

CL1XY2-DT1D5S 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

Table with 2 columns: MODEL, CL1XY2-DT1D5S; MANUAL Number, JY997D03801M; Date, November 2021

SAFETY PRECAUTIONS

Please read this manual carefully and pay special attention to safety in order to handle this product properly.

- WARNING: Procedures which may lead to a dangerous condition and cause death or serious injury... CAUTION: Procedures which may lead to a dangerous condition and cause superficial to medium injury...

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

DESIGN PRECAUTIONS

- WARNING: Configure an interlock circuit in a sequence program so that the system operates on the safety side using the communication status information...

- CAUTION: Do not have control cables and connection cables bundled with or placed near by the main circuit and/or power cables. Do not have control cables bundled with or placed near by the main circuit and/or power cables...

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.

WIRING PRECAUTIONS

- WARNING: Perform installation and wiring after disconnecting the power supply at all phases externally. CAUTION: Perform correct wiring for the module according to the product's rated voltage and terminal arrangement.

STARTING AND MAINTENANCE PRECAUTIONS

- WARNING: Do not touch the terminals when the power is ON. CAUTION: Do not disassemble or modify the module. Do not drop it or subject it to strong shock.

CAUTION

- Do not disassemble or modify the module. Do not drop it or subject it to strong shock. Do not touch the terminals when the power is ON.

DISPOSAL PRECAUTIONS

CAUTION

- 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. Do not touch the terminals when the power is ON.

Compliance with EC directive (CE marking)

This notification does not guarantee that an entire mechanical product complies with the notification in accordance with the contents of the notification.

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 from November 1st, 2002 to April 30th, 2006 are compliant with EN61000-6-4 and EN61312-2:1994+A11:1996+A12:2000 after May 1st, 2006 are compliant with EN61312-2:2007.

Table with 2 columns: Electromagnetic Compatibility Directive (EMC) and Remark. Details compliance with EN61000-6-4:2001 and EN61312-2:1994/A11:1996/A12:2000.

Notes for compliance to EMC directive: It is necessary to install the CL1 series module in a shielded metal control panel.

- Use this product in Zone A as defined in EN61312-2. Zone A = Local power distribution which is isolated from dedicated power distribution by AC/DC converters, isolation transformers, etc.

Compliance with UKCA marking

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

Outline of Product

This product is a cable type composite I/O module connected to CC-Link/LT. This product has one input point (24 V DC) and one output point (transistor output).

Name and Setting of Each Part

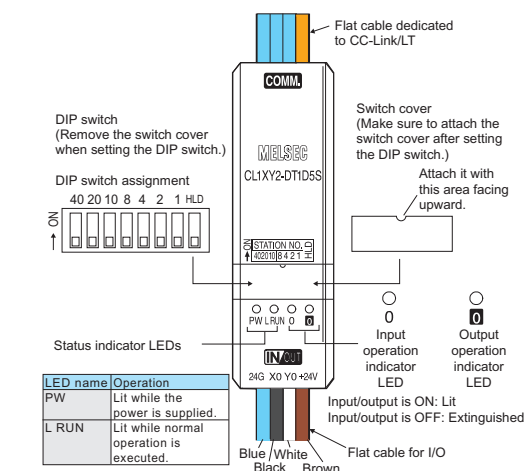
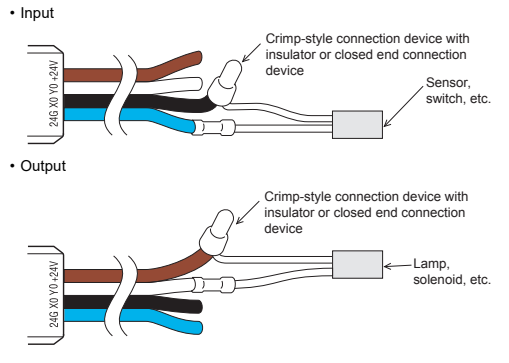


Table with 2 columns: Name and Description. Details the module's components like status indicator LED, I/O operation indicator LED, and DIP switch settings.

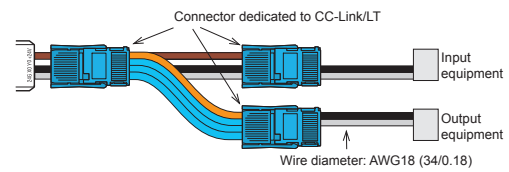
Cautions on Handling

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.

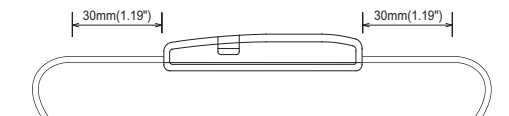


If the diameter of the I/O equipment connection cable is equivalent to the diameter of the flat cable for I/O of this module, connectors dedicated to CC-Link/LT can be used for connection.



