings can be configured channel without a aid of a various register.	I for each	0	



The sequence program must be changed as the I/O signals differ.

For details on I/O signals and sequence programs, refer to the User's Manual.

		DAIC		AJ65SBT-62DA				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0) to	Use prohibited	Y(n+0) to	Use prohibited	RXn0 to RXnB	Use prohibited	RYn0	CH1 Analog output enable/disable flag	
X(n+3)		Y(n+3)	·	RXnC	E ² PROM write error flag	RYn1	CH2 Analog output enable/disable flag	
	Communication error detection flag indicating that			RXnD RXnE RXnF	Use prohibited Test mode flag			
X(n+4)	execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal	RX(n+1)0 to RX(n+1)7	Use prohibited	RYn2 to RY(n+1)7	Use prohibited	
X(n+5)	A64DAIC reset switch ON detection flag	Y(n+5)	Reset switch ON detection flag reset signal	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data processing complete flag	
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag	
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag	
X(n+8) to X(n+17)	Use prohibited	Y(n+8) to Y(n+17)	Use prohibited	RX(n+1)B	Remote READY			
		Y(n+18)	CH1 Analog output enable signal	RX(n+1)C		RY(n+1)B		
X(n+18)	D/A conversion	Y(n+19)	CH2 Analog output enable signal	RX(n+1)D	Use prohibited	to RY(n+1)F	Use prohibited	
A(II+10)	READY	Y(n+1A)	CH3 Analog output enable signal	RX(n+1)E	Ose prombited			
		Y(n+1B)	CH4 Analog output enable signal	RX(n+1)F				
X(n+19) to X(n+1F)	Use prohibited	Y(n+1C) to Y(n+1F)	Use prohibited					

(d) Buffer memory addresses comparisons

The sequence program must be changed as the buffer memory assignments differ.

For details on buffer memory and sequence programs, refer to the User's Manual.

	A64DAIC		AJ65SBT-62DA			
Address	Name	Read/write	Address	Name	Read/write	
0	CH1 Digital value setting area		RWwm	CH1 Digital value setting		
1	CH2 Digital value setting area		RWwm+1	CH2 Digital value setting	w	
2	CH3 Digital value setting area		RWwm+2	Analog output enable/disable setting	T vv	
3	CH4 Digital value setting area		RWwm+3	Output range HOLD/CLEAR setting		
4	CH1 Analog output disable/enable		RWrn	CH1 Check code		
4	setting area					
5	CH2 Analog output disable/enable	D.0.4	RWrn+1	CH2 Check code	R	
5	setting area	R/W	EVVIIITI	GHZ GHECK Code		
6	CH3 Analog output disable/enable		RWrn+2	Error code		
0	setting area					
7	CH4 Analog output disable/enable		D.W. 0			
7	setting area		RWrn+3	Use prohibited	_	
8	Resolution of digital value setting area	1				
9	Error code storage area					

6.2.3 Comparison of temperature input module

(1) Comparisons between A64RD3C and AJ65BT-64RD3

(a) Performance specifications comparisons

○: Compatible, △: Partial change required, ×: Not compatible

		\bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible				
Item	A64RD3C	AJ65BT-64RD3	Compati- bility	Precautions for replacement		
Measurement method		3-wire type	0			
Connectable platinum	Pt100 (JIS C 1604-1989, DIN43760-1980)	Pt100, JPt100	0			
resistance thermometer	JPt100 (JIS C 1604-1981)	1 (100, 51 (100	0			
Temperature	Pt100: -180[°C] to +600[°C] (27.08 Ω to 313.59 Ω)		0			
input range	Pt100: -180[°C] to +600[°C] (25.8 Ω to 317.28 Ω)	-180[°C] to 600[°C]	0			
Detected	16	26bits signed binary -1800 to +6000 D 1 decimal place × 10)	0			
temperature value	-1	2bits signed binary 80000 to +600000 3 decimal places × 1000)	0			
Resolution	,	0.025°C	0			
Overall accuracy	± 1% (accuracy relative to full-scale)	Ambient temperature $(25\pm5^{\circ}\text{C}):\pm0.1\%$ (accuracy relative to maximum value) Ambient temperature $(20^{\circ}\text{C or less, }30^{\circ}\text{C or more}):\pm0.25\%$ (accuracy relative to maximum value)	0			
Conversion speed		0				
Number of temperature input points	4	channels/module	0			
Output current for temperature detection	4.2mA (MIN.), 4.7mA (MAX.)	1mA	×	The temperature detecting output current has been changed.		
Insulation method	Between input terminal and programmable controller: Photocoupler isolation (non-isolated between channels)	Between platinum resistance thermometer input and CC- Link transmission line: Photocoupler isolation (non-isolated between channels)	0			
Number of occupied stations (number of occupied points)	4 stations (4 stations × 8 points)	4 stations (4 stations × 32 points) (RX/RY 128 points each, RWw/RWr 16 points each)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.		
Connected terminal block	47-point terminal block	27-point terminal block	×	Change in wiring is required.		
Applicable wire size		0.75 to 2.00mm ²	0			
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV 1.25-3.5, RAV 2-3.5 (conforming to JIS C 2805)	×	Change in wiring is required.		

Item	A64RD3C	AJ65BT-64RD3	Compati- bility	Precautions for replacement
24VDC internal	0.2A	0.17A	0	
current consumption	U.ZA	U.17A	0	
Weight	0.81kg	0.38kg	0	
External dimensions	170(H) × 100(W) × 80(D)mm	65(H) × 151.9(W) × 63(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

Item	A64RD3C	AJ65BT-64RD3	Compati-	
Conversion enable/disable specification for each channel	Selects on each channel whet	0		
Sampling/avera ging processing specification	Performs processing on a detected temperature in the specified processing method, and stores the processed data to the buffer memory. The following three processing methods are available: Sampling processing Time averaging processing Count averaging processing	Selects on each channel whether to perform the sampling processing or movement averaging processing. (default ··· sampling processing)	Δ	The AJ65BT- 64RD4 has been provided the movement averaging processing instead of the averaging processing on A64RD3C.
Storage of detected temperature value	The value down to the 1st decimal place and the value down to the 3rd decimal place are stored to the buffer memory. Value down to 1st decimal place (16-bit signed binary) Example) 53.8(°C) → 538 Value down to 3rd decimal place (32-bit signed binary) Example) 216.025(°C) → 216025	The value down to the 1st decimal place and the value down to the 3rd decimal place are stored to the remote register.	0	
Wire break detection	Detects wire breaks on the connected Pt100 or cable. Wire breaks on each channel are detected, and the wire break detection flag (X19 to X1A) corresponding to each channel is turned ON.	Detects wires breaks on the connected platinum resistance thermometer for each channel.	0	
Specification of platinum temperature measuring resistor type	Specifies platinum temperature measuring resistor type to be used. The following two types of platinum temperature measuring resistors can be used: Pt100···new JIS - DIN type (JIS C 1604-1989, DIN43760-1980) JPt100···conventional JIS type (JIS C 1604-1981)	Specifies platinum temperature measuring resistor type to be used. The following two types of platinum temperature measuring resistors can be used: Pt100······new JIS, IEC type (JIS C 1604-1997, IEC 751 1983) JPt100··· conventional JIS type (JIS C 1604-1981)	0	

(c) Programmable controller CPU I/O signal comparisons

The sequence program must be changed as the I/O signals differ.

For details on I/O signals and sequence programs, refer to the User's Manual.

X(n+0) to X(n+3) Use prohibited to Y(n+3) Use prohibited to X(n+3) Use prohibited to X(n+3) Use prohibited to X(n+4)	Conversion hable flag	
X(n+0) to X(n+3) Use prohibited to Y(n+3) Use prohibited to Y(n+3) Use prohibited to Y(n+3) Use prohibited to Y(n+3) Use prohibited RXn1 CH2 Conversion completed flag RXn1 CH3 Conversion completed flag RXn1 CH3 Conversion completed flag RXn3 CH4 Conversion completed flag RXn4 CH1 Wire break detection flag Promovement pr	Conversion hable flag	
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X(n+6) Use prohibited Y(n+6) Use prohibited RXn7 CH4 Wire break detection flag RYn7 movement promovement promoveme	ocessing	
X(n+6) Use prohibited Y(n+6) Use prohibited RXn7 CH4 Wire break detection flag promovement	ification flag	
X(n+6) Use prohibited Y(n+6) Use prohibited RXn7 CH4 Wire break detection flag RYn7 movement pro	1 Sampling	
X(n+6) Use prohibited Y(n+6) Use prohibited RXn7 detection flag pro	ocessing/	
pro	ent averaging	
	ocessing	
	ification flag	
Communication Communication reset		
X(n+7) completion response Y(n+7) signal RXn8 E ² PROM error flag RYn8		
signal wait flag to Use	prohibited	
X(n+8) to Use prohibited RXn9 Test mode flag		
X(n+17) RXnA		
X(n+18) READY flag to Use prohibited RY(n+7)7 Offset	t/gain value	
RX(n+7)7 sele	ection flag	
	itial data	
X(n+19) CH1 Wire break RY(n+7)8 processing request RY(n+7)8 process	sing complete	
detection flag Y(n+8) flag	flag	
CH2 Wire break to Use prohibited Initial data setting Initial	data setting	
X(n+1A) $Y(n+1F)$ $RX(n+7)9$ $RX(n+7)9$	quest flag	
CH3 Wire break	·	
X(n+1B) RX(n+7)A Error status flag RY(n+7)A Err	ror reset	
CH4 Wire break		
X(n+1C) RX(n+7)B Remote READY RY(n+7)B		
to Use prohibited RY(n+7)F	prohibited	
	prohibited	

(d) Buffer memory addresses comparisons

The sequence program must be changed as the buffer memory assignments differ.

For details on buffer memory and sequence programs, refer to the User's Manual.

	A64RD3C		AJ65BT-64RD3			
Address	Name	Read/write	Address	Name	Read/write	
0	Conversion enable/disable specification					
1	Averaging processing specification		RWwm			
2	CH1 Averaging time, count	R/W	to	Use prohibited		
3	CH2 Averaging time, count	IV.VV	RWwm+15	Ose profibiled	_	
4	CH3 Averaging time, count		KWWIII+13			
5	CH4 Averaging time, count					
6	CH1 Detected temperature value		RWrn	CH1 Detected temperature value (16 bits)		
7	CH2 Detected temperature value		RWrn+1	CH2 Detected temperature value (16 bits)		
8	CH3 Detected temperature value		RWrn+2	CH3 Detected temperature value (16 bits)		
9	CH4 Detected temperature value	R	RWrn+3	CH4 Detected temperature value (16 bits)		
10	CH1 Detected temperature value (L)	K	RWrn+4	CH1 Detected temperature value	R	
11	(32 bits) (H)		RWrn+5	(32 bits)		
12	CH2 Detected temperature value (L)		RWrn+6	CH2 Detected temperature value		
13	(32 bits) (H)		RWrn+7	(32 bits)		
14	CH3 Detected temperature value (L)		RWrn+8	CH3 Detected temperature value		
15	(32 bits) (H)		RWrn+9	(32 bits)		
16	CH4 Detected temperature value (L)		RWrn+10	CH4 Detected temperature value		
17	(32 bits) (H)		RWrn+11	(32 bits)		
18	Write data error code	R/W	RWrn+12			
19	Conversion completed flag	R	to	Use prohibited	_	
20	Specification of platinum temperature measuring resistor type	R/W	RWrn+15	Ose prombited	_	

(2) Comparisons between A64RD3C and AJ65SBT2B-64RD3

(a) Performance specifications comparisons

Item	A64RD3C AJ65SBT2B-64RD3		Compati- bility	Precautions for replacement
Measuring method		3-wire type	0	
Connectable temperature measuring resistor	Pt100 (JIS C 1604-1989, DIN43760-1980) JPt100 (JIS C 1604-1981)	Pt100 (JIS C 1604-1997), JPt100 (JIS C 1604-1981), Ni100 (DIN 43760 1987)	0	
Temperature input range	Pt100: -180[°C] to +600[°C] (27.08 Ω to 313.59 Ω) JPt100: -180[°C] to +600[°C] (25.8 Ω to 317.28 Ω)	Pt100: -200 to 850°C JPt100: -180 to 600°C Ni100: -60 to 180°C	0	
Detected	16bits signed binary -1800 to +6000 (down to 1 decimal place × 10)	16bits signed binary -2000 to 8500 (down to 1 decimal place × 10)	0	
temperature value	32bits signed binary -180000 to +600000 (down to 3 decimal places × 1000)	-	×	32-bit output is not available.
Resolution	0.025°C	0.1℃	Δ	The maximum resolution is different.
Overall accuracy	± 1% (accuracy relative to full-scale)	*1	0	
Conversion speed		0		
Number of temperature input points	4	0		
Output current for temperature detection	4.2mA (MIN.), 4.7mA (MAX.)	1mA	×	The temperature detecting output current has been changed.
Insulation method	Between input terminal and programmable controller: Photocoupler isolation (non-isolated between channels)	Between communication line and all temperature measuring resistor inputs: Photocoupler isolation between power supply line and all temperature measuring resistor inputs: Transformer isolation between channels: Non-isolated	0	
Number of occupied stations (number of occupied points)	4 stations (4 stations × 8 points)	1 station (1 station × 32 points) (RX/RY 32 points each, RWr/RWw 4 points each)	0	
Connected terminal block	47-point terminal block	Communication part, module communication part: 7-point two-piece terminal block (M3 screw) I/O part: 18-point two-piece terminal block (M3 screw)	×	
Applicable wire size	0.75 to 2.0mm ²	0.3 to 2.0mm ²	0	Change in wiring is
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3 (conforming to JIS C 2805) [Applicable wire size: 0.3 to 1.25mm ²] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm ²]	0	required.
24VDC internal current consumption	0.2A	0.14A	0	
Weight	0.81kg	0.25kg	0	

Item	A64RD3C	AJ65SBT2B-64RD3	Compati- bility	Precautions for replacement
External dimensions	170(H) × 100(W) × 80(D) mm	50(H) × 122(W) × 54(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.

^{*1} The accuracy of the AJ65SBT2B-64RD3 varies depending on the temperature measuring resistor as shown below.

	Conversion accuracy	Specifications
	-200 to 850°C	$\pm0.5^{\circ}_{\rm C}$ (ambient temperature: 25 $\pm5^{\circ}_{\rm C}$), $\pm1.4^{\circ}_{\rm C}$ (ambient temperature: 0 $\pm55^{\circ}_{\rm C}$)
Pt100	-20 to 120°C	$\pm0.2^{\circ}\text{C}$ (ambient temperature: $25\pm5^{\circ}\text{C}$), $\pm0.6^{\circ}\text{C}$ (ambient temperature: $0\pm55^{\circ}\text{C}$)
	0 to 200°C	$\pm~0.2$ °C (ambient temperature: 25 $\pm~5$ °C), $\pm~0.6$ °C (ambient temperature: 0 $\pm~55$ °C)
	-18 to 600°C	±0.4 °C (ambient temperature: 25 ±5 °C), ±1.0 °C (ambient temperature: 0 ±55 °C)
JPt100	-20 to 120°C	$\pm0.2^{\circ}\mathrm{C}$ (ambient temperature: 25 $\pm5^{\circ}\mathrm{C}$), $\pm0.6^{\circ}\mathrm{C}$ (ambient temperature: 0 $\pm55^{\circ}\mathrm{C}$)
	0 to 200°C	$\pm0.2^{\circ}\text{C}$ (ambient temperature: 25 $\pm5^{\circ}\text{C}$), $\pm0.6^{\circ}\text{C}$ (ambient temperature: 0 $\pm55^{\circ}\text{C}$)
Ni100	-60 to 180°C	$\pm0.2^{\circ}\text{C}$ (ambient temperature: 25 $\pm5^{\circ}\text{C}$), $\pm0.5^{\circ}\text{C}$ (ambient temperature: 0 $\pm55^{\circ}\text{C}$)

(b) Functional comparisons

Item	A64RD3C	AJ65SBT2B-64RD3	Compati- bility	Precautions for replacement
Conversion enable/disable specification for each channel	Selects whether to enable or disable temper	0		
Sampling/aver aging processing specification	Performs processing on a detected temperature in the specified processing method, and stores the processed data to the buffer memory. The following three processing methods are available: Sampling processing Time averaging processing Count averaging processing	Selects whether to perform the sampling processing or averaging processing (count average/time average/moving average) on each channel.	0	
Storage of detected temperature value	The value down to the 1st decimal place and the value down to the 3rd decimal place are stored to the buffer memory. Value down to 1st decimal place (16-bit signed binary) Example) 53.8(°C) → 538 Value down to 3rd decimal place (32-bit signed binary) Example) 216.025(°C) → 216025	The value down to the 1st decimal place and the value down to the 3rd decimal place are stored to the remote register.	Δ	Only the value down to the 1st decimal place (16-bit signed binary) is stored.
Wire break detection	Detects wire breaks on the connected Pt100 or cable. Wire breaks on each channel are detected, and the wire break detection flag (X19 to X1A) corresponding to each channel is turned ON.	Detects wires breaks on the connected temperature measuring resistor for each channel.	0	
Selection of temperature measuring resistor type	Specifies the platinum temperature measuring resistor type to be used. The following two types of platinum temperature measuring resistor can be used: Pt100: new JIS • DIN type (JIS C 1604-1989, DIN43760-1980) JPt100: conventional JIS type (JIS C 1604-1981)	Specifies the temperature measuring resistor type to be used for each channel. The following three types of temperature measuring resistor can be used: Pt100 (JIS C 1604-1997) JPt100 (JIS C 1604-1981) Ni100 (DIN 43760 1987)	0	
Error correction with offset/gain setting	-	Corrects an error by using the set offset and gain values.	_	
Transmission speed auto- tracking function	-	Automatically sets the transmission speed according to the settings of the master module.	_	



