





MITSUBISHI

Changes for the Retter

CI 1Y4-R1R1 CC-Link/LT Remote I/O Module

Please read this manual thoroughly before starting to use the product and handle the product properly

User's Manual



MODEL	CL1Y4-R1B1
MANUAL Number	JY997D05501E
Date	September 2008

●SAFETY PRECAUTIONS●

(Read these precautions before using)

Please read this manual carefully and pay special attention to safely in order to handle this product properly. Also pay careful attention to safely and handle the module properly

These precautions apply only to Mitsubishi equipment. Refer to the user's manual of the CPLI module to use for a description of the PLC system safety

These ●SAFETY PRECAUTIONS● classify the safety precautions into two categories: "DANGER" and "CAUTION".



Procedures which may lead to a dangerous condition and cause death or serious injury if not carried out properly



Procedures which may lead to a dangerous condition and cause superficial to medium injury, or physical damage only, if not carried out properly.

Depending on circumstances, procedures indicated by **ACAUTION** may also be linked to serious results.

In any case, it is important to follow the directions for usage.

Store this manual in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user.

IDESIGN PRECAUTIONS

♦ DANGER

- Configure an interlock circuit in a sequence program so that the system operates on the safety side using the communication status information. in the event the data link falls into a communication problem. Otherwise, erroneous output and malfunction may result in accidents.
- Remote input and output can not be switched ON or OFF when a problem occurs in the remote I/O modules. Therefore build an external monitoring circuit that will monitor any input signals that could cause a serious accident.

ACAUTION

- Do not have control cables and communication cables bundled with or placed near by the main circuit and/or power cables. Wire those cables at least 100mm(3.94 inch) away from the main circuit and/or power cables. It may cause malfunction due to noise interference.
- Use the module and the flat cable dedicated to CC-Link/LT without applying any force on them. Otherwise, such cables may be broken or fail.

INSTALLATION PRECAUTIONS

∧CAUTION

- Use the module in an environment that meets the general specifications contained in this manual. Using this module in an environment outside the range of the general specifications could result in electric shock, fire, erroneous operation, and damage to or deterioration of the product.
- Do not directly touch the module's conductive parts. Doing so could cause malfunction or trouble in the module.
- Tighten the module securely using DIN rail or installation screws within the specified torque range.
- If the screws are too lose, the module may drop from its installation position, short circuit, or malfunction. If the screws are too tight, the screws may be damaged, which may cause the module to drop from its installation position or short circuit.
- Install the module on a flat surface
- If the mounting surface has concave and/or convex, an excessive force may be applied on the module, and nonconformity may be caused.

IMIDING PRECALITIONS

♦ DANGER

Perform installation and wiring after disconnecting the power supply at all phases externally. If the power is not disconnected at all phases an electric shock or product damage may result.

A CAUTION

- Terminal screws which are not to be used must be tightened always. Otherwise there will be a danger of short circuit against the bare solderless
- Do not perform wiring to an idle terminal "NC" outside the product. The product may be damaged by such external wiring.
- Perform correct wiring for the module according to the product's rated voltage and terminal arrangement. Connecting to a power supply different from rating or miss-wiring may cause fire, product failure or malfunction.
- Fix terminal screws securely within the regulated torque. Loose terminal screws may cause fire and/or malfunction.
- If the terminal screws are too tight, it may cause short circuit or erroneous operation due to damage of the screws.
- Make sure foreign objects do not get inside the module, such as dirt and wire chips. It may cause fire, product failure or malfunction.
- Attach a warning label (hazard symbol 417-IEC-5036) concerning the electric

ISTARTING AND MAINTENANCE PRECAUTIONS

♦ DANGER

- Do not touch the terminals when the power is ON. It may cause an electric shock or malfunction
- Perform cleaning the module or retightening of terminal screws after turning OFF the all external power supply for sure. Failure to do so may cause failure or malfunction of the modules

↑ CAUTION

- Do not disassemble or modify the module. Doing so may cause failure. malfunction, injury, or fire.
- The module case is made of resin; do not drop it or subject it to strong shock. A module damage may result.
- Make sure to switch all phases of the external power supply OFF before installing or removing the module to/from the panel. Failure to do so may cause failure or malfunction of the modules.

IDISPOSAL PRECALITIONS

♦ DANGER

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

ITRANSPORTATION AND MAINTENANCE PRECAUTIONS

- During transportation avoid any impact as the module is a precision instrument. Doing so could cause trouble in the module.
- If is necessary to check the operation of module after transportation, in case of any impact damage.

