

CI 1Y4-T1C2 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-T1C2 CC-Link/LT MANI IAI Number JV997D10701E Data September 2008

OSAFETY 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

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 nronerly

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

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 PRECAUTIONS1

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.

Bemote 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 connection 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 connection cable 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.

WIRING PRECAUTIONS

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

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. 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

ISTARTING AND MAINTENANCE PRECAUTIONS

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

ACAUTION

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

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

TRANSPORTATION AND MAINTENANCE PRECAUTIONS

∧ CAUTION

During transportation avoid the impact which exceeds a regulated value as the module is a precision instrument. Doing so could cause trouble in the module

DANGER

It is necessary to check the operation of module after transportation, in case of any impact damage. Otherwise causes the damage of the machine and the accident

Note Concerning the CE Marking

This note 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.

Standards with which this product complies

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

from February 1st, 2004 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 ---

(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)

For more details please contact the local Mitsubishi Electric sales site. - Notes For compliance to EMC regulation.

It is necessary to install the CL1 series module in a shielded metal control panel.

1. Outline of Product

This product is an open sensor connector type output module connected to CC-Link/LT This product has four output points (transistor output)

2. Name and Setting of Each Part and Terminal Arrangement



		iui c	mang	sincin (i						c)	
				Pin N	0.	Signal name	Pin N	ο.	Signal name		
Y0	V1	V2	V2		1	+24V		1	+24V		
Ë,	÷	Ľ2		CON1	2	NC	соиз	2	NC		
				CONT	3	NC	CONS	3	NC		DIP switch
н					4	Y0		4	Y2		DIP switch assignment
-	ш	-			1	+24V		1	+24V		40 20 10 8 4 2 1 HLD
ç	ç	ç	C	CON2	2	NC	CON4	2	NC		0N AAAAAAA
Ň	Ň	Ň	Ň	CONZ	3	NC	NC CON4	3	NC		
1	2	3	4		4	Y1	1	4	Y3		

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 (vern 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.			
Interface	Connector for CC-Link/LT communication line/module power supply (24G/DB/DA/+24V)			
Connector for I/O interface	sensor connector for connecting output signals The plug for the connector is an optional. The size of the acceptable electric wire is different according to the plug for the connector used.			

Name Description 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 LEBB, LED lights. DIP switch Example: When setting the station No. to "32" set the DIP switch as follows 10's digit 1'e digit Station No 40 20 10 8 4 2 1 32 OFF ON ON OFF OFF ON OFF Holds the output (when an error has occurred). шп ON Holds the output OFE : Clears the output

* Set up using a slotted screwdriver with a tip width of 0.9 mm or less.

3 Installation

The CL1Y4-T1C2 can be installed to DIN rail or directly installed using mounting scrows

Each installation procedure is described below.

3.1 Installation to DIN rail

When installing the module, align the upper DIN rail installation groove on the module with the DIN rail 1), and press the module on to the DIN rail 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



TH35-7.5Fe and TH35-7.5AI Applicable DIN rail Width-35mm

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 Applicable screw (Tightening torgue range: 78 to 108 N·cm)

4. Wiring

4.1 Connecting and wiring of connector for I/O interface

Wire the connector for I/O interface (e-CON) according to the following procedure:

- 1) Verify that the plug cover is installed in the plug unit.
- Caution: Do not push the plug cover into the plug unit before the cable is inserted.
- Once a plug is pressure-displaced, it can no longer be reused. 2) Insert the cable until it makes contact with the plug unit.
- When inserting the cable, confirm that it has been inserted completely. If the cable is not inserted completely, it may cause contact failures.
- If the cross section of the cable is not round, the cable cannot be inserted smoothly. Cut the cable tip using pliers, etc., and make is as round as possible, then insert it.
- When inserting the cable, the cable may stick out from the front of the cover. In such a case, pull the cable backward so that the tip of the cable stays within the plug cover.
- 3) Using a pliers or special tool, push the plug cover into the plug unit, and pressure-displace it. After performing pressure displacement, verify that the plug cover is securely attached to the plug unit, as shown in the figure at right.
- While performing pressure displacement, the plug cover may rise because it is not latched against the plug unit correctly. This condition indicates that pressure displacement is incomplete. Push the plug cover until it is securely installed in the plug unit.

4.2 External wiring

The output terminals of the CL1Y4-T1C2 are fixed to the sink output.