(c) Programmable controller CPU I/O signal comparisons

I/O signals are different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	A64	RD3C			AJ65SBT	2B-64RD3			
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description		
V(n+0)		V/n+0\		RXn0	CH1 Conversion	RYn0	CH1 Conversion		
X(n+0) to	Use prohibited	Y(n+0) to	Use prohibited	RAIIU	completed flag	RTIIU	enable flag		
X(n+3)	Ose prombited	Y(n+3)	Ose prombited	RXn1	CH2 Conversion	RYn1	CH2 Conversion		
Λ(11-3)		1(11.3)		IVAITI	completed flag	KIIII	enable flag		
				RXn2	CH3 Conversion	RYn2	CH3 Conversion		
				TOTIZ	completed flag	KIIIZ	enable flag		
	FROM/TO		Error detection	RXn3	CH4 Conversion	RYn3	CH4 Conversion		
X(n+4)	instruction error	Y(n+4)	reset signal		completed flag		enable flag		
	detection flag				CH1 Wire break	RYn4			
				RXn4	detection flag	to	Use prohibited		
						RYn7			
						RYn8	CH1 Measurement		
							range (0th bit)		
	A64RD3C reset		Reset signal of		0.10.14"	RYn9	CH1 Measurement		
X(n+5)	switch ON	Y(n+5)	reset switch ON	RXn5	CH2 Wire break		range (1st bit)		
	detection flag		detection flag		detection flag	RYnA	CH1 Measurement		
	· ·						range (2nd bit)		
						RYnB	CH2 Measurement		
							range (0th bit)		
					0110.145 11	RYnC	CH2 Measurement		
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RXn6	CH3 Wire break		range (1st bit)		
,		, ,	·		detection flag	RYnD	CH2 Measurement		
							range (2nd bit)		
	Communication				Communication		CI IA Wire breek	RYnE	CH3 Measurement
X(n+7)	completion response signal wait flag	reset signal	RXn7	CH4 Wire break		range (0th bit)			
			reset signal		detection flag	RYnF	CH3 Measurement		
	wait liag						range (1st bit) CH3 Measurement		
				RXn8		RY(n+1)0	range (2nd bit)		
					Use prohibited		CH4 Measurement		
				RXn9		RY(n+1)1	range (0th bit)		
								CH4 Measurement	
						Flash memory	RY(n+1)2	range (1st bit)	
X(n+8)				RXnA	read error flag		CH4 Measurement		
to	Use prohibited					RY(n+1)3	range (2nd bit)		
X(n+17)						User range read		Wire break	
, ,				RXnB	error flag		detection		
					Flash memory	RY(n+1)4	upper/lower limit		
				RXnC	write error flag		flag (all channels)		
				RXnD	11	RY(n+1)5	11		
		V(n 0)	Y(n+8) Use prohibited -		RY(n+1)6	Use prohibited			
		to	Use prohibited	RXnF	Test mode flag				
			Use profibiled	RX(n+1)0		RY(n+1)7	Offset/gain value		
X(n+18)	READY flag	Y(n+1F)		to	Use prohibited	KT(IITT)/	selection flag		
				RX(n+1)7					
	CH1 Wire break				Initial data		Initial data setting		
X(n+19)	detection flag			RX(n+1)8	processing request	RY(n+1)8	complete flag		
	detection hag				flag		Complete liag		
Υ(n+1Δ)	CH2 Wire break			PY(n+1)0	Initial data setting	PV(n+1)0	Initial data setting		
X(n+1A)	detection flag			RX(n+1)9	complete flag	RY(n+1)9	request flag		
X(n+1B)	CH3 Wire break			RX(n+1)A	Error status flag	RY(n+1)A	Error reset request		
Λ(11. 10)	detection flag			100(1111)/0	Lifor status riag	KT(IITT)A	flag		
X(n+1C)	CH4 Wire break			RX(n+1)B	Remote READY				
	detection flag				Nomoto NEAD I	RY(n+1)B			
X(n+1D)				RX(n+1)C		to	Use prohibited		
to	Use prohibited				Use prohibited	RY(n+1)F			
X(n+1F)			İ	RX(n+1)F	I .				

(d) Buffer memory addresses comparisons

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

A64RD3C				AJ65SBT2B-64RD3		
Address	Name		Read/write	Address	Name	Read/write
0	Conversion enable/disable specification	ation		RWwm	CH1 Average processing setting	
1	Averaging processing specification	on		RWwm+1	CH2 Average processing setting	R/W
2	CH1 Averaging time, count		R/W	RWwm+2	CH3 Average processing setting	- R/VV
3	CH2 Averaging time, count		- K/VV	RWwm+3	CH4 Average processing setting	1
4	CH3 Averaging time, count			RWrn	CH1 Detected temperature value (16 bits)	
5	CH4 Averaging time, count			KVVIII	Chi Detected temperature value (10 bits)	
6	CH1 Detected temperature value	е		RWrn+1	CH2 Detected temperature value (16 bits)	1
7	CH2 Detected temperature value	е		KVVIIITI	CH2 Detected temperature value (10 bits)	R
8	CH3 Detected temperature value	е		RWrn+2	CH3 Detected temperature value (16 bits)	- K
9	CH4 Detected temperature value	е	1	KVVIII+2	Cris Detected temperature value (10 bits)	
10	CH1 Detected temperature value	(L)		RWrn+3 CH4 Detected temperature value	CITA Detected temperature value (46 hite)	1
11	(32 bits)	(H)	R	RVVIII+3	CH4 Detected temperature value (16 bits)	
12	CH2 Detected temperature value	(L)	K	m, n: The add	ress assigned to the master station by a station n	umber setting
13	(32 bits)	(H)	1			
14	CH3 Detected temperature value	(L)				
15	(32 bits)	(H)	1			
16	CH4 Detected temperature value	(L)	1			
17	(32 bits)	(H)				
18	Write data error code	L	R/W			
19	Conversion-completed flag		R			
20	Type specification of a platinum		R/W			
	temperature-measuring resistor	•				



(3) Comparisons between A64RD4C and AJ65BT-64RD4

(a) Performance specifications comparisons

Item	A64RD4C	AJ65BT-64RD4	Compati- bility	Precautions for replacement
Measuring method		4-wire type	0	
Connectable platinum	Pt100 (JIS C 1604-1989, DIN43760-1980)		0	
temperature measuring resistor	JPt100 (JIS C 1604-1981)	Pt100, JPt100	0	
	Pt100: -180[°C] to +600[°C]		0	
Temperature input range	(27.08 Ω to 313.59 Ω) JPt100: -180[°C] to +600[°C]	-180[℃] to 600[℃]		
pat rango	(25.8 Ω to 317.28 Ω)		0	
Detected	10	-1800 to +6000 o 1 decimal place × 10)	0	
temperature value	33 -1	0		
Donolution	(down to	3 decimal places × 1000)		
Resolution		0.025°C Ambient temperature: (25±5°C)	0	
Overall accuracy	± 1% (accuracy relative to full-scale)	± 0.1% (accuracy relative to maximum value) Ambient temperature (20°C or less, 30°C or more): ± 0.25% (accuracy relative to maximum value)	0	
Conversion speed		0		
Number of temperature input points	4	channels/module	0	
Output current for temperature detection	4.2mA (MIN.), 4.7mA (MAX.)	1mA	×	The temperature detecting output current has been changed.
Insulation method	Between input terminal and programmable controller: Photocoupler isolation (non-isolated between channels)	Between platinum temperature measuring resistor input and CC-Link transmission line: Photocoupler isolation (non-isolated between channels)	0	
Number of occupied stations (number of occupied points)	4 stations (4 stations × 8 points)	4 stations (4 stations × 32 points) (RX/RY 128 points each, RWw/RWr 16 points each)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Connected terminal block	47-point terminal block	27-point terminal block	×	
Applicable wire size		0.75 to 2.00mm ²	0	Change in wiring is
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV 1.25-3.5, RAV 2-3.5 (conforming to JIS C 2805)	×	required.

Item	A64RD4C	AJ65BT-64RD4	Compati- bility	Precautions for replacement
24VDC internal current consumption	0.15A	0.17A	Δ	The current consumption increases. The current capacity needs to be reconsidered.
Weight	0.81kg	0.38kg	0	
External dimensions	170(H) × 100(W) × 80(D) mm	65(H) × 151.9(W) × 63(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

Item	A64RD4C	O: Compatible, ∆: Partial chan	Compati-	
Conversion enable/disable specification for each channel	Selects on each channel whet	0	•	
Sampling/avera ging processing specification	Performs processing on a detected temperature in the specified processing method, and stores the processed data to the buffer memory. The following three processing methods are available: Sampling processing Time averaging processing Count averaging processing	Selects on each channel whether to perform the sampling processing or movement averaging processing. (default…sampling processing)	Δ	The AJ65BT- 64RD4 has been provided the movement averaging processing instead of the averaging processing on A64RD3C.
Storage of detected temperature value	The value down to the 1st decimal place and the value down to the 3rd decimal place are stored to the buffer memory. Value down to 1st decimal place (16-bit signed binary) Example) 53.8(°C) → 538 Value down to 3rd decimal place (32-bit signed binary) Example) 216.025(°C) → 216025	The value down to the 1st decimal place and the value down to the 3rd decimal place are stored to the remote register.	0	
Wire break detection	Detects wire breaks on the connected Pt100 or cable. A wire break on a wire on a channel is detected, turning the Σ wire break detection flag (X19) ON.	Detects wires breaks on the connected platinum temperature measuring resistor for each channel.	0	
Specification of platinum temperature measuring resistor type	Specifies the platinum temperature measuring resistor type to be used. The following two types of platinum temperature measuring resistor can be used: Pt100new JIS - DIN type (JIS C 1604-1989, DIN43760-1980) JPt100conventional JIS type (JIS C 1604-1981)	Specifies the platinum temperature measuring resistor type to be used. The following two types of platinum temperature measuring resistor can be used: Pt100······new JIS, IEC type (JIS C 1604-1997, IEC 751 1983) JPt100····conventional JIS type (JIS C 1604-1981)	0	

(c) Programmable controller CPU I/O signal comparisons

The sequence program must be changed as the I/O signals differ.

For details on I/O signals and sequence programs, refer to the User's Manual.

		RD4C	, , ,	rams, refer to the User's Manual. AJ65BT-64RD4				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0)		Y(n+0)		RXn0	CH1 Conversion completed flag	RYn0	CH1 Conversion enable flag	
to X(n+3)	Use prohibited	to Y(n+3)	Use prohibited	RXn1	CH2 Conversion completed flag	RYn1	CH2 Conversion enable flag	
				RXn2	CH3 Conversion completed flag	RYn2	CH3 Conversion enable flag	
				RXn3	CH4 Conversion completed flag	RYn3	CH4 Conversion enable flag	
X(n+4)	FROM/TO instruction error detection flag	Y(n+4)	Error detection reset signal	RXn4	CH1 Wire break detection flag	RYn4	CH1 Sampling processing/ movement averaging processing specification flag	
V(n15)	A64RD4C reset		Reset switch ON	RXn5	CH2 Wire break detection flag	RYn5	CH2 Sampling processing/ movement averaging processing specification flag	
X(n+5)	switch ON detection flag	Y(n+5)	detection flag reset - signal	RXn6	CH3 Wire break detection flag	RYn6	CH3 Sampling processing/ movement averaging processing specification flag	
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RXn7	CH4 Wire break detection flag	RYn7	CH4 Sampling processing/ movement averaging processing specification flag	
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RXn8	E ² PROM error flag	RYn8 to	Use prohibited	
X(n+8) to X(n+17)	Use prohibited			RXn9	Test mode flag	RY(n+7)6	ose prombned	
X(n+18)	READY flag			RXnA to RX(n+7)7	Use prohibited	RY(n+7)7	Offset/gain value selection flag	
X(n+19)	Σ wire break detection flag	Y(n+8) to	Use prohibited	RX(n+7)8	Initial data processing request flag	RY(n+7)8	Initial data processing complete flag	
		Y(n+1F)		RX(n+7)9	Initial data setting complete flag	RY(n+7)9	Initial data setting request flag	
X(n+1A) to	Use prohibited			RX(n+7)A	Error status flag	RY(n+7)A	Error reset request flag	
to X(n+1F)	Use prohibited			RX(n+7)B RX(n+7)C to RX(n+7)F	Remote READY Use prohibited	to RY(n+7)F	Use prohibited	

(d) Buffer memory addresses comparisons

The sequence program must be changed as the buffer memory assignments differ.

For details on buffer memory and sequence programs, refer to the User's Manual.

	A64RD4C			AJ65BT-64RD4		
Address	Name	Read/write	Address	Name	Read/write	
0	Conversion enable/disable specification					
1	Averaging processing specification		RWwm			
2	CH1 Averaging time, count	R/W	to	Use prohibited	_	
3	CH2 Averaging time, count	TO VV	RWwm+15	Use profibited	_	
4	CH3 Averaging time, count		TWWIII 13			
5	CH4 Averaging time, count					
6	6 CH1 Detected temperature value		RWm	CH1 Detected temperature value		
Ů	OTT Detected temperature value		TAVIII	(16 bits)		
7	CH2 Detected temperature value		RWrn+1	CH2 Detected temperature value		
•	Criz Detected temperature value		IXVIII! I	(16 bits)		
Q	8 CH3 Detected temperature value		RWrn+2	CH3 Detected temperature value		
0			IXVIII 2	(16 bits)		
9	9 CH4 Detected temperature value		RWrn+3	CH4 Detected temperature value		
3	On Petected temperature value	R	10001110	(16 bits)	R	
10	CH1 Detected temperature value (L)	K	RWrn+4	CH1 Detected temperature value		
11	(32 bits) (H)		RWrn+5	(32 bits)		
12	CH2 Detected temperature value (L)		RWrn+6	CH2 Detected temperature value		
13	(32 bits) (H)		RWrn+7	(32 bits)		
14	CH3 Detected temperature value (L)		RWrn+8	CH3 Detected temperature value		
15	(32 bits) (H)		RWrn+9	(32 bits)		
16	CH4 Detected temperature value (L)		RWrn+10	CH4 Detected temperature value		
17	(32 bits) (H)		RWrn+11	(32 bits)		
18	Write data error code	R/W	RWrn+12			
19	Conversion completed flag	R	to	Use prohibited	_	
20	Specification of platinum temperature	R/W	RWrn+15	Ose profibiled	_	
20	measuring resistor type	F7/ V V	KVIIITIO			

REPLACING THE HIGH-SPEED COUNTER MODULE

7.1 List of Alternative High-speed Counter Module Models

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative model for CC-Link			
Product name	Model name	Model name	Remarks (restrictions)		
Liigh anood	AD61C		1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size change of signal wire 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in interface specifications of coincidence output 5) Change in functional specifications: Not required 6) Change in dimensions for mounting to the panel: Required		
High-speed counter module	AD62C	AJ65BT-D62	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Counting range change, external output specifications change 5) Change in functional specifications: Limit switch output function not provided 6) Change in dimensions for mounting to the panel: Required		

7.2 High-speed Counter Module Comparison

(1) Comparison between AD61C and AJ65BT-D62

(a) Performance specifications comparisons

○: Compatible,	ge required	, ×:N	ot com	patible
AJ65BT-D62				

					AJ65	Compati-	Precautions for	
	Item	1	AD	51C	Counting speed sv	bility	replacement	
					HIGH side	LOW side	Dility	replacement
Number of occupied stations (occupied points)		4 stations (4 stations × 8 points)		(RX/RY 128 points ea	tations × points) ch, RWw/RWr 16 points ach)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.	
Nu	mber of channe	els			2 channels		0	
		Phase		1-phase	input, 2-phase input		0	
	Count input signal	Signal level (φ A, φ B)		5VD0 12VD0 24VD0	C > 2 to 5mA		0	
		Counting	1-phase input	50KPPS	200KPPS	10KPPS	0	
		speed (max.)	2-phase input	50KPPS	200KPPS	7KPPS	0	
		Counting range	0 1	to 16,777,215 (decin	at 24bits	0		
<u>—</u>		System	Addition/subtraction + ring coun	•	UP/DOWN + ring cou	0		
Performance specifications of one channel	Counter	Min. count pulse width (1-, 2-phase	10µs 1	0μs	5μs 2.5μs 2.5μs 1	100µs 50 50 71 71 71 µs µs µs µs (1-phase input)	0	
nce specifi		input)	Set input rise ar to 5 μ s or less. Duty ratio 50%	d fall times	Set input rise and falless. Duty ratio 50%	all times to 2 μ s or	0	
rforma	Maximum/	Comparison range		0				
Pe	minimum comparison	Comparison result	Setting value Set value Setting value	Count value	Setting value = Set value = Setting value	0		
		Preset	12/24VD 5VDC		5/12/24V[OC 2 to 5mA		At AJ65BT-D62, external input/
	External input	Count disable	12/24VD 5VDC			_	Δ	output specifications are
		Function start	-	-	5/12/24V[OC 2 to 5mA		different, so confirm the
	External output	Coincidence output	Transistor (open 12/24VI	, .	12/24VDC 2	A per common	Δ	external device specifications.
	24VDC internal current consumption		0.1	5A	0.	07A	0	
We	eight		1.0	kg	0.4	41kg	0	
Weight External dimensions		170(H) × 100(V	V) × 80(D) mm	0.41kg 65(H) × 151.9(W) × 63(D) mm		×	The overall size differs. Pay attention to the mounting dimensions.	