●Notification of CE marking

This notification does not guarantee that an entire mechanical module produced in accordance with the contents of the notification comply with the following standards. Compliance to EMC standards of the entire mechanical module should be checked by the user / manufacturer. Compliance to LVD standards of the entire mechanical module should be checked by the user / manufacturer

Standards with which this product complies

Type : Programmable Controller (Open Type Equipment) Remote I/O module Models : Products manufactured:

Froducts manufactured: from February 1st, 2003 to April 30th, 2006 are compliant with EN61000-6-4 and EN61131-2:1994+A11:1996+A12:2000 after May 1st, 2006 are compliant with EN61131-2:2003

and may red 2000 are compliant mar 2.10 from 2.2000				
Electromagnetic Compatibility Standards (EMC)	Remark			
EN61000-6-4:2001 Electromagnetic compatibility -Generic standards - Emission standard for Industrial environment	Compliance with all relevant aspects of the standard. (Radiated Emissions and Mains Terminal Voltage Emissions)			
EN61131-2:1994/A11:1996/A12:2000 Programmable controllers -Equipment requirements and tests	Compliance with all relevant aspects of the standard. (RF Immunity, Fast transients, ESD and Damped oscillatory wave)			
EN61131-2: 2003 Programmable controllers -Equipment requirements and tests	Compliance with all relevant aspects of the standard. (Radiated Emissions, Mains Terminal Voltage Emissions, RF immunity, Fast Transients, ESD, Surge, Voltage drops and interruptions, Conducted and Power magnetic fields)			

Low Voltage Standards (LVD)	Remark
	The equipment has been assessed as a component for fitting in a suitable enclosure which meets the requirements of EN61131-2:1994 + A11:1996 + A12:2000, :2003

For more details please contact the local Mitsubishi Flectric sales site Notes For compliance to FMC LVD regulation.

It is necessary to install the CI 1 series module in a shielded metal control panel

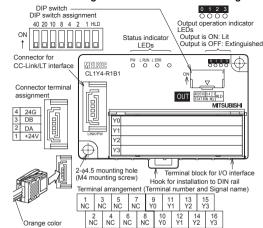
Outline of Product

This product is a terminal block type output module connected to CC-Link/LT.

This product has four output points (relay output).



2. Name and Setting of Each Part and Terminal Arrangement



Name	Description									
	PW	and the property of the proper								
	L RUN	ON w	hile n	ormal	opera	ation i	s exe	cuted.		
Status indicator LED	L ERR.	Flicke When while flicker becon then (Flicke When	ON:When a communication error or DIP switch setting error occurred Flickering at a constant interval: When the setting of the DIP switch was changed while the power was supplied (even while the LED is flickering, the operation continues. The new setting obecomes valid when the power is turned OFF once, hen ON again.) Flickering at a intermittent interval: When a terminal resistor is not attached or when the module or a connection cable is affected by noise						ged LED is setting once,	
Output operation indicator LEDs	ON while the output is ON. Extinguished while the output is OFF. Output operation indicator									
Interface	Connector for CC-Link/LT communication line/module power supply (24G/DB/DA/+24V)									
Terminal block for I/O interface	Terminal block to connect output signals and load power supply									
DIP switch	Set the 10's digit of the station No. using "STATION NO. 10", "STATION NO. 20" and "STATION NO. 40". Set the 1's digit of the station No. using "STATION NO. 1", "STATION NO. 2", "STATION NO. 4" and "STATION NO. 8". Factory default = All bits are OFF. Make sure to set the station No. in the range from 1 to 64. If any station No. outside the range from 1 to 64 is set, it is regarded as an error and the L ERR. LED lights. Example: When setting the station No. to "32", set the DIP switch as follows. Station No. 40 20 10 8 4 2 1 32 OFF ON 10 N OFF OFF ON 10 FF									

	Name	Description				
			Holds the output (when an error has occurred).			
DIP	switch	HLD	ON: Holds the output.			
			OFF: Clears the output.			

3 Installation

The CL1Y4-R1R1 can be installed to DIN rail or directly installed using mounting screws

Fach installation procedure is described below

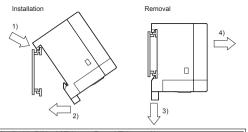
3.1 Installation to DIN rail

Align the upper DIN rail installation groove in the module with the DIN rail 1), and press the module in that status 2).

When removing the module, pull the hook downward for installation to DIN rail 3) then remove the module 4)

DIN rail mounting screw pitch

When installing the module to the DIN rail, tighten the mounting screws at the pitch of 200mm(7.87") or less



Applicable DIN rail ITH35-7.5Fe and TH35-7.5Al

3.2 Direct installation

Screw-tighten the module by attaching M4 screws to the upper and lower mounting holes (two holes in all) provided in the module.