Handling of cable

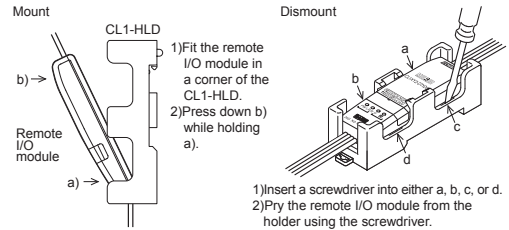
Do not bend the cable within 30 mm (1.18") from the module.



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

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.

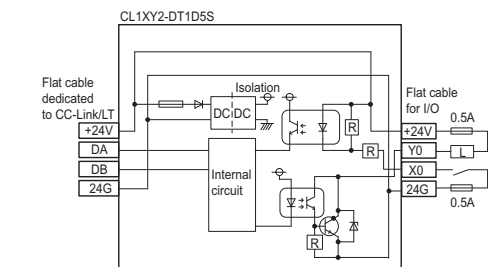


Wiring

External wiring

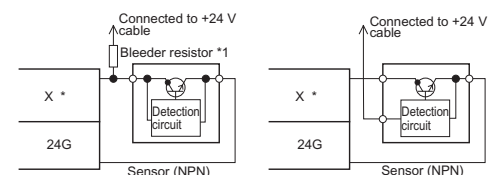
The input and output terminals of the CL1XY2-DT1D5S operate while using the power supplied from the interface. When connecting a sensor to the input terminal, use a sensor of the NPN open collector transistor type.

I/O wiring



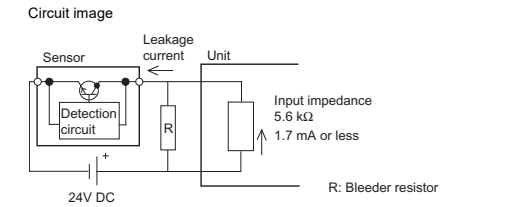
Connection to sensor

When using a two-wire type sensor • When using a three-wire type sensor



Replace * in the figure with the used input No.

- Notes: Bleeder resistor. When connecting a two-wire type sensor or input equipment having parallel resistor, select a sensor or equipment whose leakage current is 1.7 mA or less.



Formula for calculating the bleeder resistor R: R (kΩ) < 1.7 (mA) / Leakage current (mA) - 1.7 (mA) x 5.6 (kΩ). The power capacity W of the bleeder resistor R is as follows: W = (Input voltage)²/R.

- Make sure that both the ON and OFF time of the input signal are 1.5ms or more.

Specifications

General specifications

Table with 2 columns: Item and Specification. Lists ambient working temperature (0 to 55°C), ambient storage temperature (-25 to 75°C), and ambient operating/humidity (5 to 95%RH).

Table with 2 columns: Item and Specification. Lists vibration resistance (10 to 57 Hz), impact resistance (147 m/s²), operating atmosphere (corrosive gas not present), operating altitude (2,000 m), and degree of contamination (2 or less).

- Notes: The criterion is shown in IEC61131-2. The module cannot be used in an environment pressurized above the atmospheric pressure which can be generated around the altitude of 0 m.

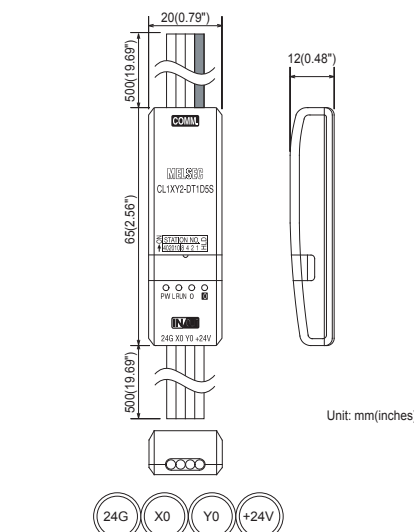
Input specifications

Table with 2 columns: Item and Specification. Lists input method (DC input), input voltage (24 V DC), input current (approx. 4 mA), operating voltage range, and response time (1.5 ms).

Output specifications

Table with 2 columns: Item and Specification. Lists output method (transistor output), number of outputs (1 point), isolation method (photocoupler), operating load voltage range, and max. load current (0.1 A/point).

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. 本产品中所含有的有害6物质的名称, 含有量, 含有部如下表所示.

Table showing the presence and quantity of restricted substances (Lead, Mercury, Cadmium, etc.) in various components of the product.

本表格依据SJ/T 11364-01 的法规制定. O: 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.

This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses.

Warranty: 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.

- 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.

Table listing Mitsubishi Electric sales offices worldwide, including USA, Brazil, Germany, UK, Italy, Spain, France, Czech Republic, Poland, Russia, China, Taiwan, Korea, Singapore, Thailand, India, and Australia.

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