(b) Functional comparisons

 $\bigcirc \colon \mathsf{Compatible}, \ \ \underline{\wedge} \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

		○: Compatible, △: Parti	al change require	
Item	AD61C	AJ65BT-D62	Compatibility	Precautions for replacement
Count function at 1-phase/ 2-phase pulse input	Captures 1-phase or 2-phase pulses from a pulse generator, and counts each of these pulses at its rise and fall. 1-phase input • • Two counts are performed on a single pulse. 2-phase input • • Four counts are performed on a single pulse at each of the A and B phases. Specifies the addition and subtraction counts in buffer memory during 1-phase input. During 2-phase input, it is automatically judged to perform addition when the A phase pulse comes before the B phase pulse, and perform subtraction when the B phase pulse comes before the A phase pulse.	Captures 1-phase or 2-phase pulses from a pulse generator, and counts each of these pulses at its rise and fall. 1-phase input • • Two counts are performed on a single pulse. 2-phase input • • Four counts are performed on a single pulse at each of the A and B phases. Specifies the addition and subtraction counts to RY during 1-phase input. During 2-phase input, it is automatically judged to perform addition when the A phase pulse comes before the B phase pulse, and perform subtraction when the B phase pulse comes before the A phase pulse.	0	
Comparison signal output function for counter value	Compares the counter value with the set value, and outputs result signals of small, large (>, <), or coincidence (=) to the programmable controller CPU. Performs external outputs of the coincidence signal to the external (EQU) terminal when the set value coincides with the count value. Note, however, that to do this the coincidence signal output enable flag must be turned ON beforehand by the sequence program.	Sets the output status of any channel in advance, and compares it with the current value to output ON/OFF signals.	0	
Preset function	an external preset.	by the sequence program or input of	0	
Ring counter function	Outputs the coincidence signal when the set value matches the counter value, and set the current value as the preset value. Note, however, that to do this the ring counter switch must be turned ON.	Counts repeatedly between the ring counter value and the preset value by the ring counter command.	0	
Count start/ stop function by external input	Starts or stops counting by the external disable (DIS) terminal turning ON/OFF.	-	Δ	This is performed on the function start terminal.
Hardware reset function	 Initializes (clears data and sets default value) AD61C I/O signals and buffer memory by the reset switch on the front of the AD61C. 	-	×	This function is not available.
Error detection function	Stores the first error to buffer memory if any errors are found in communication (FROM/TO instructions) from the programmable controller CPU to buffer memory on AD61C.	-	×	This function is not available.



(c) Programmable controller CPU I/O signal comparisons

The sequence program must be changed as the I/O signals differ.

For details on I/O signals and sequence programs, refer to the User's Manual.

	or ueta	AD61		iu sec	quence progr	rams, refer to the User's Manual. AJ65BT-D62					
Devic	e No.		Devic	e No.	Description	Devic	e No.			e No.	Description
CH1	CH2	Description	CH1	CH2	Description	CH1	CH2	Description	CH1	CH2	Description
X00 to	o X03	Use prohibited	Y00 to	o Y03	Use prohibited	RXn0	RXn4	Counter value large (Point No. 1)	t	/n0 o /nF	Use prohibited
X04	4 ^{*1}	Communication error detection	Y04	4 ^{*1}	Communication error detection reset	RXn1	RXn5	Counter value coincidence (Point No. 1)	RY (n+1)0	RY (n+1)7	Point No.1 coincidence signal reset command
X	05	Detection of reset status	Y	05	Reset status detection reset	RXn2	RXn6	Counter value small (Point No.1)	RY (n+1)1	RY (n+1)8	Preset command
X	06	Use prohibited	Y	06	Use prohibited	RXn3	RXn7	External preset command detection	RY (n+1)2	RY (n+1)9	Coincidence signal enable
X0 ⁻	7 ^{*2}	Communication completion wait flag	Y0 ⁻	7 *2	Communication completion wait flag reset	RXn8	RXnB	Counter value large (Point No. 2)	RY (n+1)3	RY (n+1)A	Down count command
X08 to	o X17	Use prohibited	Y08 t	to Y17	Use prohibited	RXn9	RXnC	Counter value coincidence (Point No. 2)	RY (n+1)4	RY (n+1)B	Count enable command
X18	X1C	CH1/CH2 counter value small/large	Y18	Y1C	CH1/CH2 coincidence signal reset command	RXnA	RXnD	Counter value small (Point No. 2)	RY (n+1)5	RY (n+1)C	Use prohibited
X19	X1D	CH1/CH2 counter value coincidence	Y19	Y1D	CH1/CH2 preset command	RXnE	RXnF	Use prohibited	RY (n+1)6	RY (n+1)D	Counter function selection start command
X1A	X1E	CH1/CH2 external preset request detection	Y1A	Y1E	CH1/CH2 count enable command	RX (n+1)0	RX (n+1)2	Preset completion	t	n+1)E o n+1)F	Use prohibited
X1B	X1F	CH1/CH2 preset completion	Y1B	Y1F	CH1/CH2 external preset request detection	RX (n+1)1	RX (n+1)3	Counter function detection	RY (n+2)0	RY (n+2)2	External preset detection reset command
						t	n+1)4 0	Use prohibited	RY (n+2)1	RY (n+2)3	Point No.2 coincidence signal reset command
						RA(I	1+7)7		t	n+2)4 o n+7)7	Use prohibited
						RX(n+7)8		Initial data processing request flag	RY(r	1+7)8	Initial data processing complete flag
						t RX(r	n+7)9 o n+7)A n+7)B	Use prohibited Remote READY	RY(n+7)9 to		Use prohibited
						RX(n	i+7)C o i+7)F	Use prohibited	-	1+7)F	

^{*1, *2:} These input signals are used on the A2CCPU side.



(d) Buffer memory addresses comparisons

The sequence program must be changed as the buffer memory assignments differ. For details on buffer memory and sequence programs, refer to the User's Manual.

	AD61C		AJ65BT-D62				
Address	Name	Read/write	Add	ress	Name	Read/write	
Address	Name	Reau/write	CH1	CH2	Name	Reau/write	
0	CH1 mode register	R/W	RWwm	RWwm+8	Preset value setting area (L)		
1	CH1 subtraction count specification		RWwm+1	RWwm+9	(H)		
					Pulse input mode/		
2	CH1 coincidence signal output enable flag	W	RWwm+2	RWwm+A	Function selection register/		
_			1XVVVIII+Z	VWIII-2 10000111-70	External output hold/		
					clear setting area	W	
3	CH1 set value	R/W	RWwm+3	RWwm+B	Coincidence output point (L)		
4	OTTI Set value	IN/ VV	RWwm+4	RWwm+C	No.1 setting area (H)		
5	CH1 preset value	w	RWwm+5	RWwm+D	Sampling/periodic setting area		
6	OTT preser value	**	RWwm+6	RWwm+E	Coincidence output point (L)		
7	CH2 mode register	R/W	RWwm+7	RWwm+F	No.2 setting area (H)		
8	CH2 down count specification		RWrn	RWrn+8	(L)		
9	CH2 coincidence signal output enable flag	W	RWrn+1	RWrn+9	Current value storage area (H)		
10			RWrn+2	RWrn+A	Latch count value/ (L)		
	CH2 set value	R/W			Sampling count value		
11	CH2 Set Value		RWrn+3	RWrn+B	Periodic pulse count (H)		
					previous value storage area	R	
12			RWrn+4	RWrn+C	Periodic pulse count (L)		
13	CH2 preset value	W	RWrn+5	RWrn+D	present value (H)		
10			TOVIII	TWIII. D	storage area		
					Sampling/periodic counter flag		
14	CH1 current value		RWi	m+6	storage area		
	Offi danent value				(common for CH1, CH2)		
15		R	RW	n+7			
16	CH2 current value			n+E	Use prohibited	_	
17			RWi	–	200 prombted		
18	Error code						



(2) Comparisons between AD62C and AJ65BT-D62

(a) Performance specifications comparisons

Item		AD62C				5BT-D62	Compati-	
·	tom	EOk pulo			Counting speed switch settings switch		bility	replacement
Counting spe	ed switch	50k pulse silk-scr		10k pulse/s (on silk- screen diagram:			0	
settings		diagram: 50kPPS)		10kPPS)	HIGH side	LOW side		
Number of occupied stations (number of occupied points)		4 stat	tions (4 sta	ations × 8 points)	(RX/RY 128 points e	tations × 32 points) ach, RWw/RWr 16 points each)	×	The number of occupied points increases. The assignment of the entire system needs to be reconsidered.
Number of ch			1 ch	annel		hannels	0	
Count	Phase				t, 2-phase input		0	
input signal	Signal level (φ A, φ B)			5VDC 12VDC 24VDC	2 to 5mA		0	
	Counting speed*	1- phase input	50k pulse/s	10k pulse/s	200kPPS	10kPPS	0	
	(max.)	2- phase input	50k pulse/s	7k pulse/s	200kPPS	7kPPS	0	
	Counting	32bits signed binary			0 to 16,777,215 (decimal notation)		×	The counting
range		-214		to 2147483647		format 24bits		range varies.
Countar	Туре			UP/DOWN Preset count	er + Ring counter fund	ction	0	
Counter	Minimum count pulse width	10µs 1 (1-, 2-phas	10µs	100 µs 142 µs 142 µs 150 50 50 71 71 µs µs µs (1-phase input) (2-phase input)	$ \begin{array}{c c} 5\mu s \\ \hline 2.5\mu s & 2.5\mu s \\ \hline (1-, 2-phase input) \end{array} $	$\begin{array}{c c} 100\mu\text{s} & 142\mu\text{s} \\ \hline \\ 150^{\circ}50^{\circ} & 77^{\circ}7^{\circ} \\ \mu\text{s} & \mu\text{s} \\ \hline \\ 1\text{-phase input)} \end{array}$	0	
		Limit the input rise and fall times to $5 \mu \text{ s or less.}$ Duty ratio 50%			2 μ :	rise and fall times to s. or less.	0	
	Comparison range		32bits sig	ned binary	-		×	
Limit switch output	Comparison result		oddress ≦ OFF a N/C conta address ≦	act action: Count value ≦ Dog address act action: Count value ≦ Dog ddress			×	Limit switch output is not available.
External	Preset	12/2	24VDC 3/6	mA. 5VDC 5mA	5/12/24\	/DC 2 to 5mA	Δ	As the external
External output	Comparison output	12/24VDC 3/6mA, 5VDC 5mA Transistor (open collector) output 12/ 24VDC, 0.1A per point, 0.8A per common		5/12/24VDC 2 to 5mA 12/24VDC 2A per common		Δ	input/output specifications are different on AJ65BT-D62, confirm the specifications of external device.	
24VDC		0.1	15A	(0.07A	0		
	internal current consumption							
Weight External dimensions		170(W) × 80(D) mm	0.41kg 65(H) × 151.9(W) × 63(D) mm		×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

 $\bigcirc \colon \mathsf{Compatible}, \ \ \underline{\wedge} \colon \mathsf{Partial} \ \mathsf{change} \ \mathsf{required}, \ \ \times \colon \mathsf{Not} \ \mathsf{compatible}$

	Item	AD62C AJ65BT-D62		Compatibility	Precautions for replacement
Pr	eset	Any value can be overwritten to the o	counter's present values.	0	
fur	nction	Preset is performed by the sequence	program or an external preset input.	0	
Ri	ng counter	Counts repeatedly between the ring of	counter value and the preset value by	0	
fur	nction	the ring counter command.		O	
		Sets the output status of any			
Lir	mit switch	channel in advance, and compares			The limit switch
ou	tput	it with the current value of the limit	_	×	output function is not
fur	nction	switch output command counter to			available.
		output ON/OFF signals.			
	Latch counter function	Stores the current value of the	Stores the current value of the		
		counter to buffer memory when the	counter to the remote register	0	
		counter function selection start	when the counter function selection		
		command signal is input.	start command signal is input.		
		Stores the number of input pulses	Stores the number of input pulses		
*uo	Sampling	to the buffer memory for the preset	to the remote register for the preset		
ecti	counter	sampling period after a signal	sampling period after a signal	0	
se	function	carrying the counter function	carrying the counter function		
Counter function selection*		selection start command is input.	selection start command is input.		
T T		Stores the number of input pulses	Stores the number of input pulses		
۶. ج	Periodic	to the buffer memory at each	to the remote register at each		
unte	pulse	preset cycle time for the duration	preset cycle time for the duration	0	
Ö	counter	that a signal carrying the counter	that a signal carrying the counter		
	function	function selection start command is	function selection start command is		
		being input.	being input.		
	Count				
	disable	Stops counting of the pulse while the	count enable command is ON.	0	
	function				

^{*:} With counter function selection, only one of the four functions can be selected and used.



(c) Programmable controller CPU I/O signal comparisons

The sequence program must be changed as the I/O signals differ. For details on I/O signals and sequence programs, refer to the User's Manual.

	AD62C AJ65BT-D62												
Device No.	Description	Device No.	Description	Device CH1	ce No. CH2	Description	Device CH1	ce No. CH2	Description				
X00 to X03	Use prohibited	Y00 to Y03	Use prohibited	RXn0	RXn4	Counter value large (Point No. 1)	RYn0 to RYnF		-				
X04 *1	Communication error detection	Y04 *1	Communication error detection reset	RXn1	RXn1 RXn5 Counter value coincidence (Point No. 1		RY (n+1)0	RY (n+1)7	Point No.1 coincidence signal reset command				
X05	Detection of reset status	Y05	Reset status detection reset	RXn2	RXn6	Counter value small (Point No.1)	RY (n+1)1	RY (n+1)8	Preset command				
X06	Use prohibited	Y06	Use prohibited	RXn3	RXn7	External preset command detection	RY (n+1)2	RY (n+1)9	Coincidence signal enable				
X07 *2	Communication completion wait flag	Y07 *2	Communication completion flag reset	RXn8	RXnB	Counter value large (Point No. 2)	RY (n+1)3	RY (n+1)A	Down count command				
	Use prohibited	Y08 to Y17	Use prohibited	RXn9	RXnC	Counter value coincidence (Point No. 2)	RY (n+1)4	RY (n+1)B	Count enable				
		Y18	Count enable command	RXnA	RXnD	Counter value small (Point No. 2)	RY (n+1)5	RY (n+1)C	_				
X08 to X1A		Use prohibited	Y19	Down count command	RXnE	RXnF	-	RY (n+1)6	RY (n+1)D	Counter function selection start command			
		Y1A	Preset command					t	n+1)E o n+1)F	-			
X1B	Fuse blown detection	Y1B	Ring counter command	RX (n+1)0	RX (n+1)2	Preset completion	RY (n+2)0	RY (n+2)2	External preset detection reset command				
X1C	Sampling/ periodic counter	Y1C	Counter function selection start	RX (n+1)1	RX (n+1)3	Counter function detection	RY (n+2)1	RY (n+2)3	Point No.2 coincidence signal reset command				
	ON/OFF flag		command	RX(n+1)4 to RX(n+7)7		-	RY(n+2)4 to RY(n+7)7		-				
X1D	Limit switch output READY flag	Y1D	Limit switch output command	RX(r	1+7)8	Initial data processing request flag	RY(r	1+7)8	Initial data processing complete flag				
X1E	External preset request detection	Y1E	External preset request detection reset command	RX(n+7)9 to RX(n+7)A RX(n+7)B RX(n+7)C to RX(n+7)F		-							
X1F	Multiple-dog setting error detection	Y1F	Multiple-dog setting error detection reset			RX(n+7)B Remot		Remote			t	n+7)9 o n+7)F	-
						-							

^{*1, *2:} These input signals are used on the A2CCPU side.

(d) Buffer memory addresses comparisons

The sequence program must be changed as the buffer memory assignments differ. For details on buffer memory and sequence programs, refer to the User's Manual.

	AD62C		AJ65BT-D62				
Address	Name	Read/write	Add	ress	Name		Read/write
Address	Name	Read/write	CH1	CH2	Name	Name	
0	Present value (L)		RWwm	RWwm+8	Preset value setting area	L)	
1	(H)		RWwm+1	RWwm+9	(F	H)	
		Pulse input mode/Function s		Pulse input mode/Function selection	ion		
2	Counter function selection (L)		RWwm+2	RWwm+A	register/External output hold and cl	lear	
	count value	R			setting area		
3	(H)		RWwm+3	RWwm+B		L)	
	Limit switch output				Coincidence output point		W
4	status flag		RWwm+4	RWwm+C	No.1 setting area (F	H)	
	(CH1 to CH8)						
5	Pulse input mode setting		RWwm+5	RWwm+D	Sampling/periodic setting area		
6	Counter function selection setting		RWwm+6	RWwm+E		L)	
7	(L)	1	RWwm+7	RWwm+F	No.2 setting area (F	H)	
8	Preset value setting (H)		RWrn	RWrn+8	(L	L)	
9	(L)	R/W	RWrn+1	RWrn+9	Current value storage area (F	H)	
10	Ring counter value setting (H)	R/W	RWrn+2	RWrn+A	Latch count value/Sampling (L	L)	
					count value/Periodic pulse		
11	Sampling/periodic setting		RWrn+3	RWrn+B	count previous value	H)	
					storage area		R
12	Communication error code		RWrn+4	RWrn+C	Periodic pulse count (L	L)	
13	Multiple-dog setting error code		RWrn+5	RWrn+D	present value storage area (F	H)	
					Sampling/periodic counter		
14 to 30	CH1 limit switch output data setting		RW	rn+6	flag storage area		
					(common for CH1, CH2)		
31 to 47	CH2 limit switch output data setting		RW	rn+7			
48 to 64	CH3 limit switch output data setting	R/W	RWrn+E		Use prohibited		-
65 to 81	CH4 limit switch output data setting	TS/VV	RW	rn+F			
82 to 98	CH5 limit switch output data setting						
99 to 115	CH6 limit switch output data setting						
116 to 132	CH7 limit switch output data setting						
133 to 149	CH8 limit switch output data setting						

REPLACING THE COMMUNICATION MODULES

8.1 List of Alternative Communication Module Models

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
Serial Communication	AJ35PTF-R2	AJ65BT-R2N	 Change in RS-232C cable (25-pin → 9-pin) Change in general-purpose I/O specifications (power voltage range, number of points) Change is required as the program is not compatible. 	
Operating box	AJ35T-OPB-P1-S3	None		
Operating box	AJ35PT-OPB-M1-S3	None		
Cable for operating box	AC30MINI	None	Transition to GOT is recommended.	
Joint box	AJ35T-JB-S3	None		
Transmission converter	AJ35PTC-CNV	AJ65SBT-RPS	New cable must be used as the two systems differ in cable types.	