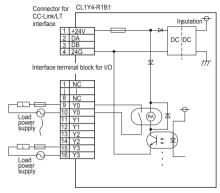
Install the module so that the clearance of 1 to 2mm (0.04" to 0.08") is assured for each module

$M4 \times 0.7$ mm $(0.03") \times 16$ mm $(0.63")$ or more
(Tightening torque range: 78 to 108 N·cm)

4. Wiring

4.1 External wiring

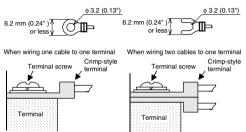
The output terminals of the CL1Y4-R1B1 can be used with either AC or DC load voltage.



Wire nothing to the NC terminal (idle terminal).

4.2 Crimp-style terminal

For I/O wiring, use crimp-style terminals of the following dimensions.



Applicable crimp-	RAV1.25-3 V1.25-3 (manufactured by JST Mfg. Co., Ltd.) 1.25-3 and TG1.25-3 (manufactured by NICHIFU Co., Ltd.)
Annlicable wire size	0.3 to 1.25 mm ²

Use a crimp-style terminal in a status in which no force is applied on the cable.

4.3 Module terminal screw

Tighten the terminal screws (M3 screws) on the terminal block with a tightening torque of 42 to 58 N·cm.

5. Specifications

5.1 General specifications

Item	Specification				
Operating ambient temperature	0 to 55°C (32 to 131°F)				
Storage ambient temperature	-25 to 75°C (-13 to 167°F)				
Operating ambient humidity	5 to 95%RH: Dew condensation shall not be considered.				
Storage ambient humidity	5 to 95%RH:	Dew conden	sation shall no	t be considered.	
	When interm	ittent vibratio	n is present	Number of times of sweep	
	Frequency	Acceleration	Half amplitude		
	10 to 57Hz	-	0.075mm		
Vibration resistance	57 to 150Hz	9.8m/s ²	-	10 times in each of	
resistance	When contin	uous vibratio	n is present	X, Y and Z directions	
	Frequency	Acceleration	Half amplitude	(for 80 min)	
	10 to 57Hz	-	0.035mm		
	57 to 150Hz	4.9m/s ²	-		
Shock resistance	147 m/s², 3 times in each of X, Y and Z directions				
Operating ambience	Corrosive gas shall not be present.				
Operating altitude	2,000m(6561'8") or less (*1)				
Installation location	Inside control panel (*2)				
Overvoltage category	II or less (*3)				
Pollution level	2 or less (*4)				

- *1 The module cannot be used in an environment pressurized above the atmospheric pressure which can be generated around the altitude of 0 m. If the module is used in such an environment, it may fail.
- *2 The module can be used in any environment even outside the control panel as far as the requirements of the ambient operating temperature, the ambient operating humidity, etc. are satisfied.
- *3 This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution network and the machinery within premises. Category II applies to equipment for which electrical power is supplied from fixed facilities.

The surge voltage withstand level for up to the rated voltage of 300V is 2500V.

*4 This index indicates the degree of conductive generating substances in the environment in which the module is used. The degree of contamination 2 indicates that contamination is caused by generation of only non-conductive substances.

In this degree, however, temporary conduction may be caused by accidental condensation.

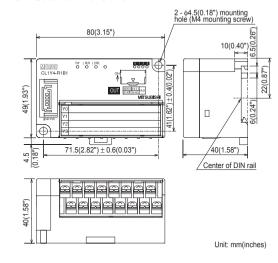
5.2 Output specifications

Item		Specification
Output method		Relay output
Number of outputs		4 points
Insulation meth	od	Mechanical insulation
Rated load volt	age	250V AC/30V DC or less
Max. load current		2A/point 2A/1common
Response	OFF→ON	Approx. 10ms or less
time ON→OFF		Approx. 10ms or less
Common wiring method		1point/1common (Mutually exclusive outputs) (terminal block one-wire type)
Internal protection for outputs		Internal protection circuit none Please connect the fuse in the connected load outside.

5.3 Performance specifications

	Item	Specification		
	Voltage	20.4 to 28.8V DC (24V DC -15% to +20%) Ripple ratio: Within 5%		
Module	Current consumption	65mA (when all points are ON)		
supply	Initial current	70mA		
очрр.,	Max. allowable momentary power failure period	PS1:1ms		
Number occupie	of stations d	4-, 8- or 16-point mode: 1 station		
Noise durability Withstand voltage Isolation resistance		DC type: 500 Vp-p AC type: 1,000 Vp-p Noise width: 1 μs		
		AC type: 1,500V AC for 1 min DC type: 500V DC for 1 min		
		$10\text{M}\Omega$ or more between primary area (external DC terminal) and secondary area (internal circuit) by 500V DC megger		
Protecti	on grade	IP1X		
I/O area method	connection	Connection with terminal block		
Module method	installation	DIN rail installation, mounted by screws of type $M4 \times 0.7$ mm(0.03") \times 16mm(0.63") or larger Can be installed in six directions		
Mass (w	reight)	0.11kg (0.24lbs)		
Contact life		200V AC - 1.5 A, 240V AC - 1 A (COSφ = 0.7): 100,000 times or more		
		200V AC - 1 A, 240V AC - 0.1 A (COSφ = 0.35): 100,000 times or more		
		24V DC - 1 A, 100V DC - 0.1 A (L/R = 7 ms): 100,000 times or more		

