



CL1Y2-T1D2S 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

CC-Link/LT

MODEL CL1Y2-T1D2S MANUAL Number JY997D04001L Date November 2021

●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 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: "WARNING" and "CAUTION".

<u>∧</u>WARNING ⚠CAUTION

[DESIGN PRECAUTIONS]

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 <u>^CAUTION</u> may also be linked to serious results.

be linked to serious festils.

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.

⚠WARNING

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 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 in the status in which any force is not applied on the module, flat cables dedicated to CC-Link/LT and flat cables for I/O. If a force is applied, wire breakage or failure may be caused.

IINSTALLATION 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.

IWIRING PRECAUTIONS

. WARNING 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.

 Do not short-circuit the 24G and +24V terminals. It may result in 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]

<u>_____</u>WARNING

- Do not touch the terminals when the power is ON. It may cause an electric shock or malfunction.

 Perform cleaning the module after turning OFF the all external power supply for sure. Failure to do so may cause failure or malfunction of the modules. when the power is ON. It may cause a

- 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 the module. Doing so may cause failure
- The module case is made of 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]

<u>∧</u>CAUTION

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

[TRANSPORTATION AND MAINTENANCE PRECAUTIONS]

ACAUTION

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.

●Compliance with EC directive (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 directive of the entire mechanical module should be checked by the user / manufacturer.

Attention

This product is designed for use in industrial applications.

Standards with which this product complies Type : Programmable Controller (Open Type Equipment) Remote I/O module Models : Products manufactured:

Froducts manufactured: from November 1st, 2002 to April 30th, 2006 are compliant with EN61000-6-4:2001 and EN61131-2:1994+A11:1996+A12:2000 after May 1st, 2006 are compliant with EN61131-2:2007

alter May 13t, 2000 are compliant with ENOTIST-2.2007					
Electromagnetic Compatibility Directive (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. Radiated electromagnetic field Fast transient burst Electrostatic discharge Damped oscillatory wave				
EN61131-2: 2007 Programmable controllers -Equipment requirements and tests	Compliance with all relevant aspects of the standard. EMI Radiated Emission Conducted Emission EMS Radiated electromagnetic field Fast transient burst Electrostatic discharge High-energy surge Voltage drops and interruptions Conducted RF Power frequency magnetic field				

Notes for compliance to EMC directive

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

For more details, please contact the local Mitsubishi Electric sales site

Use this product in Zone A^{*1} as defined in EN61131-2.

- *1 Zone defined in EN61131-2 Separation defined in EN61131-2 for EMC LVD regulation decided depending on condition in industrial setting.
 - Zone C = Factory mains which is isolated from public mains by dedicated transformers.
 - Zone B = Dedicated power distribution which is protected by secondary surge protection. (300V or less in the rated voltage is
 - assumed.) Zone A = Local power distribution which is isolated from dedicated power distribution by AC/DC converters, isolation transformers, etc. (120V or less in the rated voltage is assumed.)

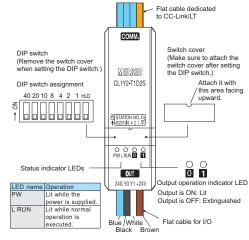
●Compliance with UKCA marking●

The requirements for compliance with UKCA marking are the same as that with EC directive (CE marking).

1. Outline of Product

This product is a cable type output module connected to CC-Link/LT. This product has two output points (transistor output).

2. Name and Setting of Each Part



Name	Description						
Status indicator	PW	ON while the power is supplied.					
LED	L RUN ON while normal operation is executed.						
Output operation indicator LED		e the output is ON. shed while the output is OFF. O Y0 output operation indicator LED O Y1 output operation indicator LED					
	24G						
Flat cable dedicated to CC-	DB	Connector for CC-Link/LT communication line/					
Link/LT	DA	module power supply					
	+24V						
	Blue	24G					
Flat cable for I/O	Black	Y0					
	White	Y1					
	Brown	+24V					

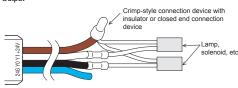
Description Set the 10's digit of the station No. using "STATION NO. 10", "STATION NO. 20" and "STATION NO. 40". Set the 1's digit of the station No. using "STATION NO. 1", "STATION NO. 2", "STATION NO. 4" and "STATION NO. 8". Factory default = All bits are OFF Make sure to set the station No. in the range from 1 to 64 Holds the output (when an error has occurred). ON: Holds the output. OFF: Clears the output HLD

3. Cautions on Handling

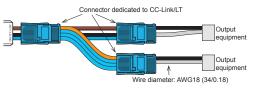
3.1 Handling of flat cable for I/O

The cable length from the module to a sensor shall be within 3m(9'10"). Measure the cable outside the module, and confirm that the driving voltage for the used sensor is assured.

