

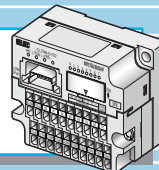
CL2X8-D1S2 CL2Y8-TP1S2
 CL2X16-D1C3V CL2Y16-TP1C2V
 CL2XY16-DTP1C5V

CC-Link/LT Remote I/O Module

Spring clamp terminal block type module and open sensor connector (e-CON) 16-point module

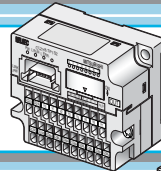
8-point input 24VDC 2-wire
spring clamp terminal block type module

CL2X8-D1S2



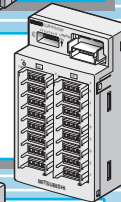
8-point output 2-wire spring clamp terminal block
type module with 0.1A transistor output protection

CL2Y8-TP1S2



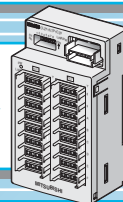
16-point input 24VDC 3-wire sensor
connector type module

CL2X16-D1C3V



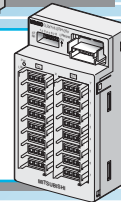
16-point output 2-wire sensor connector type
module with 0.1A transistor output protection

CL2Y16-TP1C2V



8-point input 24VDC 3-wire sensor connector/
8-point output 2-wire sensor connector type module
with 0.1A transistor output protection

CL2XY16-DTP1C5V



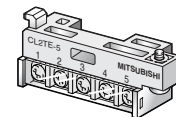
**"Ideal for wire-saving,
reduced I/O points"**

CC-Link/LT

Common terminal block

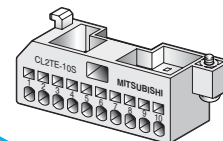
Screw type

CL2TE-5



Spring clamp type

CL2TE-10S



Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001 (standards for quality assurance management systems)

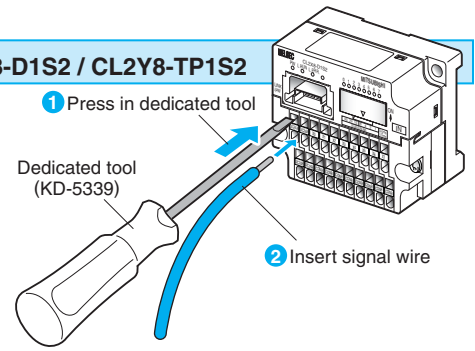


Spring clamp terminal block type module CL2X8-D1S2 / CL2Y8-TP1S2

1. Spring clamp terminal block

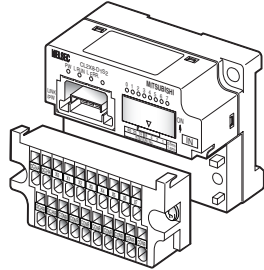
The spring clamp terminal block eliminates the need to tighten screws.

- ① Reduced number of wiring steps
→ Wiring can be completed just by pressing in the dedicated tool and inserting the signal wire.
- ② Standard work (Torque control not required)
→ The signal wire is tightened by the force of the spring, so the screw tightening force does not differ between individuals.
- ③ Maintenance free (Retightening not required)
→ Retightening is not required even when modules are reinstalled.
- ④ Applicable wire size: 0.3 to 1.5mm² (AWG22 to 16)



2. Two-piece terminal block

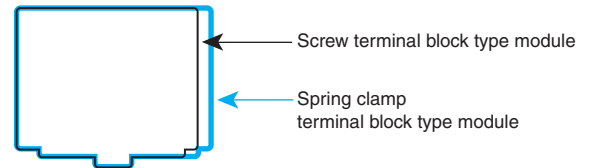
The two-piece spring clamp terminal block makes maintenance easy. During repair work, the module can be replaced with the wires connected, thereby shortening the work time and preventing incorrect wiring.



3. Space saving compact size

- 1-point/common is realized with approximately the same size as the 2-point/common terminal block type.
- * The spring clamp terminal block type module has a two-piece terminal block which is approximately the same size, compared with the screw terminal block type module. Also it saves wiring with the 1-point/common instead of 2-point/common wiring.
- * Each common terminal is connected inside the module.