6. Outside Dimensions



This manual confers no industrial property rights or any rights of any other kind, no does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur a a result of using the contents noted in this manual.

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi: machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

- For safe use

 This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- · This product has been manufactured under strict quality control. However when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

Country/Re	gion Sales office/Tel	Country/Regi	on Sales office/Tel
U.S.A.	Mitsubishi Electric Automation, Inc. 500 Corporate Woods Parkway, Vernon Hillis, IL 60061 U.S.A. Tel: +1-847-478-2100	Hong Kong	Mitsubishi Electric Automation (Hong Kong) Ltd. 10th Floor., Manulife Tower, 169 Electric Road, North Point, HongKong
Brazil	MELCO-TEC Av. Paulista 1439, conj.74, Bela Vista CEP: 01311-200 Sao Paulo-SP-Brazil Tel: +55-11-3285-1840	China	Tel: +852-2887-8870 Mitsubishi Electric Automation (Shanghai) Ltd. 17F. ChuangXing Financial Center.
Germany	Mitsubishi Electric Europe B.V. German Branch Gothaer Strasse 8, D-40880 Ratingen,		No. 288 West Nanjing Road, Shanghai China 200003 Tel: +86-21-2322-3030
U.K.	Germany Tel: +49-2102-486-0 Mitsubishi Electric Europe B.V. UK	Taiwan	Setsuyo Enterprise Co., Ltd. 6F No.105 Wu Kung 3rd RD, Wu-Ku Hsiang, Taipei Hsien, 248, Taiwan
	Branch Travellers Lane, Hatfield, Hertfordshire., AL10 8XB, U.K. Tel: +44-1707-276100	Korea	Tel: +886-2-2299-2499 Mitsubishi Electric Automation Korea Co. Ltd. 3F, 1480-6, Gayang-Dong, Gangseo-Gu.
Italy	Mitsubishi Electric Europe B.V. Italian Branch		Seoul, 157-200, Korea Tel: +82-2-3660-9552
Spain	VIALE COLLEONI 7-20041 Agrate Brianza (Milano), Italy Tel: +390-39-60531 Mitsubishi Electric Europe B.V. Spanish	Singapore	Mitsubishi Electric Asia Pte, Ltd. 307 Alexandra Road #05-01/02 Mitsubishi Electric Building, Singapore 159943
Орин	Branch Ctra. de Rub 76-80-AC. 420, E-08190 Sant Cugat del Valles (Barcelona), Spain	Thailand	Tel: +65-6470-2460 Mitsubishi Electric Automation (Thailand) Co., Ltd. Bano-Chan Industrial Estate No.111.
France	Tel : +34-93-565-3131 Mitsubishi Electric Europe B.V. French Branch		Soi Šerithai 54, T.Kannayao, A.Kannayao, Bangkok 10230 Tel: +66-2-517-1326
	25, Boulevard des Bouvets, F-92741 Nanterre Cedex, France Tel: +33-1-55685568	India	Messung Systems Pvt. Ltd. Sapphire House EL-3 J-Block MIDC Bhosari Pune 411026 India
Russia	Mitsubishi Electric Europe B.V. Moscow Representative Office 52, bld. 5, Kosimodamianskaya nab, RU-115054, Moscow, Russia	Australia	Tel: +91-20-27102000 Mitsubishi Electric Australia Pty. Ltd. 348 Victoria Road, Rydalmere, N.S.W 2116. Australia
	Tel: +7-495-721-2070	0 11 441	Tel: +61-2-9684-7777
		South Africa	Circuit Breaker Industries Ltd. Private Bag 2016, ZA-1600 Isando,

♣MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN HIMEJI WORKS: 840. CHIYODA CHO. HIMEJI, JAPAN

When exported from Japan, this manual does not require application to the Ministry of Econor Trade and Industry for service transaction permission.