8.2 Serial Communication Module Comparisons

(1) Comparisons between AJ35PTF-R2 and AJ65BT-R2N

(a) Performance specifications comparisons

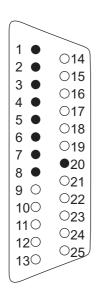
O: Compatible, △: Partial change required, ×: Not compatible

O: Compatible, △: Partial change required,						
	Item		cations	Compatibility	Precautions for	
		AJ35PTF-R2	AJ65BT-R2N	oompumomi,	replacement	
Interface specificat		RS-232C-compliant (25-pin) × 1 channel	RS-232C-compliant (9-pin) × 1 channel	Δ	For differences in the RS-232C interface specifications, refer to 1).	
Commu	nication	Full-duplex communication system	Full-duplex communication system			
method		(nonprocedural)	(nonprocedural)	0		
Synchro method	nization	Asynchronous method	Asynchronous method	0		
Transmi	ssion speed	300, 600, 1200, 2400, 4800, 9600, 19200 bps	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps ^{*1}	0		
	Start bit	1	1	0		
Data	Data bit	7 or 8	7 or 8	0		
type	Parity bit	1 or 0 (none)	1 or 0 (none)	0		
	Stop bit	1 or 2	1 or 2	0		
Error de	tection	Parity check (Odd or Even)	Parity check (Odd or Even)	0		
Communication		DTR/DSR (ER/DR) control	DTR/DSR (ER/DR) control	0		
control		XON/XOFF (DC1/DC3) control	DC1/DC3 control	0		
Transmission distance		15m	Up to 15m	0		
OS receiv	ve buffer	2048 bytes	5120 bytes	0		
	Input	12/24VDC (sink type) × 4 points	24VDC (sink type) × 2 points		For differences in	
General- purpose I/O		Transistor output (sink type) 12/24VDC × 4 points	Transistor output (sink type) 12/24VDC × 2 points	Δ	the general- purpose I/O specifications, refer to 2) and 3).	
Number stations	of occupied	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	×		
Power s	upply voltage	15.6 to 31.2VDC	24VDC	0		
Current	consumption	130mA (24V)	110mA (24V)	0		
Weight		0.71kg	0.40kg	0		
Max. size of send/ receive buffer		1000 bytes each for send/receive (1000 bytes for total of send and receive)	(1536 words for total of send and receive)	0		
External dimensions		250(H) × 132(W) × 41(D)mm	80(H) × 170(W) × 47(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.	

1) RS-232 interface specifications comparisons

The RS-232C cable must be changed as the RS-232C interface specifications are different between the AJ35PTF-R2 and AJ65BT-R2N.

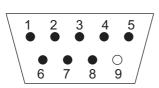
[AJ35PTF-R2]



Pin No.	Name	Signal code	Signal direction AJ35PTF-R2←External device
1	Frame ground	FG	←
2	Send data	SD(TXD)	
3	Receive data	RD(RXD)	←
4	Request to send	RS(RTS)	-
5	Clear to send	CS(CTS)	←
6	Data set ready	DSR(DR)	←—
7	Signal ground	SG	←—
8	Carrier detect	CD	←
20	Data terminal ready	DTR(ER)	

25-pin D-sub (female) screw type 17LE-13250-22-D2AC (DDK Ltd.) or equivalent

[AJ65BT-R2N]



Use the following model as a connector of the AJ65BT-R2N side connection cable.

DDK Ltd.

Plug, chell: 17JE-23090-02 (D8A) (-CG)

Pin No.	Name	Signal code	Signal direction AJ65BT-R2N ↔ External device
1	Data carrier detect	CD(DCD)	-
2	Received data	RD(RXD)	-
3	Transmitted data	SD(TXD)	
4	Data terminal ready	ER(DTR)	
5	Signal ground	SG	-
6	Data set ready	DR(DSR)	-
7	Request to send	RS(RTS)	
8	Clear to send	CS(CTS)	←
9	_	_	_

2) General-purpose input specifications comparisons

[AJ35PTF-R2]

ltem			DC input ((sink type)	
		AJ35PTF-R2			Terminal layout
Number of inp	ut points	4 pc	oints		
Insulation met	hod	Photod	coupler	1	
Rated input vo	ltage	12VDC	24VDC		
Rated input cu	ırrent	3mA	7mA		
Operating volt	age range	10.2 to 31.2VDC (rip	ople ratio within 5%)		
Maximum num	nber of	100% (4 points) o	imultaneously ON		
simultaneous	input points	100% (4 points) s	initialieously ON		
ON voltage/Of	N current	9.5V or more /	2.6mA or more		
OFF voltage/C	FF current	6V or less / 1.0mA or less] [1 X0 -0 0-
Input resistant	ce	Approx. 3.4kΩ			2 X1 0 0
Response	OFF→ON	10ms	or less		3 X2 -O O
time	ON→OFF	10ms	or less] [4 X3 -0 0
Wiring method	I for common	4 points per common] [5 COM1 + -
vviilig illetiloc	i loi common	(common terminal: TB5)			6 NC
Operation indi	cation	ON indication (LED)] [7 NC
External conne	action	8-point terminal	block connector] [8 NC
External confidence	BOUOTI	(M3 × 6	screws)		
Applicable wir	0.6170	0.75 to	2mm ²		
Applicable wire size		(applicable tightenii	ng torque 7kg · cm)		
		1.25-3, 1.25-YS3A, 2-	S3, 2-YS3A, V1.25-3,		
Applicable sol	derless	V1.25-YS3A, V2-S3	3, V2-YS3A, 1.25-3,		
terminal		1.25-YS3A, 2-S3,	2-YS3A, V1.25-3,		
		V1.25-YS3A, V	2-S3, V2-YS3A		

[AJ65BT-R2N]

[/10001-1	1211					
Ite	em	DC input (positive/negati	ve commor		,	
		AJ65BT-R2N		External c	onnection	
Number of inp	ut points	2 points				
Isolation meth	od	Photocoupler				
Rated input vo	oltage	24VDC	⊢ ••	IXC R	1 . ()
Rated input cu	ırrent	Approx. 7mA		INC R	·	<u> </u>
Operating volt	age range	19.2 to 28.8VDC (ripple ratio within 5%)			图 (聲)	7
Maximum nun	nber of	100%	12) M -		
simultaneous	input points	100 70	7-1-2		_	=
ON voltage/OI	N current	14V or more / 3.5mA or more				circuit
OFF voltage/C	FF current	6V or less / 1.7mA or less	- SXD R + S			
Input resistant	се	Approx. 3.3kΩ				
Response	OFF→ON	10ms or less			阜 (科() =
time	ON→OFF	10ms or less		'		
Wiring mothes	l for common	2 points/common (COM1)				
Wiring method	i loi common	Positive/negative common shared type				
External conn	ection system	7-point terminal block (M3.5 screw)	Terminal	0:1	Terminal	0:
			number	Signal	number	Signal
Applicable wir	e size	0.75 to 2mm ²	TB1	XC	TB3	XD
Applicable sol	derless	DAV/4 25 2 5 DAV/2 2 5 (US C 2005 compliant)	TB2	COM1		
terminal		RAV1.25-3.5, RAV2-3.5 (JIS C 2805-compliant)	102	COMT	ı	_

3) General-purpose output specifications comparisons

[AJ35PTF-R2]

Item		Transistor output (sink type)				
II.	tem	AJ35PTF-R2	Terminal layout			
Number of out	tput points	4 points				
Insulation met	thod	Photocoupler				
Rated load vo	ltage	12/24VDC				
Operating load	d voltage range	10.2 to 31.2VDC				
Maximum load	d current	0.1A/point, 0.4A/common				
Maximum inru	ish current	0.4A 100ms or less				
Leakage curre	ent at OFF	0.1mA or less				
Maximum volt	age drop at ON	2.5V (0.1A), 1.75V (5mA), 1.7V (1mA)	9 Y0 - T-			
Response	OFF→ON	2ms or less	10 Y1			
time	ON→OFF	2ms or less (resistance load)	11 Y2 - I			
Surge suppres	ssor	Clamp diode	12 Y3 L			
Wiring method	d for common	4 points per common	13 12/24V			
willing method	a for confinion	(common terminal: TB14)	14 COM2 - +			
Operation indi	ication	ON indication (LED)	15 NC			
External conn	oction	8-point terminal block connector	16 NC			
External confin	ection	$(M3 \times 6 \text{ screws})$				
Applicable wir	:0 0i70	0.75 to 2mm ²				
Applicable Wil	e 512e	(applicable tightening torque 7kg - cm)				
Applicable col	derless terminal	1.25-3 1.25-YS3A 2-S3 2-YS3A V1.25-3				
Applicable 501	deness terminal	V1.25-YS3A V2-S3 V2-YS3A				
External power	er Voltage	10.2 to 31.2VDC				
supply for out	put Current	15mA (TYP.24VDC)				

[AJ65BT-R2N]

[AGOOD I - RZIV]		Transistor o	output (Sink t	ype)		
It	em	AJ65BT-R2N			onnection	
No. of outpu	ut points	2 points				
Insulation m	nethod	Photocoupler	•			
Rated load	voltage	12 to 24VDC (+20/-15%)	1			
Operating lo	oad voltage	10.2 to 28.8VDC (Ripple ratio is 5% or less)				
Max. load c	urrent	0.1A/point 0.2A/common				
Max. inrush	current	0.7A, 10ms or less	1			
Leakage cu	rrent at OFF	0.1mA or lower	•			
Max. voltag	e drop at ON	0.1VDC(TYP.)0.1A, 0.2VDC(MAX.)0.1A	1			LED
Output meth	nod	sink type	TB 5	<u> </u>		Internal 💯
Response	OFF→ ON	1ms or less		circuit		
time	ON→ OFF	1ms or less (Resistance load)	1		T	
External	Voltage	10.2 to 28.8VDC (Ripple ratio is 5% or less)	11			
power supply of output section	Current	10mA (at 24VDC) (MAX all points ON)	TB 7 TB 4 +, - TB 6	Constant-voltage circuit	}	
Surge supp	ressor	Zener diode	12/24VDC			
Wiring meth	nod for	2 points/common (COM2)				
External cor method	nnection	7-point terminal block (M3.5 screw)				
Applicable v	wire size	0.75 to 2mm ²				
Applicable s	solderless	RAV1.25-3.5, RAV2-3.5				
terminal		(JIS C 2805-Compliant)				
		Provided		1	1	
Droto otiv - f	unation	Overheat protective function operates in unit of 1 point.	Terminal number	Signal	Terminal number	Signal
Protective for	unction	Overload protective function operates in unit of 1 point.	TB4	+24V	TB6	COM2
		(Detection disabled)	TB5	YC	TB7	YD

(b) Functional comparisons

The following table shows serial communication module comparisons between MELSECNET/MINI-S3 and CC-Link.

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

léa ma	Functions			Precautions for
Item	AJ35PTF-R2	AJ65BT-R2N	bility	replacement
Barcode reading	Actually required data only can be read to the programmable controller CPU regardless of the data communication protocol of the compatible barcode reader.	None	×	Utilize nonprocedural communication.
ID card reading/ writing	Data can be read from and written to a programmable controller CPU by setting the MINI standard protocol for communication with the compatible ID card controller.	None	×	Utilize nonprocedural communication.
Nonprocedural communication	Nonprocedural communication with external devices is available.	Nonprocedural communication with external devices is available. There are two methods for nonprocedural communications: the automatic buffer memory update function and the RIWT (RISEND) and RIRD (RIRCV) instructions.	Δ	Create new programs as there is no compatibility in programs.

(c) Switch comparisons

The switch settings on the serial communication module are not compatible as MELSECNET/MINI-S3 and CC-Link are different networks.

For details, refer to the User's Manual for each module.

(d) Parameter comparisons

The parameter settings on the serial communication module are not compatible as MELSECNET/ MINI-S3 and CC-Link are different networks.

For details, refer to the User's Manual for each module.

(e)Program Comparisons

The I/O signals and buffer memory on the serial communication module are not compatible as MELSECNET/MINI-S3 and CC-Link are different networks.

For details, refer to the User's Manual for each module.

APPENDICES

Appendix 1 External Dimensions

For external dimensions of modules described in this handbook, refer to the user's manual for each module.

Appendix 2 Performance Specifications Comparison between

MELSECNET/MINI-S3 compact type I/O module and Renewal

Tool for A0J2

Appendix 2.1Precautions for the performance specifications comparison

This section describes the precautions when comparing the performance specifications between a MELSECNET/MINI-S3 compact type I/O module and a renewal tool for A0J2.

(1) External supply power (24VDC)

The renewal tool for A0J2 requires an external supply power (24VDC). Reuse the I/O module terminal block of the existing MELSECNET/MINI-S3 compact type I/O module and connect the external supply power (24VDC) to the renewal tool.

For precautions or details when connecting the external supply power, refer to the following.

 Renewal tool for A0J2 series Transition from MELSEC-A0J2(H) series to renewal system using renewal tool

(Issued by Mitsubishi Electric System & Service Co., Ltd.)

When the I/O module on the CC-Link side is connected to the renewal tool for A0J2 with the dedicated cable, the external supply power (24VDC) supplies the driving power for external devices of the I/O module on the CC-Link side.

(2) Selection of I/O modules on the CC-Link

The renewal tool for A0J2 has functions that convert AC input into DC input, and convert transistor output into relay output or triac output.

Therefore, select a DC input module and a transistor output module for the I/O modules on the CC-Link side, regardless of the type of the renewal tool for A0J2.

When the I/O module on the CC-Link side is connected to the renewal tool for A0J2 with the dedicated cable, select the AJ65SBTCF1-32D or AJ65SBTCF1-32T that can be wired using a connector for the I/O module on the CC-Link side.

The mounting plate SC-A0JQPT2 can be used to mount the AJ65SBTCF1-32D or AJ65SBTCF1-32T. In this case, drilling of mounting holes is not required.

(3) Derating chart for the maximum number of simultaneous input points

(a) Input module on the programmable controller side

Check the number of simultaneous input points by referring to the derating chart of the selected CC-Link input module.

When the AJ65SBTCF1-32D is used, the maximum number of simultaneous input points is 100% (all points turn on simultaneously).

(b) Renewal tool for A0J2

The maximum number of simultaneous input points of the renewal tool for A0J2 (input module) has the limitation depending on the external supply power (24VDC) that supplies the power to the module. Use the module within the range shown in the derating chart in the performance specifications comparison.

(4) Temperature derating for the triac output module

The output load current of the renewal tool for A0J2 (triac output module) has the limitation depending on the ambient temperature in the environment where the module is used.

Use the module within the range shown in the temperature derating chart in the performance specifications comparison.

Appendix 2.2Performance specifications comparison

This section shows the performance specifications comparison between MELSECNET/MINI-S3 compact type remote I/O module and interface module of renewal tool for A0J2 described in Section 1.2.

(1) Specifications comparison between AJ35PTF-32A and interface module (SC-A0JQIF32A)

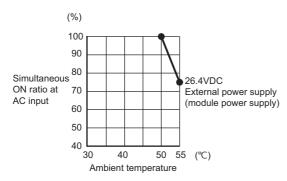
O: Compatible, △: Partially changed, ×: Incompatible

Specifications		AJ35PTF-32A input specifications	SC-A0JQIF32A input specifications	Compatibility	Precautions for replacement
Insulation method		Photocoupler	Photocoupler	0	
Rated input voltage		100 to 120VAC, 50/60Hz	100 to 120VAC, 50/60Hz	0	
Rated input current		10mA (100VAC 60Hz)	10mA (100VAC 60Hz)	0	
Operating voltage range		85 to 132VAC	85 to 132VAC		
		(50/60Hz ±5%)	(50/60Hz ±5%)	0	
Maximum number of simultaneous input points		100% (16 points/common) simultaneously ON	Refer to the derating chart.*1	Δ	Use the module within the range in the derating chart. When the voltage of the external power supply (module power supply) is high, the AC input simultaneous ON ratio is low.
ON voltage/ON current		80VAC or more/6mA or more	80VAC or more/6mA or more	0	
OFF voltage/OFF current		40VAC or less/4mA or less	26VAC or less/1.7mA or less	Δ	The OFF voltage/OFF current have been reduced.*2
Inrush current		Max. 300mA, within 0.3ms (132VAC)	Max. 300mA, within 0.3ms (132VAC)	0	
Input resistance		Approx. 10kΩ (60Hz), Approx. 12k (50Hz)	Approx. $10k\Omega$ (60Hz), Approx. $12k$ (50Hz)	0	
Response time	OFF → ON	15ms or less (6ms TYP.)	14ms or less (11ms TYP.)	Δ	In combination with CC-Link input module: 15.5ms or less (12ms TYP.)*3
	ON → OFF	35ms or less (16ms TYP.)	19ms or less (13ms TYP.)	Δ	In combination with CC-Link input module: 21.5ms or less (14ms TYP.)*3
Common terminal arrangement		16 points/common (Common terminal: TB17, TB34)	16 points/common (Common terminal: TB17, TB34)	0	
Operation indication		Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link input module.
External power supply (Module power supply)	Voltage	15.6 to 31.2VDC	24VDC ±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to TB35 and TB36 of the interface module is required.
	Current	110mA	210mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External connection method		36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable wire size		0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	

O: Compatible, △: Partially changed, ×: Incompatible

Specifications	AJ35PTF-32A input specifications	SC-A0JQIF32A input specifications	Compatibility	Precautions for replacement
Applicable solderless terminal	R1.25-3, R2-3 RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of occupied stations	4 stations (4 stations × 8 points)	-	-	When the AJ65SBTCF1-32D is used, the number of occupied stations is 1 station (When using CC-Link, it is 1 station × 32 points).
Weight	0.75kg	0.40kg	Δ	Also consider the weight of the fixed stand of programmable controller.*4
External dimensions	250(H) × 132(W) × 41(D) mm	182(H) × 132(W) × 41(D) mm*5	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

*1 The following figure shows the derating.