4. Both positive common and negative common type are available.



Sensor connector type module CL2X16-D1C3V / CL2Y16-TP1C2V / CL2XY16-DTP1C5V

1. Open sensor connector (e-CON)

- ① Easy wiring
→ As each sensor is connected to each plug, sensor can be replaced separately therefore reducing wiring work.
→ The connector can be easily crimped with commercially-available pliers.
→ Preparation of wire is not required, thus eliminating wastes.
- ② Reliability
→ Contact failure is eliminated by crimping.

2. Common power supply for both sensor and module.

A separate I/O power supply is not required.

3. Composite module is available.

Input and output addresses are contiguous, enabling effective use of I/O points.

4. Both 2-wire type and 3-wire type connection are available.

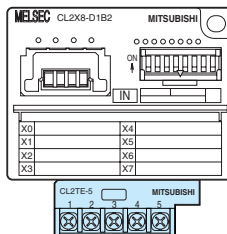
Common terminal block CL2TE-5 / CL2TE-10S

Screw terminal block for input/output module

CL2TE-5 + CL2X8-D1B2 / CL2Y8-TP1B2

Input: CL2TE-B5 converts 2-point/common to 1-point/common type wiring. In addition, a 3-wire type sensor can be connected with a 24V wire.

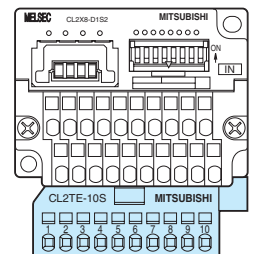
Output: CL2TE-B5 converts 2-point/common to 1-point/common type wiring.



Spring clamp terminal block for input module

CL2TE-10S + CL2X8-D1S2

3-wire type sensor can be connected using CL2TE-10S.



Common information

1. All switches are operated on the front panel.
2. The input module's response time is switchable.
3. Possible to set output hold/output clear when communication error occurs.
4. Overload protection and overcurrent protection are available.
5. More flexible installation position is available.
6. Light dust-proof protection (Complying with IP2X)

Performance Specifications

Spring clamp terminal block type module CL2X8-D1S2 / CL2Y8-TP1S2

Item	Type	CL2X8-D1S2	
Number of inputs		8 points	
Isolation method		Photocoupler isolation	
Rated input voltage		24VDC	
Rated input current		Approx. 4mA	
Max. simultaneous input points		100%	
ON voltage/ON current		19V or higher/3mA or higher	
OFF voltage/OFF current		11V or lower/1.7mA or lower	
Input resistance		5.6kΩ	
Response time	Response time setting	0.5ms (High speed response)	1.5 ms (Normal)
	OFF→ON	TYP.	0.05ms
		MAX.	0.1ms
	ON→OFF	TYP.	0.2ms
MAX.		0.5ms	1.5ms
Common wiring method		8 points/1 common (terminal block 2-wire type)	
Input method		Positive common/negative common	
Number of stations occupied		In 4-point mode: Occupies 2 stations In 8 or 16-point mode: Occupies 1 station	
Module power supply	Voltage	24VDC (-15 to +20%) (ripple ratio: within 5%)	
	Current consumption	40mA or lower (When 24VDC and all point is on)	
	Current on startup	70mA or lower (24VDC)	
Noise durability		DC type noise voltage 500Vp-p, noise width 1μs, noise carrier frequency 25 to 60Hz (noise simulator condition) First transient/noise burst IEC 61000-4-4: 1kV	
Dielectric withstand voltage		500VAC for 1 minute between DC terminal and internal circuit	
Insulation resistance		10MΩ or more at 500VDC (between external DC terminal and internal circuit)	
Protection degree		IP2X	
Weight		0.12kg	
I/O connection method		2-piece 20-point spring clamp terminal block	
Module installation method		DIN rail installation, mounted by screws of type M4 x 0.7mm x 16mm or larger, Can be installed in six directions	
Applicable wire size		0.3 to 1.5mm ² (AWG22 to 16)	