5. Specifications

5.1 General specifications

Item		S	pecification		
Ambient working temperature	0 to 55°C (32 to 131°F)				
Ambient storage temperature	-25 to 75°C (-13 to 167°F)				
Ambient operating humidity	5 to 95%RH: Dew condensation shall not be considered.				
Ambient storage humidity	5 to 95%RH: Dew condensation shall not be considered.				
	When intermittent vibration is present			Number of times of sweep	
	Frequency	Acceleration	Half amplitude		
· · · · ·	10 to 57Hz	-	0.075mm		
Vibration	57 to 150Hz	9.8m/s ²	-	10 times in each of	
esistance	When continuous vibration is present X, Y and Z direct				
	Frequency	Acceleration	Half amplitude	(for 80 min)	
	10 to 57Hz	-	0.035mm]	
	57 to 150Hz	4.9m/s ²	-		
Impact resistance	147 m/s ² , 3 times in each of X, Y and Z directions				
Operating atmosphere	Corrosive gas shall not be present.				
Operating altitude	2,000m(6561'8") or less (*1)				
Installation place	Inside control panel (*2)				
Over-voltage category	II or less (*3)			
Degree of contamination	2 or less (*4))			

- Notes
- *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

lte	em	Specification
Output metho	d	Transistor output (Power supply supplied from CC-Link/LT interface) (sink)
Number of ou	tputs	4 points
Isolation met	hod	Isolation with photocoupler
Rated load vo	ltage	24V DC
Operating loa range	d voltage	20.4 to 28.8V DC (Ripple ratio: Within 5%)
Max. load cur	rent	0.1A/point, 0.4 A/1 common
Max. inrush c	urrent	0.4A/10 ms
Leakage current at OFF		0.1mA or less
Max. voltage drop at ON		0.3V or less (typical)/0.1A 0.6V or less (max.)/0.1A
Response	OFF→ON	1.0ms or less
time	ON→OFF	1.0ms or less
Surge suppre	ssion	Zener diode
Common wiring method		4 points/1 common (sensor connector 3-wire type)
Internal protection for outputs		Internal protection circuit none Please connect the fuse in the connected load outside.

5.3 Performance specifications

	ltem	Specification
	Voltage	20.4 to 28.8V DC (24V DC -15% to +20%) Ripple ratio: Within 5%
Module power	Current consumption	60mA (when all points are ON)
supply	Initial current	70mA
Suppry	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		500Vp-p Noise width: 1µs Cycle: 25 to 60 Hz (by noise simulator)
		500V AC for 1 min between primary area (externa DC terminal) and secondary area (internal circuit
Isolation resistance		10 $M\Omega$ or more between primary area (external DC terminal) and secondary area (internal circuit by 500V DC megger
Protecti	on class	IP2X
I/O part connection method		Connection with terminal block
Module installation method		DIN rail installation, mounted by screws of type $M4 \times 0.7mm(0.03") \times 16mm(0.63")$ or larger Can be installed in six directions
Mass (w	eight)	0.04 kg (0.09 lbs)

6. Outside Dimensions



This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as 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 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.

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When exported from Japan, this manual does not require application to the Ministry of Economy, Trade and Industry for service transaction permission.
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CL1Y4-T1C2

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-T1C2

 MANUAL Number
 JY997D10701E

 Date
 September 2008
 CC-Link/LT 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 CPU module to use for a description of the PLC system safety precautions.

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

5	
DANGER	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 CAUTION 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.

Do not have control cables and connection 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 connection cable 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 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.

WIRING PRECAUTIONS

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.

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. 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

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. 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]

During transportation avoid the impact which exceeds a regulated value as the module is a precision instrument. Doing so could cause trouble in the module.

It is necessary to check the operation of module after transportation, in case of any impact damage. Otherwise, causes the damage of the machine and the accident

●Note Concerning the CE Marking●

This note 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.

Standards with which this product complies Type : Programmable Controller (Open Type Equipment) Remote I/O module Models : Products manufactured: from February 1st, 2004 to April 30th, 2006 are compliant with nt with

nonniebiuary	131, 2004 to April 30th, 2000 are compliant
ENG1000 6	and EN61131-2:1994+A11:1996+A12:2000
after May 1st	2006 are compliant with EN61131-2:2003
anoi way iot,	2000 are compliant with Enor 101 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)
For more details please contact the local Mit - Notes For compliance to EMC regulation.	subishi Electric sales site.

It is necessary to install the CL1 series module in a shielded metal control panel.



connector type output module connected to CC-Link/LT. This product has four output points (transistor output).



2. Name and Setting of Each Part and Terminal Arrangement Connector termina assignment 0 1 2 3



Status indicator .ED	Flickering at a constant interval: When the setting of the DIP switch was cha while the power was supplied (even while th is flickering, the operation continues. The n setting becomes valid when the power is tu OFF once, then ON again.) Flickering at a intermittent interval: When a terminal resistor is not attached or the module or a connection cable is affecte noise	e LED ew Irned when		
Dutput operation ndicator LEDs	ON while the output is ON. Extinguished while the output is OFF.	3 O_ dicator		
nterface	Connector for CC-Link/LT communication line/module supply (24G/DB/DA/+24V)	power		
Connector for I/O nterface	sensor connector for connecting output signals The plug for the connector is an optional. The size of the acceptable electric wire is different according to the plug for the connector used.			