*2 Check that the specifications of leakage current of the used sensor and switches are equal to or less than the OFF current

If leakage current is equal to or more than the OFF current specifications, take measures against it with referring to "Input Module Troubleshooting" in the following handbook.

(Handbook for replacement)

Renewal tool for A0J2 series transition from MELSEC-A0J2(H) series to renewal system using renewal tool (Refer to Appendix 2.6.)

- *3 A value when the AJ65SBTCF1-32D is used.
- *4 The weight of the fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *5 The external dimensions of the SC-A0JQIF32A do not include those of its projection.

(2) Specifications comparison between AJ35PTF-32D and interface module (SC-A0JQIF32D)

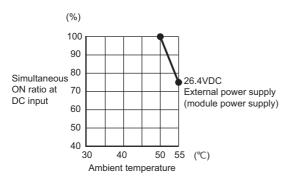
 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specifi	cations	AJ35PTF-32D input specifications	SC-A0JQIF32D input specifications	Compatibility	Precautions for replacement
Number of in	put points	32 points	32 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated input v	oltage	12/24VDC	12/24VDC	0	
Rated input c	urrent	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
Operating vol	ltage range	10.2 to 31.2VDC (ripple ratio within 5%)	10.2 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
Maximum nui simultaneous		100% (16 points/common) simultaneously ON	Refer to the derating chart.*1	Δ	Use the module within the range in the derating chart.
ON voltage/C	N current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage/	OFF current	6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resistan	ice	Approx. 3.4kΩ	Approx. 3.3kΩ	0	
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF → ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*2
time	ON → OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*2
Common tern		16 points/common (Common terminal: TB17, TB34)	16 points/common (Common terminal: TB17, TB34)	0	
Operation ind	lication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link input module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specif	ications	AJ35PTF-32D	SC-A0JQIF32D	Compatibility	Precautions for replacement
External power Voltage supply (Module		15.6 to 31.2VDC	24VDC ±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for CC-Link input module operation, connecting a module power supply to TB35 and TB36 of the interface module is required.
power supply)	Current	110mA	200mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External con method	nection	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable w	ire size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable setterminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of o stations	ccupied	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D, the number of occupied stations is 1 station (When using CC-Link, it is 1 station × 32 points). (When using CC-Link, it is 1 station × 32 points).
Weight		0.70kg	0.36kg	Δ	Also consider the weight of the fixed stand of programmable controller.*3
External dim	ensions	250(H) × 132(W) × 41(D) mm	182(H) × 132(W) × 41(D) mm* ⁴	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

*1 The following figure shows the derating.



- *2 A value when the AJ65SBTCF1-32D is used.
- *3 The weight of the fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4 The external dimensions of the SC-A0JQIF32D do not include those of its projection.

(3) Specifications comparison between AJ35PTF-24R and interface module (SC-A0JQIF24R)

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specifi	cations	AJ35PTF-24R output specifications	SC-A0JQIF24R output specifications	Compatibility	Precautions for replacement
Number of ou	tput points	24 points	24 points	0	
Insulation method		Photocoupler	Relay isolation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated switchin	ng voltage/	24VDC 2A (Resistance load)/ point 240VAC 2A (COS φ =1)/point 5A/common	24VDC 2A (Resistance load)/ point 240VAC 2A (COS ϕ =1)/point 5A/common	0	
Minimum swit	ching load	5VDC 1mA	5VDC 1mA	0	
	tching voltage	264VAC 125VDC	264VAC 125VDC	0	
Maximum swi frequency		3600 times/hr	3600 times/hr	0	
Mechanical lif	e	20 million times or more	20 million times or more	0	
		Rated switching voltage/current load	Rated switching voltage/current load 200,000 times or more	0	
Electrical life		200,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	200,000 times of more 200,000 times of more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 0.75A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	0	
Response	OFF→ON	10ms or less	9ms or less	Δ	In combination with CC-Link output module: 9.5ms or less *1
time	ON→OFF	12ms or less	11ms or less	Δ	In combination with CC-Link output module: 12.5ms or less *1
External supply	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	24VDC±10% Ripple voltage 4Vp-p or less	0	
power (Relay coil driving power)	Current	220mA (24VDC All points are ON.)	230mA (24VDC All points are ON.)	0	Review current capacity since current consumption is increased.
Surge suppre	ssor	None	None	0	
Fuse rating		None	None	0	
Fuse blown indication		-		0	
Relay socket		None	None	0	
Common term	ninal	8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation ind	ication	Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specif	ications	AJ35PTF-24R	SC-A0JQIF24R	Compatibility	Precautions for replacement
External	Voltage	15.6 to 31.2VDC	-	0	
supply power (Module power supply)	Current	120mA	-	0	No external power supply (module power supply) is required.
External conn	ection method	36-point terminal block connector	36-point terminal block connector	0	
External confi	lection method	(M3 × 6 screws)	(M3 × 6 screws)	O	
		0.75 to 2mm ²	0.75 to 2mm ²		
Applicable wir	re size	(Applicable tightening torque	(Applicable tightening torque	0	
		69N • cm)	69N • cm)		
Applicable sol	Iderless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
	cupied stations	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32T, the number of occupied stations is 1 station (When using CC-Link, it is 1 station × 32 points).
Weight		0.80kg	0.47kg	Δ	Also consider the weight of fixed stand of programmable controller.*2
External dime	ensions	250(H) × 132(W) × 41(D) mm*3	182(H) × 132(W) × 41(D)mm*4	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32T.
- *2: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *3: External dimensions of the AJ35PTF-24R does not include dimensions of the optical fiber cable connector.
- $^{\star}4$: The external dimensions of the SC-A0JQIF24R do not include those of its projection.

(4) Specifications comparison between AJ35PTF-24S and interface module (SC-A0JQIF24S)

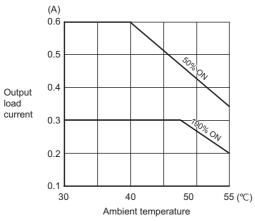
 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specific	ations	AJ35PTF-24S output specifications	SC-A0JQIF24S output specifications	Compatibility	Precautions for replacement
Number of inp	ut points	24 points	24 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated load vol	tage	100 to 240VAC, 40 to 70Hz	100 to 240VAC, 47 to 63Hz	Δ	The available frequency range is small.
Maximum load	l voltage	264VAC	264VAC	0	
Maximum load	current	0.6A/point, 2.4A/common	0.6A/point, 2.4A/common	0	
Minimum load current	voltage/	24VAC 100mA, 100V/240VAC 10mA	24VAC 100mA, 100V/240VAC 10mA	0	
Maximum inru	sh current	20A 10ms or less 8A 100ms or less	20A 10ms or less 8A 100ms or less	0	
Leakage curre	nt at OFF	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	0	
Maximum volta	age drop at	1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	0	
Temperature d	erating	None	Refer to the derating chart.*1	Δ	Use the module within the range in the derating chart.
Response	OFF → ON	1ms or less	1ms or less	Δ	In combination with CC-Link output module: 2ms or less*2
time	ON → OFF	0.5 cycle + 1ms or less	0.5 cycle + 1ms or less	Δ	In combination with CC-Link output module: 0.5 cycle + 2ms or less*2
Fuse		High speed type fuse 3.2A (one fuse/common) HP-32	None	×	Install a fuse externally from the module (one fuse/common). (A fuse and fuse holder are included.)
Fuse blown inc		Available (When a fuse is blown, the LED turns on and a signal is output to the CPU.)	-	-	
Surge suppressor	CR absorber	0.022 μ F + 47 Ω	0.015 μ F + 22 Ω	0	
эцри сээог	Varistor	None	Varistor voltage (400 to 540V)	0	
Common term arrangement	inal	8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation indi	cation	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link output module.

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specifi	ications	AJ35PTF-24S	SC-A0JQIF24S	Compatibility	Precautions for replacement
External power supply (Module	Voltage	15.6 to 31.2VDC	24VDC ±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for CC-Link output module operation, connecting a module power supply to TB35 and TB36 of the interface module is required.
power supply)	Current	200mA	370mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External conr method	nection	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable wi	re size	0.75 to 2mm ² (Applicable tightening torque 69N - cm)	0.75 to 2mm ² (Applicable tightening torque 69N - cm)	0	
Applicable so terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of oc stations	ocupied	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32T, the number of occupied stations is 1 station (When using CC-Link, it is 1 station × 32 points). (When using CC-Link, it is 1 station × 32 points).
Weight		0.70kg	0.46kg	Δ	Also consider the weight of the fixed stand of programmable controller.*3
External dime	ensions	250(H) × 132(W) × 41(D) mm	182(H) × 132(W) × 41(D) mm* ⁴	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

*1 Temperature derating chart



- *2 A value when the AJ65SBTCF1-32T is used.
- *3 The weight of the fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4 The external dimensions of the SC-A0JQIF24S do not include those of its projection.

(5) Specifications comparison between AJ35PTF-24T and interface module (SC-A0JQIF24T)

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specif	ications	AJ35PTF-24T output specifications	SC-A0JQIF24T output specifications	Compatibility	Precautions for replacement
Number of input points		24 points	24 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated load v	oltage	12/24VDC	12/24VDC	0	
Operating loa	ad voltage	10.2 to 31.2VDC	10.2 to 30VDC	0	The operating voltage range differs.
Maximum loa	nd current	0.5A/point, 4A/common	0.5A/point, 4A/common	0	
Maximum inn	ush current	4A 10ms or less	4A 10ms or less	0	
Leakage curr	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	Itage drop at	0.9VDC (TYP.) 0.5A	0.9VDC (TYP.) 0.5A		
ON		1.5VDC (MAX.) 0.5A	0.8VDC (MAX.) 0.5A	0	
Response	OFF → ON	2ms or less	1ms or less	Δ	In combination with CC-Link output module: 2ms or less*1
time	ON → OFF	2ms or less (resistance load)	1ms or less (resistance load)	Δ	In combination with CC-Link output module: 2ms or less (resistance load)*1
External power	Voltage	12/24VDC (10.2 to 31.2VDC)	12/24VDC (10.2 to 30VDC)	0	
supply	Current	23mA (TYP. 24VDC 8 points/ common ON)	5mA (TYP. 24VDC 8 points/ common ON)	0	
Surge suppre	essor	Varistor (52 to 62V)	Varistor (50.4 to 61.6V)	0	
Common terminal arrangement		8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation indication		Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link output module.
Fuse		None	6.7A (Replacement is not available.) (Fuse breaking capacity: 50A)	0	
Fuse blown in	ndication	None	None	0	

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specif	ications	AJ35PTF-24T	SC-A0JQIF24T	Compatibility	Precautions for replacement
External power supply (Module power	Voltage	15.6 to 31.2VDC	24VDC ±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for CC-Link output module operation, connecting a module power supply to TB35 and TB36 of the interface module is required.
supply)	Current	130mA	70mA	0	
External con method	nection	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable w	ire size	0.75 to 2mm ² (Applicable tightening torque 69N - cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable setterminal	olderless	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of o stations	ccupied	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32T, the number of occupied stations is 1 station (When using CC-Link, it is 1 station × 32 points).
Weight		0.73kg	0.36kg	Δ	Also consider the weight of the fixed stand of programmable controller.*2
External dim	ensions	250(H) × 132(W) × 41(D) mm	182(H) × 132(W) × 41(D) mm*3	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

^{*1} A value when the AJ65SBTCF1-32T is used.

^{*2} The weight of the fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.

^{*3} The external dimensions of the SC-A0JQIF24T do not include those of its projection.

(6) Specifications comparison between AJ35PTF-28AR and interface module (SC-A0JQIF28AR)

 $\bigcirc \hbox{: Compatible, \triangle: Partially changed, \times: Incompatible}$

Specif	ications	AJ35PTF-28AR input specifications	SC-A0JQIF28AR input specifications	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input v	/oltage	100 to 120VAC, 50/60Hz	100 to 120VAC, 50/60Hz	0	
Rated input of	current	10mA (100VAC 60Hz)	10mA (100VAC 60Hz)	0	
Operating vo	Itage range	85 to 132VAC (50/60Hz ±5%)	85 to 132VAC (50/60Hz ±5%)	0	
Maximum nu simultaneous		100% (16 points/common) simultaneously ON	Refer to the derating chart.*1	Δ	Use the module within the range in the derating chart. When the voltage of the external power supply (module power supply) is high, the AC input simultaneous ON ratio is low.
ON voltage/C	ON current	80VAC or more/6mA or more	80VAC or more/6mA or more	0	
OFF voltage/	OFF current	40VAC or less/4mA or less	26VAC or less/1.7mA or less	Δ	The OFF voltage/OFF current have been reduced.*2
Inrush currer	nt	Max. 300mA, within 0.3ms (132VAC)	Max. 300mA, within 0.3ms (132VAC)	0	
Input resistar	nce	Approx. $10k\Omega$ (60Hz), Approx. $12k\Omega$ (50Hz)	Approx. 10kΩ (60Hz), Approx. 12kΩ (50Hz)	0	
Response	OFF → ON	15ms or less (6ms TYP.)	14ms or less (11ms TYP.)	Δ	In combination with CC-Link input module: 15ms or less (12ms TYP.)*3
time	ON → OFF	25ms or less (16ms TYP.)	19ms or less (13ms TYP.)	Δ	In combination with CC-Link input module: 21.5ms or less (14ms TYP.)*3
Common terminal		16 points/common	16 points/common	0	
arrangement		(Common terminal: TB17)	(Common terminal: TB17)		
Operation inc	dication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link input module.

 \bigcirc : Compatible, $\ _{\bigtriangleup}$: Partially changed, $\ \times$: Incompatible

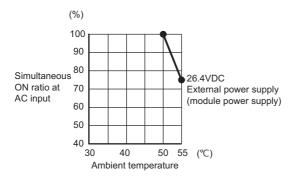
Specifi	ications	AJ35PTF-28AR output	SC-A0JQIF28AR output	Compatibility	Precautions for replacement
Оросии		specifications	specifications	Joinputionity	rocadiono for ropideoment
Number of in	put points	12 points	12 points	0	
Insulation method		Photocoupler	Relay isolation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
		24VDC 2A (resistance load)/	24VDC 2A (resistance load)/		
Pated load w	oltage/current	point	point		
Rateu Ioau vi	onage/current	240VAC 2A (COS ϕ = 1)/point	240VAC 2A (COS ϕ = 1)/point	0	
		5A/common	5A/common		
Minimum swi	tching load	5VDC 1mA	5VDC 1mA	0	
Maximum sw	ritching	264VAC, 125VDC	264VAC, 125VDC	0	
voltage		204 VAC, 123 VBC	2047/AC, 1237/DC	0	
Maximum sw	ritching	3600 times/hr	3600 times/hr	0	
frequency		0000 0000000000000000000000000000000000	0000 (00/1	Ü	
Mechanical li	fe	20 million times or more	20 million times or more	0	
		Rated switching voltage/current	Rated switching voltage/current	J	
		load	load	0	
		200000 times or more	200000 times or more		
		200VAC 1.5A, 240VAC 1A	200VAC 1.5A, 240VAC 1A		
		$(COS \phi = 0.7) 200000 \text{ times or}$	$(COS\phi = 0.7) 200000 \text{ times or}$		
Electrical life		more	more		
		200VAC 0.75A, 240VAC 0.5A	200VAC 0.75A, 240VAC 0.5A	0	
		$(COS\phi = 0.35) 200000 \text{ times}$	$(COS\phi = 0.35) 200000 \text{ times}$		
		or more	or more		
		24VDC 1A, 100VDC 0.1A	24VDC 1A, 100VDC 0.1A		
		(L/R = 7 ms) 200000 times or	(L/R = 7 ms) 200000 times or		
		more	more		
	OFF →	40	0		In combination with CC-Link input
D	ON	10ms or less	9ms or less	Δ	module: 10ms or less*4
Response time					In combination with CC-Link input
unic	ON →	12ms or less	11ms or less		module:
	OFF	121113 01 1633	Time or less	Δ	12ms or less*4
		24VDC ±10%	24VDC ± 10%		121110 01 1000
External	Voltage	Ripple voltage 4Vp-p or less	Ripple voltage 4Vp-p or less	0	
power		Ripple voltage 4vp-p of less	Ripple voltage 4vp-p of less		The current consumption
supply	Current	110mA	125mA	^	increases. The current capacity
,	Guitent	(24VDC, all points ON)	(24VDC, all points ON)	Δ	needs to be reconsidered.
Surge suppre	essor	None	None	0	
- Cu.go cupp.c		8 points/common	8 points/common		
		(Common terminal: B26)	(Common terminal: B26)		
Common terr	minal	3 points/common	3 points/common		
arrangement		(Common terminal: B31)	(Common terminal: B31)	0	
		Independent contact	Independent contact		
		(Common terminal: TB33)	(Common terminal: TB33)		
		Available			Operation indication can be
Operation inc	dication	(Turning ON the input turns	None	Δ	checked with the CC-Link output
		LED ON)			module.
Fuse		None	None	0	
Fuse blown in	ndication	_	-	_	
Relay socket		None	None	_	
			I .	1	

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specifications		AJ35PTF-28AR	SC-A0JQIF28AR	Compatibility	Precautions for replacement
External power supply (Module power	Voltage	15.6 to 31.2VDC	24VDC ± 10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for CC-Link I/O module operation, connecting a module power supply to TB35 and TB36 of the interface module is required.
supply)	Current	120mA	105mA	0	
External con method	nection	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable w	ire size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable setterminal	olderless	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of o stations	ccupied	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		0.68kg	0.43kg	Δ	Also consider the weight of the fixed stand of programmable controller.*5
External dim	ensions	250(H) × 132(W) × 41(D) mm	182(H) × 132(W) × 41(D) mm*6	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

^{*1} The following figure shows the derating.