Specifications subject to change without notice

South Africa Tel: +27-11-9282000



Changes for the Better

CL1Y4-R1B1 CC-Link/LT Remote I/O Module

 MODEL
 CL1Y4-R1B1

 MANUAL Number
 JY997D05501E

 Date
 September 2008

Please read this manual thoroughly before starting to use the product and

User's Manual

CC-Link/LT

●SAFETY PRECAUTIONS●

(Read these precautions before using)

Please read this manual carefully and pay special attention to safely in order to handle this product properly. Also pay careful attention to safely and handle the module properly.

These precautions apply only to Mitsubishi equipment. Refer to the user's manual of the CPU module to use for a description of the PLC system safety precautions.

manual of the PCO induction to use for a description of the PCC system salety precautions. These ●SAFETY PRECAUTIONS● classify the safety precautions into two categories: "DANGER" and "CAUTION".



Procedures which may lead to a dangerous condition and cause death or serious injury if not carried out properly.

Procedures which may lead to a dangerous condition and cause superficial to medium injury, or physical damage only, if not carried out properly.

Depending on circumstances, procedures indicated by ACAUTION may also be linked to serious results. In any case, it is important to follow the directions for usage. Store this manual in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user. [DESIGN PRECAUTIONS]

DANGER

Configure an interlock circuit in a sequence program so that the system operates on the safety side using the communication status information in the event the data link falls into a communication problem. Otherwise, erroneous output and malfunction may result in accidents. Remote input and output can not be switched ON or OFF when a problem occurs in the remote I/O modules. Therefore build an external monitoring circuit that will monitor any input signals that could cause a serious accident.

∆CAUTION

- Do not have control cables and communication cables bundled with or placed near by the main circuit and/or power cables. Wire those cables at least 100mm(3.94 inch) away from the main circuit and/or power cables. It may cause malfunction due to noise interference.

 Use the module and the flat cable dedicated to CC-Link/LT without applying any force on them.

 Otherwise, such cables may be broken or fail.

[INSTALLATION PRECAUTIONS]

∆CAUTION

- Use the module in an environment that meets the general specifications contained in this manual. Using this module in an environment outside the range of the general specifications could result in electric shock, fire, erroneous operation, and damage to or deterioration of the product. Do not directly touch the module's conductive parts. Doing so could cause malfunction or trouble in the module.
- Tighten the module securely using DIN rail or installation screws within
- Ingitien the module securely using DIN rail or installation screws within the specified torque range. If the screws are too lose, the module may drop from its installation position, short circuit, or malfunction. If the screws are too tight, the screws may be damaged, which may cause the module to drop from its installation position or short circuit.
- Install the module on a flat surface.
- If the mounting surface has concave and/or convex, an excessive force may be applied on the module, and nonconformity may be caused.

[WIRING PRECAUTIONS]

DANGER

Perform installation and wiring after disconnecting the power supply at all phases externally. If the power is not disconnected at all phases an electric shock or product damage may result.

≜CAUTION

- Terminal screws which are not to be used must be tightened always.

 Otherwise there will be a danger of short circuit against the bare solderless
- Do not perform wiring to an idle terminal "NC" outside the product.
- Do not perform wiring to an idle terminal "NC" outside the product.
 The product may be damaged by such external wiring.
 Perform correct wiring for the module according to the product's rated voltage and terminal arrangement. Connecting to a power supply different from rating or miss-wiring may cause fire, product failure or malfunction.
 Fix terminal screws securely within the regulated torque. Loose terminal screws may cause fire and/or malfunction.
 If the terminal screws are too tight, it may cause short circuit or erroneous operation due to damage of the screws.
 Make sure foreign objects do not get inside the module, such as dirt and wire chips. It may cause fire, product failure or malfunction.
 Attach a warning label (hazard symbol 417-IEC-5036) concerning the electric shock to the location.

[STARTING AND MAINTENANCE PRECAUTIONS]

DANGER

- Do not touch the terminals when the power is ON. It may cause an electric
- Perform cleaning the module or retightening of terminal screws after turning OFF the all external power supply for sure. Failure to do so may cause failure or malfunction of the modules

△CAUTION

- Do not disassemble or modify the module. Doing so may cause failure. malfunction, injury, or fire.
- The module case is made of resin; do not drop it or subject it to strong shock
- A module damage may result.

 Make sure to switch all phases of the external power supply OFF before installing or removing the module to/from the panel. Failure to do so may cause failure or malfunction of the modules.

[DISPOSAL PRECAUTIONS]

♦ DANGER

 When disposing of this product, treat it as industrial waste [TRANSPORTATION AND MAINTENANCE PRECAUTIONS]

∆CAUTION

During transportation avoid any impact as the module is a precision instrument. Doing so could cause trouble in the module.

If is necessary to check the operation of module after transportation, in case of the process of the process. of any impact damage.