Item	Type	CL2Y8-TP1S2	
Number of inputs		8 points	
Isolation method		Photocoupler isolation	
Rated load voltage		12/24VDC	
Max. load current		0.1A/1 point 0.8A/1 common	
Max. inrush current		0.7A 10ms or lower	
Leakage current at OFF		0.1mA or lower	
Max. voltage drop at ON		0.3V or lower (TYP.) 0.1A, 0.6V or lower (MAX.) 0.1A	
Output method		Sink	
Protection function		Overload protection function, Overheat protection function	
Response time	OFF→ON	0.5ms or lower	
	ON→OFF	0.5ms or lower (Resistive load)	
Surge suppression		Zener diode	
Common wiring method		8 points/1 common (terminal block 2-wire type)	
Number of stations occupied		In 4-point mode: Occupies 2 stations In 8 or 16-point mode: Occupies 1 station	
External power supply of the output part	Voltage	10.2 to 28.8VDC (ripple ratio: within 5%)	
	Current consumption	15mA or lower (24VDC, when all points are ON) Not including external load current	
Module power supply	Voltage	24VDC (-15 to +20%) (ripple ratio: within 5%)	
	Current consumption	40mA or lower (When 24VDC and all point is on)	
	Current on startup	70mA or lower (24VDC)	
Noise durability		DC type noise voltage 500Vp-p, noise width 1μs, noise carrier frequency 25 to 60Hz (noise simulator condition) First transient/noise burst IEC 61000-4-4: 1kV	
Dielectric withstand voltage		500VAC for 1 minute between DC terminal and internal circuit	
Insulation resistance		10MΩ or more at 500VDC (between external DC terminal and internal circuit)	
Protection degree		IP2X	
Weight		0.12kg	
I/O connection method		2-piece 20-point spring clamp terminal block	
Module installation method		DIN rail installation, mounted by screws of type M4 x 0.7mm x 16mm or larger, Can be installed in six directions	
Applicable wire size		0.3 to 1.5mm ² (AWG22 to 16)	

Sensor connector type module CL2X16-D1C3V / CL2Y16-TP1C2V

Item	Type	CL2X16-D1C3V	
Number of inputs		16 points	
Isolation method		Photocoupler isolation	
Rated input voltage		24VDC (Common with the module power supply)	
Rated input current		Approx. 4mA	
Max. simultaneous input points		100%	
ON voltage/ON current		19V or higher/3mA or higher	
OFF voltage/OFF current		11V or lower/1.7mA or lower	
Input resistance		5.6kΩ	
Response time	Response time setting	0.5ms (High speed response)	1.5ms (Normal)
	OFF→ON	TYP.	0.05ms
		MAX.	0.1ms
	ON→OFF	TYP.	0.2ms
MAX.		0.5ms	1.5ms
Common wiring method		16 points/1 common (sensor connector 3-wire type)	
Input method		Positive common	
Number of stations occupied		In 4-point mode: Occupies 4 stations, In 8-point mode: Occupies 2 stations In 16-point mode: Occupies 1 station	
Module power supply	Voltage	24VDC (-15 to +20%) (ripple ratio: within 5%)	
	Current consumption	45mA or lower (When 24VDC and all point is on)	
	Current on startup	70mA or lower (24VDC)	
Noise durability		DC type noise voltage 500Vp-p, noise width 1μs, noise carrier frequency 25 to 60Hz (noise simulator condition) First transient/noise burst IEC 61000-4-4: 1kV	
Dielectric withstand voltage		500VAC for 1 minute between DC terminal and internal circuit	
Insulation resistance		10MΩ or more at 500VDC (between external DC terminal and internal circuit)	
Protection degree		IP2X	
Weight		0.08kg	
Applicable I/O connector		Open sensor connector (e-CON) x 16 (Connector plugs are sold separately (compatible wire size: 0.08 to 0.5mm ² , depending on the connector plug used). Refer to the CC-Link/LT Catalog.)	
Module installation method		DIN rail installation, Can be installed in six directions	