When the voltage of the external power supply (module power supply) is high, the AC input simultaneous ON ratio is low.



*2 Check that the specifications of leakage current of the used sensor and switches are equal to or less than the OFF current value.

If leakage current is equal to or more than the OFF current specifications, take measures against it with referring to "Input Module Troubleshooting" in the following handbook.

(Handbook for replacement)

Renewal tool for A0J2 series transition from MELSEC-A0J2(H) series to renewal system using renewal tool (Refer to Appendix 2.5.)

- *3 A value when the AJ65SBTCF1-32D is used.
- *4 A value when the AJ65SBTCF1-32T is used.
- *5 The weight of the fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *6 The external dimensions of the SC-A0JQIF28AR do not include those of its projection.

(7) Specifications comparison between AJ35PTF-28AS and interface module (SC-A0JQIF28AS)

 $\bigcirc \colon \mathsf{Compatible}, \ \underline{\wedge} \colon \mathsf{Partially \ changed}, \ \times \colon \mathsf{Incompatible}$

Specifi	cations	AJ35PTF-28AS input specifications	SC-A0JQIF28AS input specifications	Compatibility	Precautions for replacement
Number of in	put points	16 points	16 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	100 to 120VAC, 50/60Hz	100 to 120VAC, 50/60Hz	0	
Rated input c	urrent	10mA (100VAC 60Hz)	10mA (100VAC 60Hz)	0	
Operating vol	tage range	85 to 132VAC (50/60Hz ±5%)	85 to 132VAC (50/60Hz ±5%)	0	
Maximum nui		100% (16 points/common) simultaneously ON	100% (16 points/common) simultaneously ON	0	
ON voltage/C	N current	80VAC or more/6mA or more	80VAC or more/6mA or more	0	
OFF voltage/	OFF current	40VAC or less/4mA or less	26VAC or less/1.7mA or less	Δ	The OFF voltage/OFF current have been reduced.*1
Inrush curren	t	Max. 300mA, within 0.3ms (132VAC)	Max. 300mA, within 0.3ms (132VAC)	0	
Input resistan	ice	Approx. $10k\Omega$ (60Hz), Approx. $12k\Omega$ (50Hz)	Approx. $10k\Omega$ (60Hz), Approx. $12k\Omega$ (50Hz)	0	
Response	OFF → ON	15ms or less (6ms TYP.)	14ms or less (11ms TYP.)	Δ	In combination with CC-Link input module: 15ms or less (12ms TYP.)*2
time	ON → OFF	25ms or less (16ms TYP.)	19ms or less (13ms TYP.)	Δ	In combination with CC-Link input module: 21.5ms or less (14ms TYP.)*2
Common terminal arrangement		16 points/common (Common terminal: TB17)	16 points/common (Common terminal: TB17)	0	
Operation ind	lication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link input module.

 \bigcirc : Compatible, $\, \underline{\wedge} \, :$ Partially changed, $\, \times :$ Incompatible

Specific	ations	AJ35PTF-28AS output specifications	SC-A0JQIF28AS output specifications	Compatibility	Precautions for replacement
Number of input points		12 points	12 points	0	
Insulation met	nod	Photocoupler	Photocoupler	0	
Rated load vol	tage	100 to 240VAC, 40 to 70Hz	100 to 240VAC, 47 to 63Hz	Δ	The available frequency range is small.
Maximum load	voltage	264VAC	264VAC	0	
Maximum load	current	0.6A/point, 2.4A/common	0.6A/point, 2.4A/common	0	
Minimum load	voltage/	24VAC 100mA,	24VAC 100mA,	0	
current		100V/240VAC 10mA,	100V/240VAC 10mA,		
Maximum inrus	sh current	20A 10ms or less, 8A 100ms or less	20A 10ms or less, 8A 100ms or less	0	
Leakage curre	nt at OFF	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	0	
Maximum voltage drop at ON		1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	0	
Temperature d	erating	None	Refer to the derating chart.*3	Δ	Use the module within the range in the derating chart.
Response	OFF → ON	1ms or less	1ms or less	Δ	In combination with CC-Link output module: 2ms or less*4
time	ON → OFF	0.5 cycle + 1ms or less	0.5 cycle + 1ms or less	Δ	In combination with CC-Link output module: 0.5 cycle + 2ms or less*4
Fuse		High speed type fuse 3.2A (one fuse/common) HP-32	None	×	Install a fuse externally from the module (one fuse/common). (A fuse and fuse holder are included.)
Fuse blown inc	dication	Available (When a fuse is blown, the LED turns on and a signal is output to the CPU.)	-	-	
Surge	CR absorber	0.022 μ F + 47 Ω	0.015 μ F + 22 Ω	0	
suppressor	Varistor	None	Varistor voltage (400 to 540V)	0	
Common term arrangement	inal	8 points/common (Common terminal: TB26) 4 points/common (Common terminal: TB33)	8 points/common (Common terminal: TB26) 4 points/common (Common terminal: TB33)	0	
Operation indic	cation	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link output module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specifications		AJ35PTF-28AS	SC-A0JQIF28AS	Compatibility	Precautions for replacement
External power supply (Module	Voltage	15.6 to 31.2VDC	24VDC ±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for CC-Link I/O module operation, connecting a module power supply to TB35 and TB36 of the interface module is required.
power supply)	Current	140mA	290mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External cor method	nnection	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable v	vire size	0.75 to 2mm ² (Applicable tightening torque 69N - cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable s	solderless	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of o	occupied	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		0.65kg	0.43kg	Δ	Also consider the weight of the fixed stand of programmable controller.*5
External dim	nensions	250(H) × 132(W) × 41(D) mm	182(H) × 132(W) × 41(D) mm* ⁶	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

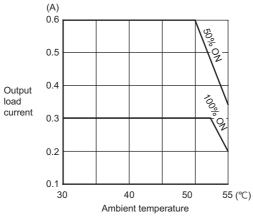
*1 Check that the specifications of leakage current of the used sensor and switches are equal to or less than the OFF current value.

If leakage current is equal to or more than the OFF current specifications, take measures against it with referring to "Input Module Troubleshooting" in the following handbook.

(Handbook for replacement)

Renewal tool for A0J2 series transition from MELSEC-A0J2(H) series to renewal system using renewal tool (Refer to Appendix 2.6.)

- *2 A value when the AJ65SBTCF1-32D is used.
- *3 Temperature derating chart



- *4 A value when the AJ65SBTCF1-32T is used.
- *5 The weight of the fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *6 The external dimensions of the SC-A0JQIF28AS do not include those of its projection.

(8) Specifications comparison between AJ35PTF-28DR and interface module (SC-A0JQIF28DR)

 \bigcirc : Compatible, \triangle : Partially changed, x: Incompatible

		A ISERTE SORR innut	SC AG IOIE39DD imput	1	
Specifications		AJ35PTF-28DR input specifications	SC-A0JQIF28DR input specifications	Compatibility	Precautions for replacement
Number of in	out points	16 points	16 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	12VDC/24VDC	12VDC/24VDC	0	
Rated input o	urrent	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
Operating vol	tage range	10.2 to 31.2VDC (Ripple ratio within 5%)	10.2 to 26.4VDC (Ripple ratio within 5%)	Δ	The operating voltage range differs.
Maximum nui		100% (16 points/common) simultaneously ON	100% (16 points/common) simultaneously ON	0	
ON voltage/C	N current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage/OFF current		6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resistan	се	Approx. 3.4kΩ	Approx. 3.3kΩ	0	
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
time	ON→OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
Common terr	ninal	16 points/common (Common terminal: TB17)	16 points/common (Common terminal: TB17)	0	
Operation inc	lication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with CC-Link input module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

				O. Compatible	, A: Partially changed, x: Incompatible
Specifi	ications	AJ35PTF-28DR output specifications	SC-A0JQIF28DR output specifications	Compatibility	Precautions for replacement
Number of ou	tput points	12 points	12 points	0	
Insulation method		Photocoupler	Relay isolation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated switchin	ng voltage/	24VDC 2A (Resistance load)/ point 240VAC 2A (COS ϕ =1)/point	24VDC 2A (Resistance load)/ point 240VAC 2A (COS ϕ =1)/point	0	
Current		5A/common	5A/common		
Minimum swit	ching load	5VDC 1mA	5VDC 1mA	0	
Maximum swi	tching voltage	264VAC 125VDC	264VAC 125VDC	0	
Maximum swi	tching	3600 times/hr	3600 times/hr	0	
Mechanical lif	e e	20 million times or more	20 million times or more	0	
		Rated switching voltage/current load 200,000 times or more	Rated switching voltage/current load 200,000 times or more	0	
Electrical life		200 VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	200 VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 0.75A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	0	
Response	OFF→ON	10ms or less	9ms or less	Δ	In combination with CC-Link output module: 9.5ms or less*2
time	ON→OFF	12ms or less	11ms or less	Δ	In combination with CC-Link output module: 12.5ms or less*2
External supply	Voltage	24VDC±10% Ripple voltage 4Vp-p or less	24VDC±10% Ripple voltage 4Vp-p or less	0	
power (Relay coil driving power)	Current	110mA (24VDC All points are ON.)	125mA (24VDC All points are ON.)	Δ	Review current capacity since current consumption is increased.
Surge suppre	ssor	None	None	0	
Fuse rating		None	None	0	
Fuse blown in	dication	_		0	
Relay socket		None	None	0	
Common terminal arrangement		8 points/common (Common terminal: TB26) 3 points/common (Common terminal: TB31) Independent contact (Common terminal: TB33)	8 points/common (Common terminal: TB26) 3 points/common (Common terminal: TB31) Independent contact (Common terminal: TB33)	0	
Operation ind	ication	Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specifi	ications	AJ35PTF-28DR	SC-A0JQIF28DR	Compatibility	Precautions for replacement
External supply power (Module power	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB27 or TB36 is required.
supply)	Current	120mA	100mA	0	
External conn	ection method	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable wir	re size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable sol	Iderless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
	cupied stations ccupied points)	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		0.76kg	0.42kg	Δ	Also consider the weight of fixed stand of programmable controller.*3
External dime	ensions	250(H) × 132(W) × 41(D) mm*4	182(H) × 132(W) × 41(D) mm*5	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32D.
- *2: A value when using the AJ65SBTCF1-32T.
- *3: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4: External dimensions of the AJ35PTF-28DR does not include dimensions of the optical fiber cable connector.
- *5: The external dimensions of the SC-A0JQIF28DR do not include those of its projection.

(9) Specifications comparison between AJ35PTF-28DS and interface module (SC-A0JQIF28DS)

 $\bigcirc \hbox{: Compatible, \triangle: Partially changed, \times: Incompatible}$

Specifi	ications	AJ35PTF-28DS input specifications	SC-A0JQIF28DS input specifications	Compatibility	Precautions for replacement
Number of input points		16 points	16 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated input v	roltage	12/24VDC	12/24VDC	0	
Rated input c	urrent	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
Operating vol	Itage range	10.2 to 26.4VDC (ripple ratio within 5%)	10.2 to 26.4VDC (ripple ratio within 5%)	0	
Maximum nui		100% (16 points/common) simultaneously ON	100% (16 points/common) simultaneously ON	0	
ON voltage/C	N current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage/	OFF current	6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resistan	nce	Approx. 3.4kΩ	Approx. 3.3kΩ	0	-
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF → ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6ms or less (2ms TYP.)*1
time	ON → OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6ms or less (2ms TYP.)*1
Common tern arrangement		16 points/common (Common terminal: TB17)	16 points/common (Common terminal: TB17)	0	
Operation ind	lication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link input module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

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Specific	ations	AJ35PTF-28DS output specifications	SC-A0JQIF28DS output specifications	Compatibility	Precautions for replacement
Number of inp	ut points	12 points	12 points	0	
Insulation met	hod	Photocoupler	Photocoupler	0	
Rated load vol	tage	100 to 240VAC, 40 to 70Hz	100 to 240VAC, 47 to 63Hz	0	
Maximum load	l voltage	264VAC	264VAC	0	
Maximum load	current	0.6A/point, 2.4A/common	0.6A/point, 2.4A/common	0	
Minimum load	voltage/	24VAC 100mA,	24VAC 100mA,		
current		100V/240VAC 10mA,	100V/240VAC 10mA,	0	
Maximum inru	sh current	20A 10ms or less, 8A 100ms or less	20A 10ms or less, 8A 100ms or less	0	
Leakage curre	nt at OFF	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	0	
Maximum volta	age drop at	1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	0	
Temperature d	lerating	None	None	_	
Response	OFF → ON	1ms or less	1ms or less	Δ	In combination with CC-Link output module: 2ms or less*2
time	ON → OFF	0.5 cycle + 1ms or less	0.5 cycle + 1ms or less	Δ	In combination with CC-Link output module: 0.5 cycle + 2ms or less*2
Fuse		High speed type fuse 3.2A (one fuse/common) HP-32	None	×	Install a fuse externally from the module (one fuse/common). (A fuse and fuse holder are included.)
Fuse blown inc	dication	Available (When a fuse is blown, the LED turns on and a signal is output to the CPU.)	-	-	
Surge	CR absorber	0.022 μ F + +47 Ω	0.015 μ F + +22 Ω	0	
suppressor	Varistor	None	Varistor voltage (400 to 540V)	0	
Common term arrangement	inal	8 points/common (Common terminal: TB26) 4 points/common (Common terminal: TB33)	8 points/common (Common terminal: TB26) 4 points/common (Common terminal: TB33)	0	
Operation indi	cation	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link output module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specifications		AJ35PTF-28DS	SC-A0JQIF28DS	Compatibility	Precautions for replacement
External power Voltage supply (Module	Voltage	15.6 to 31.2VDC	24VDC ±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for CC-Link I/O module operation, connecting a module power supply to TB35 and TB36 of the interface module is required.
power supply)	Current	150mA	285mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External cor method	nnection	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable w	vire size	0.75 to 2mm ² (Applicable tightening torque 69N• cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable s terminal	solderless	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of c	occupied	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		0.76kg	0.41kg	Δ	Also consider the weight of the fixed stand of programmable controller.*3
External dimensions		250(H) × 132(W) × 41(D) mm	182(H) × 132(W) × 41(D) mm* ⁴	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

^{*1} A value when the AJ65SBTCF1-32D is used.

^{*2} A value when the AJ65SBTCF1-32T is used.

^{*3} The weight of the fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.

^{*4} The external dimensions of the SC-A0JQIF28DS do not include those of its projection.

(10) Specifications comparison between AJ35PTF-28DT and interface module (SC-A0JQIF28DT)

 $\bigcirc : \mathsf{Compatible}, \ \underline{\wedge} : \mathsf{Partially \ changed}, \ \times : \mathsf{Incompatible}$

Specifi	cations	AJ35PTF-28DT input specifications	SC-A0JQIF28DT input specifications	Compatibility	Precautions for replacement
Number of input points		16 points	16 points	0	
Insulation met	thod	Photocoupler	Photocoupler	0	
Rated input vo	oltage	12VDC/24VDC	12VDC/24VDC	0	
Rated input cu	urrent	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
Operating volt	tage range	10.2 to 31.2VDC (Ripple ratio within 5%)	10.2 to 26.4VDC (Ripple ratio within 5%)	Δ	The operating voltage range differs.
Maximum nun simultaneous		100% (16 points/common) simultaneously ON	100% (16 points/common) simultaneously ON	0	
ON voltage/O	N current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage/0	OFF current	6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resistan	се	Approx. 3.4kΩ	Approx. 3.3kΩ	0	
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
time	ON→OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
Common term arrangement	ninal	16 points/common (Common terminal: TB17)	16 points/common (Common terminal: TB17)	0	
Operation indi	ication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with CC-Link input module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

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Specif	ications	AJ35PTF-28DT output specifications	SC-A0JQIF28DT output specifications	Compatibility	Precautions for replacement	
Number of ou	tput points	12 points	12 points	0		
Insulation me	thod	Photocoupler	Photocoupler	0		
Rated load vo	oltage	12VDC/24VDC	12VDC/24VDC	0		
Operating loa	d voltage	10.2 to 31.2VDC	10.2 to 30VDC	Δ	The operating load voltage range differs.	
Maximum loa	d current	0.5A/point, 3.2A/common	0.5A/point, 4A/common	0		
Maximum inru	ush current	4A 10ms or less	4A 10ms or less	0		
Leakage curr	ent at OFF	0.1mA or less	0.1mA or less	0		
Maximum vol	tage drop at	0.9VDC (TYP.) 0.5A 1.5VDC (MAX.) 0.5A	0.5VDC (TYP.) 0.5A 0.8VDC (MAX.) 0.5A	0		
Output metho	d	Sink type	Sink type	0		
OFF-	OFF→ON	2ms or less	1ms or less	Δ	In combination with CC-Link output module: 1.5ms or less*2	
time	ON→OFF	2ms or less (Resistance load)	1ms or less (Resistance load)	Δ	In combination with CC-Link output module: 2.5ms or less (Resistance load)*2	
External	Voltage	12VDC/24VDC (10.2 to 31.2VDC)	12VDC/24VDC (10.2 to 30VDC)	Δ	The operating voltage range differs.	
supply	Current	23mA (TYP. 24VDC 8 points/common ON)	5mA (TYP. 24VDC 8 points/common ON)	0		
Surge suppre	ssor	Varistor (52 to 62V)	Varistor (50.4 to 61.6V)	0		
Common terminal arrangement		8 points/common (Common terminal: TB26) 4 points/common (Common terminal: TB33)	8 points/common (Common terminal: TB26) 4 points/common (Common terminal: TB33)	0		
Operation indication		Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.	
Fuse		None	None	0		
Fuse blown in	ndication	None	None	0		

○: Compatible, △: Partially changed, ×: Incompatible

Specifications		AJ35PTF-28DT	SC-A0JQIF28DT	Compatibility	Precautions for replacement
power (Module power	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB35 or TB36 is required.
	Current	110mA	130mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External conn	ection method	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable wir	re size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable sol	Iderless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
	cupied stations ccupied points)	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		0.65kg	0.36kg	Δ	Also consider the weight of fixed stand of programmable controller.*3
External dime	ensions	250(H) × 132(W) × 41(D)mm*4	182(H) × 132(W) × 41(D)mm*5	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32D.
- *2: A value when using the AJ65SBTCF1-32T.
- *3: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4: External dimensions of the AJ35PTF-28DT does not include dimensions of the optical fiber cable connector.
- *5: The external dimensions of the SC-A0JQIF28DT do not include those of its projection.