●Notification of CE marking●

This notification does not guarantee that an entire mechanical module produced in accordance with the contents of the notification comply with the following standards. Compliance to EMC standards of the entire mechanical module should be checked by the user / manufacturer. Compliance to LVD standards of the entire mechanical module should be checked by the user / manufacturer.

Standards with which this product complies

Type: Programmable Controller (Open Type Equipment) Remote I/O module Products manufactured: from February 1st, 2003 to April 30th, 2006 are compliant with EN61000-6-4 and EN61131-2:1994+A11:1996+A12:2000

after May 1st, 2006 are compliant	with EN61131-2:2003
Electromagnetic Compatibility Standards (EMC)	Remark
EN61000-6-4:2001 Electromagnetic compatibility -Generic standards - Emission standard for Industrial environment	Compliance with all relevant aspects of the standard. (Radiated Emissions and Mains Terminal Voltage Emissions)
EN61131-2:1994/A11:1996/A12:2000 Programmable controllers -Equipment requirements and tests	Compliance with all relevant aspects of the standard. (RF Immunity, Fast transients, ESD and Damped oscillatory wave)
EN61131-2: 2003 Programmable controllers -Equipment requirements and tests	Compliance with all relevant aspects of the standard. (Radiated Emissions, Mains Terminal Voltage Emissions, RF immunity, Fast Transients, ESD, Surge, Voltage drops and interruptions, Conducted and Powe magnetic fields)

Low Voltage Standards (LVD) Remark The equipment has been assas a component for fitting in a suitable enclosure which mee EN61131-2:1994/A11:1996 /A12:2000 rogrammable controllers -Equipment requirements and tests requirements of EN61131-2:1994 -A11:1996 + A12:2000, :2003

For more details please contact the local Mitsubshi Electric sales site.

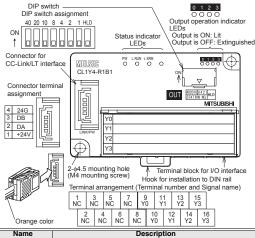
- Notes For compliance to EMC LVD regulation.
It is necessary to install the CL1 series module in a shielded metal control panel.

 Outline of Product
 This product is a terminal block type output module connected to . CC-Link/LT.

This product has four output points (relay output).



2. Name and Setting of Each Part and Terminal Arrangement



Orange colo	r [1	NC NC	NC NC	Ϋ́O	Ϋ́ī	Y2 Y	
Name			Description				
	PW	ON while the power is supplied.					
	L RUN	_	ON while normal operation is executed.				
Status indicator LED	L ERR.	ON:When a communication error or DIP switch setting error occurred Flickering at a constant interval: When the setting of the DIP switch was changed while the power was supplied (even while the LED is flickering, the operation continues. The new setting becomes valid when the power is turned OFF once, then ON again.) Flickering at a intermittent interval: When a terminal resistor is not attached or when the module or a connection cable is affected by noise					
Output operation indicator LEDs	ON while the output is ON. Extinguished while the output is OFF. Output operation indicator						
Interface	Connector for CC-Link/LT communication line/module power supply (24G/DB/DA/+24V)						
Terminal block for I/O interface	Terminal block to connect output signals and load power supply						
DIP switch	Set the 10's digit of the station No. using "STATION NO. 10", "STATION NO. 20" and "STATION NO. 40". Set the 1's digit of the station No. using "STATION NO. 1", "STATION NO. 2", "STATION NO. 4" and "STATION NO. 8". Factory default = All bits are OFF. Make sure to set the station No. in the range from 1 to 64. If any station No. outside the range from 1 to 64 is set, it is regarded as an error and the LERR. LED lights. Example: When setting the station No. to "32", set the DIP switch as follows. Station 10's digit 1's digit No. 40 20 10 8 4 2 1 3 2 OFF I ON 0 PF I OFF I ON 0 OFF						

Description Name folds the output (when an error has occurred HLD DIP switch ON: Holds the output.

3. Installation

The CL1Y4-R1B1 can be installed to DIN rail or directly installed using

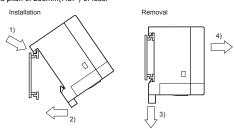
Align the upper DIN rail installation groove in the module with the DIN rail

mounting screws.
Each installation procedure is described below 3.1 Installation to DIN rail

1), and press the module in that status 2). When removing the module, pull the hook downward for installation to DIN rail 3), then remove the module 4).

DIN rail mounting screw pitch

When installing the module to the DIN rail, tighten the mounting screws at the pitch of 200mm(7.87") or less.