Output

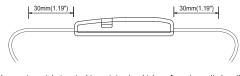


the diameter of the flat cable for I/O of this module, connectors dedicated to CC-Link/LT can be used for connection.



3.2 Handling of cable

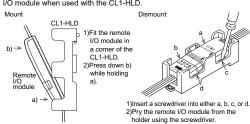
Do not bend the cable within 30mm(1.19") from the module



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

3.3 Mounting with the CL1-HLD (module holder)

Refer to the figures below for details on mounting or removing the remote I/O module when used with the CL1-HLD.

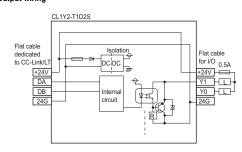


4. Wiring

4.1 External wiring

The output terminals of the CL1Y2-T1D2S operate while using the power supplied from the interface

The output wiring is fixed to the sink output. **Output wiring**



5. Specifications

5.1 General specifications							
Item	Specification						
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 intern	Number of times of sweep					
	Frequency	Acceleration	Half amplitude				
	10 to 57Hz	-	0.075mm				
Vibration resistance (*1)	57 to 150Hz	9.8m/s ²	-	10 times in each			
resistance (*1)	When contin	of X, Y and Z directions (for					
	Frequency	Acceleration	Half amplitude	80 min)			
	10 to 57Hz	-	0.035mm	,			
	57 to 150Hz	4.9m/s ²	-				
Impact resistance (*1)	147 m/s², 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 (*2)						
Installation place	Inside control panel (*3)						
Over-voltage category	II or less (*4)						
Degree of contamination	2 or less (*5)						

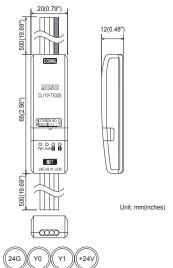
- *1 The criterion is shown in IEC61131-2.
- *2 The module cannot be used in an environment pressurized above the atmospheric pressure which can be generated around the altitude of 0 m. If the module is used in such an environment, it may fail.
- *3 The module can be used in any environment even outside the control panel as far as the requirements of the ambient operating temperature, the ambient operating humidity, etc. are satisfied. *4 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. *5 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 specifications

lte	em	Specification				
Output method		Transistor output				
		(using module power supply in common) (sink)				
Number of ou	tputs	2 points				
Isolation met	nod	Isolation with photocoupler				
Rated load vo	ltage	24V DC				
Operating loa range	d voltage	Same as module power supply				
Max. load cur	rent	0.1A/point 0.2 A/1 common				
Max. inrush current		0.4A/10 ms				
Leakage curre	ent at OFF	0.1mA or less/30V DC				
Max. voltage	Max. voltage drop at ON 1V 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 wiri	ng method	2 point/1 common (1 point)				
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	Current consumption	40mA (when all points are ON)				
supply	Initial current	70mA				
oupp.y	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				
Isolation resistance		10 M Ω or higher between primary area (external DC terminal) and secondary area (internal circuit) by 500V DC insulation resistance tester				
Protection class		IP2X				
I/O part connection method		Connection with cable				
Module installation method		Can be installed in six directions				
Flat cable for I/O (wire diameter)		AWG18 (34/0.18)				
Mass (weight)		0.07 kg (0.15 lbs) (including 500mm(19.69") flat cable dedicated to CC-Link/LT and 500mm(19.69") flat cable for I/O)				

6. Outside Dimensions



「电器电子产品有害物质限制使用标识要求」的表示方式



Note: This symbol mark is for China only.

含有有害6物质的名称,含有量,含有部品 本产品中所含有的有害6物质的名称,含有量,含有部品如下表所示。

产品中有害物质的名称及含量

		有害物质					
部件	牛名称	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴 二苯醚 (PBDE)
可编程	外壳	0	0	0	0	0	0
控制器	印刷基板	X	0	0	0	0	0

本表格依据SJ/T 11364的规定编制。

- 〇:表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572
- 规定的限量要求以下。 ※:表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。
- 基于中国标准法的参考规格:GB/T15969.2

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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.

For safe use

21) For sate 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 pow aerospace, medicine or passenger movement vehicles, consult with Mistubishi Elec
This product has been manufactured under strict quality control. However en installing the product where major accidents or losses could occur if the

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