(11) Specifications comparison between AJ35PTF-56AR and interface module (SC-A0JQIF56AR)

 $\bigcirc \hbox{: Compatible, \triangle: Partially changed, \times: Incompatible}$

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Specifications		AJ35PTF-56AR input specifications	SC-A0JQIF56AR input specifications	Compatibility	Precautions for replacement
Number of inp	out points	32 points	32 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	100 to 120VAC 50/60Hz	100 to 120VAC 50/60Hz	0	
Rated input c	urrent	10mA (100VAC 60Hz)	10mA (100VAC 60Hz)	0	
Operating vol	tage range	85 to 132VAC (50/60Hz±5%)	85 to 132VAC (50/60Hz±5%)	0	
Maximum nur simultaneous		100% (16 points/common) simultaneously ON	60% (10 points/common) simultaneously ON	Δ	The maximum number of simultaneous input points differs.
ON voltage/O	N current	80VAC or more/6mA or more	80VAC or more/6mA or more	0	
OFF voltage/	OFF current	40VAC or less/4mA or less	26VAC or less/1.7mA or less	Δ	OFF voltage/OFF current is smaller.*1
Inrush curren	t	Maximum 300mA, Within 0.3ms (132VAC)	Maximum 300mA, Within 0.3ms (132VAC)	0	
Input impeda	nce	Approx. $10k\Omega$ (60Hz), Approx. $12k\Omega$ (50Hz)	Approx. $10k\Omega$ (60Hz), Approx. $12k\Omega$ (50Hz)	0	
Response	OFF→ON	15ms or less (6ms TYP.)	14ms or less (11ms TYP.)	Δ	In combination with CC-Link input module: 15.5ms or less (12ms TYP.)*2
time	ON→OFF	25ms or less (16ms TYP.)	19ms or less (13ms TYP.)	Δ	In combination with CC-Link input module: 21.5ms or less (14ms TYP.)*2
Common terminal		16 points/common	16 points/common	0	
arrangement		(Common terminal: TB17, TB34)	(Common terminal: TB17, TB34)	0	
Operation ind	ication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with CC-Link input module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specif	ications	AJ35PTF-56AR output specifications	SC-A0JQIF56AR output specifications	Compatibility	Precautions for replacement
Number of ou	tput points	24 points	24 points	0	
Insulation method		Photocoupler	Relay isolation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated switchi current	ng voltage/	24VDC 2A (Resistance load)/ point 240VAC 2A (COS ϕ =1)/point 5A/common	24VDC 2A (Resistance load)/ point 240VAC 2A (COS ϕ =1)/point 5A/common	0	
Minimum switching load		5VDC 1mA	5VDC 1mA	0	
	tching voltage	264VAC 125VDC	264VAC 125VDC	0	
Maximum swi		3600 times/hr	3600 times/hr	0	
Mechanical lif	e	20 million times or more	20 million times or more	0	
		Rated switching voltage/current load 200,000 times or more	Rated switching voltage/current load 200,000 times or more	0	
Electrical life		200VAC 1.5A, 240VAC 1A (COS φ = 0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS φ = 0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 0.75A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	0	
Response	OFF→ON	10ms or less	9ms or less	Δ	In combination with CC-Link output module: 9.5ms or less ⁺³
time	ON→OFF	12ms or less	11ms or less	Δ	In combination with CC-Link output module: 12.5ms or less *3
External supply	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	24VDC±10% Ripple voltage 4Vp-p or less	0	
power (Relay coil driving power)	Current	220mA (24VDC All points are ON.)	230mA (24VDC All points are ON.)	Δ	Review current capacity since current consumption is increased.
Surge suppre	ssor	None	None	0	
Fuse rating		None	None	0	
Fuse blown indication		-	_	0	
Relay socket		None	None	0	
Common term arrangement	ninal	8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation ind	ication	Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.

O: Compatible, △: Partially changed, ×: Incompatible

Specif	ications	AJ35PTF-56AR	SC-A0JQIF56AR	Compatibility	Precautions for replacement
External supply power (Module	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB35 or TB36 is required.
power supply)	supply) Current 150mA 210mA \triangle	The current consumption increases. The current capacity needs to be reconsidered.			
External conn	ection method	36-point terminal block connector (M3 × 6 screws) 2 pieces	36-point terminal block connector (M3 × 6 screws) 2 pieces	0	
Applicable wil	re size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable so terminal	Iderless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
	cupied stations ccupied points)	8 stations (8 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		1.20kg	0.66kg	Δ	Also consider the weight of fixed stand of programmable controller.*4
External dime	nsions	250(H) × 190(W) × 41(D)mm*5	182(H) × 190(W) × 41(D)mm*6	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

*1: Check that the specifications of leakage current of the used sensor and switches are equal to or less than the OFF current value.

If leakage current is equal to or more than the OFF current specifications, take measures against it with referring to "Input Module Troubleshooting" in the following handbook.

(Handbook for replacement)

Renewal tool for A0J2 series Transition from MELSEC-A0J2(H) series to renewal system using renewal tool (refer to Appendix 2.5.)

- *2: A value when using the AJ65SBTCF1-32D.
- *3: A value when using the AJ65SBTCF1-32T.
- *4: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *5: External dimensions of the AJ35PTF-56AR does not include dimensions of the optical fiber cable connector.
- *6: The external dimensions of the SC-A0JQIF56AR do not include those of its projection.

(12) Specifications comparison between AJ35PTF-56AS and interface module (SC-A0JQIF56AS)

 $\bigcirc \hbox{: Compatible, \triangle: Partially changed, \times: Incompatible}$

Specifi	cations	AJ35PTF-56AS input specifications	SC-A0JQIF56AS input specifications	Compatibility	Precautions for replacement
Number of in	put points	32 points	32 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	roltage	100 to 120VAC, 50/60Hz	100 to 120VAC, 50/60Hz	0	
Rated input of	current	10mA (100VAC 60Hz)	10mA (100VAC 60Hz)	0	
Operating vo	ltage range	85 to 132VAC (50/60Hz ±5%)	85 to 132VAC (50/60Hz ±5%)	0	
Maximum nui		60% (10 points/common) simultaneously ON	60% (10 points/common) simultaneously ON	0	
ON voltage/C	N current	80VAC or more/6mA or more	80VAC or more/6mA or more	0	
OFF voltage/	OFF current	40VAC or less/4mA or less	26VAC or less/1.7mA or less	Δ	The OFF voltage/OFF current have been reduced.*1
Inrush curren	t	Max. 300mA, within 0.3ms (132VAC)	Max. 300mA, within 0.3ms (132VAC)	0	
Input resistar	nce	Approx. $10k\Omega$ (60Hz), Approx. $12k\Omega$ (50Hz)	Approx. 10kΩ (60Hz), Approx. 12kΩ (50Hz)	0	
Response	OFF → ON	15ms or less (6ms TYP.)	14ms or less (11ms TYP.)	Δ	In combination with CC-Link input module: 15ms or less (12ms TYP.)*2
time	ON → OFF	35ms or less (16ms TYP.)	19ms or less (13ms TYP.)	Δ	In combination with CC-Link input module: 10ms or less (6ms TYP.)*2
Common terminal arrangement		16 points/common (Common terminal: TB17, TB34)	16 points/common (Common terminal: TB17, TB34)	0	
Operation inc	lication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link input module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

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Specific	cations	AJ35PTF-56AS output specifications	SC-A0JQIF56AS output specifications	Compatibility	Precautions for replacement
Number of inp	ut points	24 points	24 points	0	
Insulation met	hod	Photocoupler	Photocoupler	0	
Rated load vo	Itage	100 to 240VAC, 40 to 70Hz	100 to 240VAC, 47 to 63Hz	Δ	The available frequency range is small.
Maximum load	d voltage	264VAC	264VAC	0	
Maximum load	d current	0.6A/point, 2.4A/common	0.6A/point, 2.4A/common	0	
Minimum load	voltage/	24VAC 100mA,	24VAC 100mA,		
current		100V/240VAC 10mA,	100V/240VAC 10mA,	0	
Maximum inru	sh current	20A 10ms or less, 8A 100ms or less	20A 10ms or less, 8A 100ms or less	0	
Leakage curre	ent at OFF	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	0	
Maximum volta	age drop at	1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	0	
Temperature of	derating	None	Refer to the derating chart.*3	Δ	Use the module within the range in the derating chart.
Response	OFF → ON	1ms or less	1ms or less	Δ	In combination with CC-Link output module: 2ms or less*4
time	ON → OFF	0.5 cycle + 1ms or less	0.5 cycle + 1ms or less	Δ	In combination with CC-Link output module: 0.5 cycle + 2ms or less*4
Fuse		High speed type fuse 3.2A (one fuse/common) HP-32	None	×	Install a fuse externally from the module (one fuse/common). (A fuse and fuse holder are included.)
Fuse blown in	dication	Available (When a fuse is blown, the LED turns on and a signal is output to the CPU.)	-	-	
Surge suppressor	CR absorber	0.022 μ F + +47 Ω	0.015 μ F + +22 Ω	0	
Juppicssoi	Varistor	None	Varistor voltage (400 to 540V)	0	
Common term arrangement	inal	8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation indi	cation	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link output module.

O: Compatible, △: Partially changed, ×: Incompatible

Speci	fications	AJ35PTF-56AS	SC-A0JQIF56AS	Compatibility	Precautions for replacement
External power supply (Module	Voltage	15.6 to 31.2VDC	24VDC ±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for CC-Link I/O module operation, connecting a module power supply to TB35 and TB36 of the interface module is required.
power supply)	Current	230mA	580mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External cor method	nection	Two 36-point terminal block connectors (M3 × 6 screws)	Two 36-point terminal block connectors (M3 × 6 screws)	0	
Applicable w	vire size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable s terminal	olderless	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of c	ccupied	8 stations (8 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		1.10kg	0.66kg	Δ	Also consider the weight of the fixed stand of programmable controller.*5
External dim	ensions	250(H) × 190(W) × 41(D) mm	182(H) × 190(W) × 41(D) mm*6	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

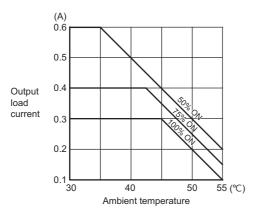
*1 Check that the specifications of leakage current of the used sensor and switches are equal to or less than the OFF current

If leakage current is equal to or more than the OFF current specifications, take measures against it with referring to "Input Module Troubleshooting" in the following handbook.

(Handbook for replacement)

Renewal tool for A0J2 series transition from MELSEC-A0J2(H) series to renewal system using renewal tool (Refer to Appendix 2.6.)

- *2 A value when the AJ65SBTCF1-32D is used.
- *3 Temperature derating chart



- *4 A value when the AJ65SBTCF1-32T is used.
- *5 The weight of the fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *6 The external dimensions of the SC-A0JQIF56AS do not include those of its projection.

(13) Specifications comparison between AJ35PTF-56DR and interface module (SC-A0JQIF56DR)

 $\bigcirc \colon \mathsf{Compatible}, \ \underline{\wedge} \colon \mathsf{Partially \ changed}, \ \times \colon \mathsf{Incompatible}$

Specif	ications	AJ35PTF-56DR input specifications	SC-A0JQIF56DR input specifications	Compatibility	Precautions for replacement
Number of inp	out points	32 points	32 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	12VDC/24VDC	12VDC/24VDC	0	
Rated input co	urrent	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
Operating vol	tage range	10.2 to 31.2VDC (Ripple ratio within 5%)	10.2 to 26.4VDC (Ripple ratio within 5%)	Δ	The operating voltage range differs.
Maximum nur simultaneous		60% (10 points/common) simultaneously ON	60% (10 points/common) simultaneously ON	0	
ON voltage/O	N current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage/0	OFF current	6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resistan	ce	Approx. 3.4kΩ	Approx. 3.3kΩ	0	
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
time	ON→OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
Common terminal arrangement		16 points/common (Common terminal: TB17, TB34)	16 points/common (Common terminal: TB17, TB34)	0	
Operation ind	ication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with CC-Link input module.

 $\bigcirc : \mathsf{Compatible}, \ \underline{\wedge} : \mathsf{Partially \ changed}, \ \times : \mathsf{Incompatible}$

Specif	ications	AJ35PTF-56DR output specifications	SC-A0JQIF56DR output specifications	Compatibility	Precautions for replacement
Number of ou	tput points	24 points	24 points	0	
Insulation me	thod	Photocoupler	Relay isolation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated switchi	ng voltage/	24VDC 2A (Resistance load)/point	24VDC 2A (Resistance load)/point		
current		240VAC 2A (COS φ =1)/point 5A/common	240VAC 2A (COS φ =1)/point 5A/common	0	
Minimum swit	tching load	5VDC 1mA	5VDC 1mA	0	
Maximum swi	itching voltage	264VAC 125VDC	264VAC 125VDC	0	
Maximum swi	itching	3600 times/hr	3600 times/hr	0	
Mechanical lif	fe	20 million times or more	20 million times or more	0	
		Rated switching voltage/current	Rated switching voltage/current		
		load 200,000 times or more	load 200,000 times or more	0	
Electrical life		200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or	$200 \text{VAC } 1.5 \text{A, } 240 \text{VAC } 1 \text{A}$ (COS ϕ =0.7) 200,000 times or more 200 VAC 0.75 A, 240 VAC 0.5 A (COS ϕ =0.35) 200,000 times or more 24 VDC 1A, 100 VDC 0.1 A (L/R=7ms) 200,000 times or	0	
Response	OFF→ON	more 10ms or less	more 9ms or less	Δ	In combination with CC-Link output module: 9.5ms or less*2
time	ON→OFF	12ms or less	11ms or less	Δ	In combination with CC-Link output module: 12.5ms or less*2
External supply	Voltage	24VDC±10% Ripple voltage 4Vp-p or less	24VDC±10% Ripple voltage 4Vp-p or less	0	
power (Relay coil driving power)	Current	220mA (24VDC All points are ON.)	230mA (24VDC All points are ON.)	Δ	Review current capacity since current consumption is increased.
Surge suppre	ssor	None	None	0	
Fuse rating		None	None	0	
Fuse blown indication		-	=	0	
Relay socket		None	None	0	
Common tern arrangement	ninal	8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation ind	lication	Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specifi	ications	AJ35PTF-56DR	SC-A0JQIF56DR	Compatibility	Precautions for replacement
External supply power (Module	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB35 or TB36 is required.
power supply)	Current	150mA	200mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External conn	ection method	36-point terminal block connector (M3 × 6 screws) 2 pieces	36-point terminal block connector (M3 × 6 screws) 2 pieces	0	
Applicable wir	e size	0.75 to 2mm ² (Applicable tightening torque 69N• cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable sol terminal	derless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
	cupied stations ccupied points)	8 stations (8 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		1.16kg	0.62kg	Δ	Also consider the weight of fixed stand of programmable controller.*3
External dime	nsions	250(H) × 190(W) × 41(D)mm*4	182(H) × 190(W) × 41(D)mm*5	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32D.
- *2: A value when using the AJ65SBTCF1-32T.
- *3: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4: External dimensions of the AJ35PTF-56DR does not include dimensions of the optical fiber cable connector.
- *5: The external dimensions of the SC-A0JQIF56DR do not include those of its projection.

(14) Specifications comparison between AJ35PTF-56DS and interface module (SC-A0JQIF56DS)

 $\bigcirc : \mathsf{Compatible}, \ \triangle : \mathsf{Partially changed}, \ \times \colon \mathsf{Incompatible}$

Specifi	cations	AJ35PTF-56DS input specifications	SC-A0JQIF56DS input specifications	Compatibility	Precautions for replacement
Number of in	put points	32 points	32 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	12/24VDC	12/24VDC	0	
Rated input c	urrent	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
Operating vol	ltage range	10.2 to 26.4VDC (ripple ratio within 5%)	10.2 to 26.4VDC (ripple ratio within 5%)	0	
Maximum nui simultaneous		60% (10 points/common) simultaneously ON	60% (10 points/common) simultaneously ON	0	
ON voltage/C	N current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage/	OFF current	6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resistan	ice	Approx. 3.4kΩ	Approx. 3.3kΩ	0	
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF → ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2ms TYP.)*1
time	ON → OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2ms TYP.)*1
Common term		16 points/common (Common terminal: TB17, TB34)	16 points/common (Common terminal: TB17, TB34)	0	
Operation ind	lication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link input module.