3.2 Direct installation

Applicable DIN rail TH35-7.5Fe and TH35-7.5Al

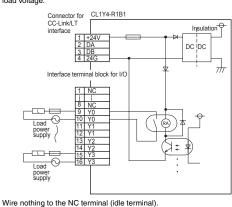
Screw-tighten the module by attaching M4 screws to the upper and lower mounting holes (two holes in all) provided in the module. Install the module so that the clearance of 1 to 2mm (0.04" to 0.08") is assured for each module.

M4 × 0.7mm(0.03") × 16mm(0.63") or more Applicable screw (Tightening torque range: 78 to 108 N-cm)

4. Wiring

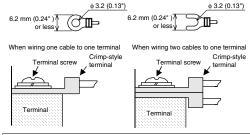
4.1 External wiring

The output terminals of the CL1Y4-R1B1 can be used with either AC or DC load voltage.



4.2 Crimp-style terminal

For I/O wiring, use crimp-style terminals of the following dimensions.



Applicable crimp- style terminal	RAV1.25-3 V1.25-3 (manufactured by JST Mfg. Co., Ltd.) 1.25-3 and TG1.25-3 (manufactured by NICHIFU Co., Ltd.)
Applicable wire size	0.3 to 1.25 mm ²
Use a crimp-style ter	minal in a status in which no force is applied on the cable

4.3 Module terminal screw

Tighten the terminal screws (M3 screws) on the terminal block with a tightening torque of 42 to 58 N cm.

5. Specifications 5.1 General specifications

Item	Specification				
Operating ambient temperature	0 to 55°C (32 to 131°F)				
Storage ambient temperature	-25 to 75°C (-13 to 167°F)				
Operating ambient humidity	5 to 95%RH: Dew condensation shall not be considered.				
Storage ambient humidity	5 to 95%RH: Dew condensation shall not be considered.				
	When interm	Number of times of sweep			
	Frequency	Acceleration	Half amplitude		
	10 to 57Hz	-	0.075mm	1	
Vibration	57 to 150Hz	9.8m/s ²	-	10 times in each of	
resistance	When contin	X, Y and Z directions			
	Frequency	Acceleration	Half amplitude	(for 80 min)	
	10 to 57Hz	-	0.035mm		
	57 to 150Hz	4.9m/s ²	-	1	
Shock resistance	147 m/s², 3 times in each of X, Y and Z directions				
Operating ambience	Corrosive gas shall not be present.				
Operating altitude	2,000m(6561'8") or less (*1)				
Installation location	Inside control panel (*2)				
Overvoltage category	II or less (*3)				
Pollution level	2 or less (*4)				

- *1 The module cannot be used in an environment pressurized above the atmospheric pressure which can be generated around the altitude of 0 m. If the module is used in such an environment, it may fail.
- *2 The module can be used in any environn en outside the contro far as the requirements of the ambient operating temperature, the ambient operating humidity, etc. are satisfied.
- *3 This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution assumed to be connected between the public electrical power distribution network and the machinery within premises. Category II applies to equipment for which electrical power is supplied from fixed facilities.
- The surge voltage withstand level for up to the rated voltage of 300V is 2500V. *4 This index indicates the degree of conductive generating substances in the environment in which the module is used. The degree of contamination 2 indicates that contamination is caused by generation of only non-conductive

In this degree, however, temporary conduction may be caused by accidental

5.2 Output enecifications

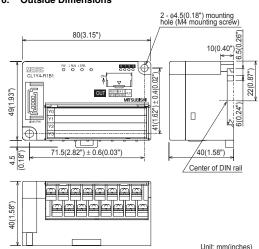
5.2 Output specifications						
Item		Specification				
Output method		Relay output				
Number of outputs		4 points				
Insulation method		Mechanical insulation				
Rated load voltage		250V AC/30V DC or less				
Max. load current		2A/point 2A/1common				
Response OFF→ON		Approx. 10ms or less				
time	ON→OFF	Approx. 10ms or less				
Common wiring method		1point/1common (Mutually exclusive outputs) (terminal block one-wire type)				
Internal protection for outputs		Internal protection circuit none Please connect the fuse in the connected load outside.				