Description 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. 4", "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. Station 10's and 10's Big 10's digit 1's digit No. 40 20 10 8 4 2 1 32 OFF ON ON OFF OFF ON OFF Holds the output (when an error has occurred). ON : Holds the output. HLD

OFF : Clears the output screwdriver with a tip width of 0.9 mm or les Set up using a slotted

3. Installation

The CL1Y4-T1C2 can be installed to DIN rail or directly installed using mounting screws. Each installation procedure is described below

3.1 Installation to DIN rail

When installing the module, align the upper DIN rail installation groove on the module with the DIN rail 1), and press the module on to the DIN rail 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 TH35-7.5Fe and TH35-7.5AI Width:35mm

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

4. Wiring

4.1 Connecting and wiring of connector for I/O interface

Wire the connector for I/O interface (e-CON) according to the following procedure:

1) Verify that the plug cover is installed in the plug unit

- Caution: Do not push the plug cover into the plug unit before the cable is inserted
- Once a plug is pressure-displaced, it can no longer be reused
- 2) Insert the cable until it makes contact with the plug unit.
 When inserting the cable, confirm that it has been inserted completely. If the cable is not inserted completely, it may cause contact failures. If the cross section of the cable is not round, the cable cannot be inserted smoothly. Cut the cable tip using pliers, etc., and make is as round as possible, then insert it.
- When inserting the cable, the cable may stick out from the front of the cover. In such a case, pull the cable backward so that the tip of the cable stays within the plug cover.
- 3) Using a pliers or special tool, push the plug cover into the plug unit, and pressure-displace it. After performing pressure displacement, verify that the plug cover is securely attached to the plug unit, as shown in the figure at right.

While performing pressure displacement, the plug cover may rise because it is not latched against the plug unit correctly. This condition indicates that pressure displacement is incomplete. Push the plug cover until it is securely installed in the plug unit.

4.2 External wiring

The output terminals of the CL1Y4-T1C2 are fixed to the sink output.



Item		Specification				
Ambient working temperature	0 to 55°C (3	0 to 55°C (32 to 131°F)				
Ambient storage emperature	-25 to 75°C	-25 to 75°C (-13 to 167°F)				
Ambient operating humidity	5 to 95%RH	5 to 95%RH: Dew condensation shall not be considered.				
Ambient storage humidity	5 to 95%RH	5 to 95%RH: Dew condensation shall not be considered.				
Vibration resistance	When intern	nittent vibratio	Number of times of sweep			
	Frequency	Acceleration	Half amplitude			
	10 to 57Hz	-	0.075mm			
	57 to 150Hz	9.8m/s ²	-	10 times in each of		
	When contin	nuous vibratio	X, Y and Z directions			
	Frequency	Acceleration	Half amplitude	(for 80 min)		
	10 to 57Hz	-	0.035mm			
	57 to 150Hz	4.9m/s ²	-			
Impact resistance	147 m/s ² , 3	147 m/s ² , 3 times in each of X, Y and Z directions				

5. Specifications

Operating

Operating

Installation

Over-voltage

contamination

category Degree of

altitude

atmosphere

5.1 General specifications

5.2 Output specifications

n	Specification		
	Specification		
	Transistor output (Power supply supplied from		
	CC-Link/LT interface) (sink)		
outs	4 points		
bd	Isolation with photocoupler		
age	24V DC		
voltage	20.4 to 28.8V DC (Ripple ratio: Within 5%)		
ent	0.1A/point, 0.4 A/1 common		
rrent	0.4A/10 ms		
nt at OFF	0.1mA or less		
on at ON	0.3V or less (typical)/0.1A		
op at ON	0.6V or less (max.)/0.1A		
OFF→ON	1.0ms or less		
ON→OFF	1.0ms or less		
sion	Zener diode		
a method	4 points/1 common		
ginetiou	(sensor connector 3-wire type)		
tion for	Internal protection circuit none		
	Please connect the fuse in the connected load		
	outside.		
	outs age voltage ent rrent it at OFF op at ON OFF→ON ON→OFF		

Item		Specification		
	Voltage	20.4 to 28.8V DC (24V DC -15% to +20%) Ripple ratio: Within 5%		
Module power supply	Current consumption	60mA (when all points are ON)		
	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		500Vp-p Noise width: 1μs Cycle: 25 to 60 Hz (by noise simulator)		
Withstand voltage		500V AC for 1 min between primary area (externa DC terminal) and secondary area (internal circuit		
Isolation resistance		10 MΩ or more between primary area (external DC terminal) and secondary area (internal circuit by 500V DC megger		
Protection class		IP2X		
I/O part connection method		Connection with terminal block		
Module installation method		DIN rail installation, mounted by screws of type $M4 \times 0.7mm(0.03") \times 16mm(0.63")$ or larger Can be installed in six directions		
Mass (weight)		0.04 kg (0.09 lbs)		

6. Outside Dimensions



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*1 The module cannot be used in an environment pressurized above atmospheric pressure which can be generated around the altitude of 0 m. If the module is used in such an environment, it may fail.

orrosive gas shall not be present.

2,000m(6561'8") or less (*1)

nside control panel (*2)

II or less (*3)

2 or less (*4)

- *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 nvironment in which the module is used. The indicates that contamination is caused by generation of only non-conductive substances.

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

- Definition of the 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,
 Before using the product for special purposes such as nuclear power, electric power,
- 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.

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