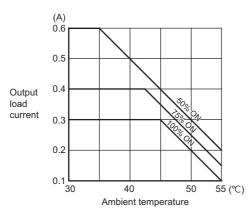
 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specific	cations	AJ35PTF-E56DS output specifications	SC-A0JQIF56DS output specifications	Compatibility	Precautions for replacement
Number of inp	out points	24 points	24 points	0	
Insulation met	thod	Photocoupler	Photocoupler	0	
Rated load vo	ltage	100 to 240VAC, 40 to 70Hz	100 to 240VAC, 47 to 63Hz	Δ	The available frequency range is small.
Maximum load	d voltage	264VAC	264VAC	0	
Maximum load	d current	0.6A/point, 2.4A/common	0.6A/point, 2.4A/common	0	
Minimum load current	l voltage/	24VAC 100mA, 100V/240VAC 10mA,	24VAC 100mA, 100V/240VAC 10mA,	0	
Maximum inru	ish current	20A 10ms or less, 8A 100ms or less	20A 10ms or less, 8A 100ms or less	0	
Leakage curre	ent at OFF	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	1.5mA (120VAC, 60Hz) 3mA (240VAC, 60Hz)	0	
Maximum volt	age drop at	1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	1.5V or less (0.1 to 0.6A) 1.8V or less (0.1A or less) 2.0V or less (10 to 50mA)	0	
Temperature of	derating	None	Refer to the derating chart.*2	Δ	Use the module within the range in the derating chart.
Response	OFF → ON	1ms or less	1ms or less	Δ	In combination with CC-Link output module: 2ms or less*3
time	ON → OFF	0.5 cycle + 1ms or less	0.5 cycle + 1ms or less	Δ	In combination with CC-Link output module: 0.5 cycle + 2ms or less*3
Fuse		High speed type fuse 3.2A (one fuse/common) HP-32	None	×	Install a fuse externally from the module (one fuse/common). (A fuse and fuse holder are included.)
Fuse blown in	dication	Available (When a fuse is blown, the LED turns on and a signal is output to the CPU.)	-	-	
Surge	CR absorber	0.022 μ F + +47 Ω	0.015 μ F + +22 Ω	0	
suppressor	Varistor	None	Varistor voltage (400 to 540V)	0	
Common term arrangement	ninal	8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation indi	ication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with the CC-Link output module.

○: Compatible, △: Partially changed, ×: Incompatible

Specif	ications	AJ35PTF-56DS	SC-A0JQIF56DS	Compatibility	Precautions for replacement
External power supply (Module	Voltage	15.6 to 31.2VDC	$24\text{VDC} \pm 10\%$ Ripple voltage 4Vp-p or less	Δ	To deliver a power for CC-Link I/O module operation, connecting a module power supply to TB35 and TB36 of the interface module is required.
power supply)	Current	230mA	570mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External con method	nection	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable w	ire size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable so terminal	olderless	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of o stations	ccupied	8 stations (8 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		1.06kg	0.61kg	Δ	Also consider the weight of the fixed stand of programmable controller.*4
External dim	ensions	250(H) × 190(W) × 41(D) mm	182(H) × 190(W) × 41(D) mm*5	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1 A value when the AJ65SBTCF1-32D is used.
- *2 Temperature derating chart



- *3 A value when the AJ65SBTCF1-32T is used.
- *4 The weight of the fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *5 The external dimensions of the SC-A0JQIF56DS do not include those of its projection.

(15) Specifications comparison between AJ35PTF-56DT and interface module (SC-A0JQIF56DT)

 $\bigcirc \hbox{: Compatible, \triangle: Partially changed, \times: Incompatible}$

				- '	_ , , , ,
Specif	ications	AJ35PTF-56DT input specifications	SC-A0JQIF56DT input specifications	Compatibility	Precautions for replacement
Number of in	out points	32 points	32 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated input v	oltage	12VDC/24VDC	12VDC/24VDC	0	
Rated input of	urrent	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
Operating vol	tage range	10.2 to 31.2VDC (Ripple ratio within 5%)	10.2 to 26.4VDC (Ripple ratio within 5%)	Δ	The operating voltage range differs.
Maximum nui		60% (10 points/common) simultaneously ON	60% (10 points/common) simultaneously ON	0	
ON voltage/C	N current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage/	OFF current	6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resistan	ce	Approx. 3.4kΩ	Approx. 3.3kΩ	0	
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
time	ON→OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
Common terminal arrangement		16 points/common (Common terminal: TB17, TB34)	16 points/common (Common terminal: TB17, TB34)	0	
Operation inc	lication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with CC-Link input module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specif	ications	AJ35PTF-56DT output specifications	SC-A0JQIF56DT output specifications	Compatibility	Precautions for replacement
Number of ou	tput points	24 points	24 points	0	
Insulation me	thod	Photocoupler	Photocoupler	0	
Rated load vo	oltage	12VDC/24VDC	12VDC/24VDC	0	
Operating loa	d voltage	10.2 to 31.2VDC	10.2 to 30VDC	Δ	The operating load voltage range differs.
Maximum loa	d current	0.5A/point, 3.2A/common	0.5A/point, 4A/common	0	
Maximum inru	ush current	4A 10ms or less	4A 10ms or less	0	
Leakage curr	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vol	tage drop at	0.9VDC (TYP.) 0.5A 1.5VDC (MAX.) 0.5A	0.5VDC (TYP.) 0.5A 0.8VDC (MAX.) 0.5A	0	
Output metho	d	Sink type	Sink type	0	
Response	OFF→ON	2ms or less	1ms or less	Δ	In combination with CC-Link output module: 1.5ms or less*2
time	ON→OFF	2ms or less (Resistance load)	1ms or less (Resistance load)	Δ	In combination with CC-Link output module: 2.5ms or less (Resistance load)*2
External	Voltage	12VDC/24VDC (10.2 to 31.2VDC)	12VDC/24VDC (10.2 to 30VDC)	Δ	The operating voltage range differs.
supply	Current	23mA (TYP. 24VDC 8 points/common ON)	5mA (TYP. 24VDC 8 points/common ON)	0	
Surge suppre	ssor	Varistor (52 to 62V)	Varistor (50.4 to 61.6V)	0	
Common terminal arrangement		8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation indication		Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.
Fuse		None	None	0	
Fuse blown in	ndication	None	None	0	

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specifi	ications	AJ35PTF-56DT	SC-A0JQIF56DT	Compatibility	Precautions for replacement
External supply power (Module	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB35 or TB36 is required.
power supply)	Current	160mA	260mA	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External conn	ection method	36-point terminal block connector (M3 × 6 screws) 2 pieces	36-point terminal block connector (M3 × 6 screws) 2 pieces	0	
Applicable wire size		0.75 to 2mm ² (Applicable tightening torque 69N• cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable sol terminal	derless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
	cupied stations ccupied points)	8 stations (8 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		1.09kg	0.49kg	Δ	Also consider the weight of fixed stand of programmable controller.*3
External dimensions		250(H) × 190(W) × 41(D)mm*4	182(H) × 190(W) × 41(D)mm*5	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32D.
- *2: A value when using the AJ65SBTCF1-32T.
- *3: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4: External dimensions of the AJ35PTF-56DT does not include dimensions of the optical fiber cable connector.
- *5: The external dimensions of the SC-A0JQIF56DT do not include those of its projection.

Appendix 3 Related Manuals

Appendix 3.1 Replacement handbooks

(1) Renewal catalogue

No.	Manual Name	Manual Number	Target	
NO.	Mariuar Name	Manual Number	A (large)	AnS (small)
1	MELSEC-A/QnA Series Transition Guide	L08077E	0	×
2	MELSEC-AnS/QnAS (Small Type) Series Transition Guide	L08236E	×	0

(2) Handbook for transition

No.	Manual Namo	Manual Name Manual Number		arget
NO.		Manual Number	A (large)	AnS (small)
	Transition from MELSEC-A/QnA (Large Type) Series to Q Series	L08043ENG	0	×
1	Handbook (Fundamentals)	2000402140	J	
	Transition from MELSEC-AnS/QnAS (Small Type) Series to Q Series	L08219ENG	×	0
•	Handbook (Fundamentals)	2002102110	,	
	Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series	L08258ENG	×	0
	Handbook (Fundamentals)	2002002.10		
	Transition from MELSEC-A/QnA (Large Type) Series to Q Series	L08046ENG	0	×
	Handbook (Intelligent Function Modules)		_	
2	Transition from MELSEC-AnS/QnAS (Small Type) Series to Q Series	L08220ENG	×	0
	Handbook (Intelligent Function Modules)			
	Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series	L08259ENG	×	0
	Handbook (Intelligent Function Modules)			
	Transition from MELSEC-A/QnA (Large Type), AnS/QnAS (Small	L08048ENG	0	0
3	Type) Series to Q Series Handbook (Network Modules)			
3	Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series	L08260ENG	×	0
	Handbook (Network Modules)			
	Transition from MELSEC-A/QnA (Large Type), AnS/QnAS (Small	L08050ENG	0	0
4	Type) Series to Q Series Handbook (Communications)			
	Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series	L08261ENG	×	0
	Handbook (Communications)			
5	Transition from MELSEC-A0J2H Series to Q Series Handbook	L08060ENG	0	0
6	Transition from MELSECNET/MINI-S3, A2C(I/O) to CC-Link	L08061ENG	0	0
	Handbook		_	
7	Transition from MELSEC-I/OLINK to CC-Link/LT Handbook	L08062ENG	0	0
8	Transition from MELSEC-I/OLINK to AnyWire DB A20 Handbook	L08263ENG	0	0
9	Transition of CPUs in MELSEC Redundant System Handbook	L08117ENG	0	×
	(Transition from Q4ARCPU to QnPRHCPU)			

(3) Renewal examples

N	Manual Name	Manual Number	Target	
NO.	. Manaar Namo	mariaar Namo		AnS (small)
1	MELSEC-A/QnA (Large), AnS/QnAS (Small) Transition Examples	L08121E	0	0

Appendix 3.2 MELSECNET/MINI-S3

No.	Manual Name	Manual Number	Model Code
1	MELSECNET/MINI-S3 Master Module Type AJ71PT32-S3, AJ71T32-S3, A1SJ71PT32-S3, A1SJ71T32-S3 User's Manual	IB-66565	13JE64
2	Type A2CCPU(P21/R21), A2CCPU-DC24V, A2CCPUC24(-PRF), A2CJCPU User's Manual	IB-66545	13JE85
3	A2C, MELSECNET/MINI-S3 I/O MODULE User's Manual	SH-3546	13JL00
4	Analog-Digital Converter Module type A68ADC User's Manual	IB-66247	13J782
5	Digital-Analog Converter Module type A64DAVC/A64DAIC User's Manual	IB-66248	13J783
6	Pt100 input module type A64RD3C/4C User's Manual	IB-66312	13J671
7	High Speed Counting Module type AD61C User's Manual	IB-66246	13J779
8	High speed counter unit type AD62C User's Manual	IB-66400	13JE17
9	RS-232C interface unit type AJ35PTF-R2 User's Manual	IB-66219	13J771
10	Operating boxes type AJ35PT-OPB-M1/AJ35T-OPB-P1 User's Manual	IB-66218	13J770
11	Transmission converter unit type AJ35PTC(PP)-CNV-(SI/GI) User's Manual	IB-66349	13J669

Appendix 3.3 CC-Link

No.	Manual Name	Manual Number	Model Code
1	Open Field Network CC-Link, CC-Link/LT Catalog	L-08038E	-
2	CC-Link and CC-Link/LT Compatible Product databook	L-08039E	-
3	MELSEC-Q CC-Link System Master/Local Module User's Manual	SH-080394E	13JR64
4	MELSEC-L CC-Link System Master/Local Module User's Manual	SH-080895ENG	13JZ41
5	CC-Link System Compact Type Remote I/O Module User's Manual	SH-4007	13JL72
6	CC-Link System Remote I/O Module User's Manual	IB-66728	13J878
7	MELSECNET/MINI-S3 - CC-Link Module Wiring Conversion Adapter User's Manual A6ADP-1MC16D/A6ADP-1MC16T/A6ADP-2MC16D	IB-0800373	13JY20
8	AJ65BT-64AD Analog-Digital Converter Module User's Manual	SH-3614	13J893
9	Analog-Digital Converter Module type AJ65SBT-64AD User's Manual	SH-080106	13JR18
10	Analog-Digital Converter Module Type AJ65SBT2B-64AD User's Manual	SH-080979ENG	13JZ57
11	Analog-Digital Converter Module type AJ65VBTCU-68ADVN/ADIN User's Manual	SH-080401E	13JR65
12	Digital-Analog Conversion Module type AJ65BT-64DAV/DAI User's Manual	SH-3615	13J895
13	Digital-Analog Converter Module type AJ65SBT-62DA User's Manual	SH-080107	13JR19
14	Digital-Analog Converter Module Type AJ65SBT2B-64DA User's Manual	SH-080768ENG	13JZ19
15	Digital-Analog Converter Module type AJ65VBTCU-68DAVN User's Manual	SH-080402E	13JR66
16	Pt 100 Temperature Input Module Type AJ65BT-64RD3/AJ65BT-64RD4 User's Manual	SH-4001	13JL54
17	RTD Input Module Type AJ65SBT2B-64RD3 User's Manual	SH-080770ENG	13JZ21
18	High-Speed Counter Module type AJ65BT-D62/AJ65BT-D62D/ AJ65BT-D62D-S1 User's Manual	IB-66823	13JL45
19	CC-Link System RS-232 Interface Module User's Manual (Nonprocedural Protocol Mode) (AJ65BT-R2N)	SH-080685ENG	13JZ00
20	CC-Link System RS-232 Interface Module User's Manual (MELSOFT Connection Mode) (AJ65BT-R2N)	SH-080687ENG	13JZ01
21	CC-Link System Repeater Optical Repeater Module User's Manual AJ65SBT-RPS/AJ65SBT-RPG	IB-0800089	13JQ85

Appendix 3.4 Products manufactured by Mitsubishi Electric Engineering Co., Ltd.

No.	Catalog name	Catalog Number
1	Mitsubishi Programmable Controller Upgrade Tool	SAN C033E-04Z

Appendix 3.5 Products manufactured by Mitsubishi Electric System & Service Co., Ltd.

No.	Data/catalog	Number
1	Renewal tool for A0J2 series Transition from MELSEC-A0J2(H) series to renewal system using renewal tool	X903071003
2	Replace A0J2(H) system with Q series using existing wiring!	X900707-115

Memo		

WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.

However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place. Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

- (1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.
- (2) Even within the gratis warranty term, repairs shall be charged for in the following cases.
 - 1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
 - 2. Failure caused by unapproved modifications, etc., to the product by the user.
 - 3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
 - 4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
 - 5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
 - 6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
 - 7. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

2. Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not available after production is discontinued.

3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:

- (1) Damages caused by any cause found not to be the responsibility of Mitsubishi.
- (2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.
- (3) Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products.
- (4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.



Mitsubishi Programmable Controller

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ı	Brazil	MITSUBISHI ELECTRIC DO BRASIL COMÉRCIO E SERVIÇOS LTDA. Rua Jussara, 1750-Bloco B Anexo, Jardim Santa Cecilia, CEP 06465-070, Barueri-SP, Brasil	Tel: +55-11-4689-3000 Fax: +55-11-4689-3016
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-	reland	MITSUBISHI ELECTRIC EUROPE B.V. Irish Branch Westgate Business Park, Ballymount, Dublin 24, Ireland	Tel: +353-1-4198800 Fax: +353-1-4198890
ı	taly	MITSUBISHI ELECTRIC EUROPE B.V. Italian Branch Centro Direzionale Colleoni-Palazzo Sirio Viale Colleoni 7, 20864 Agrate Brianza(Milano) Italy	Tel: +39-039-60531 Fax: +39-039-6053-312
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ı	Poland	MITSUBISHI ELECTRIC EUROPE B.V. Polish Branch ul. Krakowska 50, 32-083 Balice, Poland	Tel: +48-12-630-47-00 Fax: +48-12-630-47-01
;	Sweden	MITSUBISHI ELECTRIC EUROPE B.V. (Scandinavia) Fjelievägen 8, SE-22736 Lund, Sweden	Tel: +46-8-625-10-00 Fax: +46-46-39-70-18
ı	Russia	MITSUBISHI ELECTRIC EUROPE B.V. Russian Branch St. Petersburg office Piskarevsky pr. 2, bld 2, lit "Sch", BC "Benua", office 720; 195027 St. Petersburg, Russia	Tel: +7-812-633-3497 Fax: +7-812-633-3499
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ı	Korea	MITSUBISHI ELECTRIC AUTOMATION KOREA CO., LTD. 7F-9F, Gangseo Hangang Xi-tower A, 401, Yangcheon-ro, Gangseo-Gu, Seoul 07528, Korea	Tel: +82-2-3660-9530 Fax: +82-2-3664-8372
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ı	ndia	MITSUBISHI ELECTRIC INDIA PVT. LTD. Pune Branch Emerald House, EL-3, J Block, M.I.D.C., Bhosari, Pune-411026, Maharashtra, India	Tel: +91-20-2710-2000 Fax: +91-20-2710-2100
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Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO 14001 (standards for environmental management systems) and ISO 9001(standards for quality assurance management systems)



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