5.3 Performance specifications

Item		Specification				
	Voltage	20.4 to 28.8V DC (24V DC -15% to +20%) Ripple ratio: Within 5%				
Module	Current consumption	65mA (when all points are ON)				
supply	Initial current	70mA				
	Max. allowable momentary power failure period	PS1:1ms				
Number of stations occupied		4-, 8- or 16-point mode: 1 station				
Noise durability		DC type: 500 Vp-p AC type: 1,000 Vp-p Noise width: 1 µs Cycle: 25 to 60 Hz (by noise simulator)				
Withstand voltage		AC type: 1,500V AC for 1 min DC type: 500V DC for 1 min				
Isolation	n resistance	$10~\text{M}\Omega$ or more between primary area (external DC terminal) and secondary area (internal circuit) by 500V DC megger				
Protecti	on grade	IP1X				
I/O area method	connection	Connection with terminal block				
Module installation method		DIN rail installation, mounted by screws of type $M4 \times 0.7$ mm(0.03") \times 16mm(0.63") or larger Can be installed in six directions				
Mass (weight)		0.11kg (0.24lbs)				
Contact life		200V AC - 1.5 A, 240V AC - 1 A (COS ϕ = 0.7): 100,000 times or more 200V AC - 1 A, 240V AC - 0.1 A (COS ϕ = 0.35): 100,000 times or more 24V DC - 1 A, 100V DC - 0.1 A (L/R = 7 ms):				
		100,000 times or more				

Consideration

6. Outside Dimensions



This manual confers no industrial property rights or any rights of any other kind, no does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur a a result of using the contents noted in this manual.

Warranty
Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi sendenting and to atthe difficult of the control of the contr products; and to other duties.

This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.

Before using the product for special purposes such as nuclear power, electric poserospace, medicine or passenger movement vehicles, consult with Mitsubishi.

This product has been manufactured under strict quality control. However when

installing the product where major accidents or losses could occur if the product fails, install appropriate backup or fails after functions in the system.

Country/Reg	gion Sales office/Tel	Country/Regi	on Sales office/Tel
U.S.A.	Mitsubishi Electric Automation, Inc. 500 Corporate Woods Parkway, Vernon Hills, IL 60061 U.S.A. Tel: +1-847-478-2100	Hong Kong	Mitsubishi Electric Automation (Hong Kong) Ltd. 10th Floor., Manulife Tower, 169 Elec Road, North Point, HongKong
Brazil	MELCO-TEC Av. Paulista 1439, conj.74, Bela Vista CEP: 01311-200 Sao Paulo-SP-Brazil Tel: +55-11-3285-1840	China	Tel: +852-2887-8870 Mitsubishi Electric Automation (Shanghai) Ltd. 17F, ChuangXing Financial Center,
Germany	Mitsubishi Electric Europe B.V. German Branch Gothaer Strasse 8, D-40880 Ratingen,		No. 288 West Nanjing Road, Shangl China 200003 Tel: +86-21-2322-3030
U.K.	Germany Tel : +49-2102-486-0 Mitsubishi Electric Europe B.V. UK	Taiwan	Setsuyo Enterprise Co., Ltd. 6F No.105 Wu Kung 3rd RD, Wu-Ku Hsiang, Taipei Hsien, 248, Taiwan Tel: +886-2-2299-2499
Italy	Branch Travellers Lane, Hatfield, Hertfordshire., AL10 8XB, U.K. Tel: +44-1707-276100 Mitsubishi Electric Europe B.V. Italian	Korea	Mitsubishi Electric Automation Korea Ltd. 3F, 1480-6, Gayang-Dong, Gangseo Seoul. 157-200. Korea
iaiy	Wilsonsii Electric Europe B. V. Italian Branch VIALE COLLEONI 7-20041 Agrate Brianza (Milano), Italy Tel: +390-39-60531	Singapore	Tel: +82-2-3660-9552 Mitsubishi Electric Asia Pte, Ltd. 307 Alexandra Road #05-01/02 Mitsubishi Electric Building,
Spain	Mitsubishi Electric Europe B.V. Spanish Branch Ctra. de Rub 76-80-AC. 420, E-08190 Sant Cugat del Valles (Barcelona), Spain Tel: +34-93-565-3131	Thailand	Singapore 159943 Tel: +65-6470-2460 Mitsubishi Electric Automation (Thail Co., Ltd. Bang-Chan Industrial Estate No.111, Soi Serithai 54. T.Kannavao. A.Kanna
France	Mitsubishi Electric Europe B.V. French Branch 25, Boulevard des Bouvets, F-92741	India	Bangkok 10230 Tel: +66-2-517-1326 Messung Systems Pyt. Ltd.
Russia	Nanterre Cedex, France Tel: +33-1-55685568 Mitsubishi Electric Europe B.V. Moscow	maia	Sapphire House EL-3 J-Block MIDC Bhosari Pune 411026, India
Riccord	Missosini Ecarlo Europe B.V. Moscow Representative Office 52, bld. 5, Kosimodamianskaya nab, RU-115054, Moscow, Russia Tel: +7-495-721-2070	Australia	Tel:+91-20-27102000 Mitsubishi Electric Australia Pty. Ltd. 348 Victoria Road, Rydalmere, N.S. 2116, Australia Tel:+61-2-9684-7777

♣MITSUBISHI ELECTRIC CORPORATION