Item	Type	CL2Y16-TP1C2V	
Number of inputs		16 points	
Isolation method		Photocoupler isolation	
Rated load voltage		24VDC (Common with the module power supply)	
Max. load current		0.1A/1 point 1.6A/1 common	
Max. inrush current		0.7A 10ms or lower	
Leakage current at OFF		0.1mA or lower	
Max. voltage drop at ON		0.3V or lower (TYP.) 0.1A, 0.6V or lower (MAX.) 0.1A	
Output method		Sink type	
Protection function		Overload protection function, Overheat protection function	
Response time	OFF→ON	0.5ms or lower	
	ON→OFF	0.5ms or lower (Resistive load)	
Surge suppression		Zener diode	
Common wiring method		16 points/1 common (sensor connector 2-wire type)	
Number of stations occupied		In 4-point mode: Occupies 4 stations, In 8-point mode: Occupies 2 stations In 16-point mode: Occupies 1 station	
External power supply of the output part	Voltage	–	
	Current consumption	–	
Module power supply	Voltage	24VDC (-15 to +20%) (ripple ratio: within 5%)	
	Current consumption	55mA or lower (When 24VDC and all point is on) Not including external load current	
	Current on startup	70mA or lower (24VDC)	
Noise durability		DC type noise voltage 500Vp-p, noise width 1μs, noise carrier frequency 25 to 60Hz (noise simulator condition) First transient/noise burst IEC 61000-4-4: 1kV	
Dielectric withstand voltage		500VAC for 1 minute between DC terminal and internal circuit	
Insulation resistance		10MΩ or more at 500VDC (between external DC terminal and internal circuit)	
Protection degree		IP2X	
Weight		0.08kg	
Applicable I/O connector		Open sensor connector (e-CON) x 16 (Connector plugs are sold separately (compatible wire size: 0.08 to 0.5mm ² , depending on the connector plug used). Refer to the CC-Link/LT Catalog.)	
Module installation method		DIN rail installation, Can be installed in six directions	

Sensor connector type composite module CL2XY16-DTP1C5V

Item		CL2XY16-DTP1C5V						
		Input specifications		Output specifications				
Number of inputs		8 points		Number of outputs				
Isolation method		Photocoupler isolation		Isolation method				
Rated input voltage		24VDC (Common with the module power supply)		Rated load voltage				
Rated input current		Approx. 4mA		Max. load current				
Max. simultaneous ON input points		100%		Max. inrush current				
ON voltage/ON current		19V or more/3mA or more		Leakage current at OFF				
OFF voltage/OFF current		11V or lower/1.7mA or lower		Max. voltage drop at ON				
Input resistance		5.6kΩ		Output method				
Protection function		-		Protection function				
Response time	Response time setting	0.5 ms (High speed response)	1.5 ms (Normal)	1.5 ms (Normal)	OFF→ON	0.5ms or lower		
	OFF→ON	TYP. 0.05ms	MAX. 0.1ms				ON→OFF	0.5ms or lower (Resistive load)
	ON→OFF	TYP. 0.2ms	MAX. 0.5ms					
Input method		Positive common		Surge suppression				
Common wiring method		8 points/1 common (sensor connector 3-wire type)		Common wiring method				
Number of stations occupied		In 4-point mode: Occupies 2 stations In 8 or 16-point mode: Occupies 1 station						
Module power supply	Voltage	24VDC (-15 to +20%) (ripple ratio: within 5%)						
	Current consumption	50mA or lower (When 24VDC and all point is on)						
	Current on startup	70mA or lower (24VDC)						
Noise durability		DC type noise voltage 500Vp-p, noise width 1μs, noise carrier frequency 25 to 60Hz (noise simulator condition) First transient/noise burst IEC 61000-4-4: 1kV						
Dielectric withstand voltage		500VAC for 1 minute between DC terminal and internal circuit						
Insulation resistance		10MΩ or more at 500VDC (between external DC terminal and internal circuit)						
Protection degree		IP2X						
Weight		0.08kg						
Applicable I/O connector		Open sensor connector (e-CON) x 16 (Connector plugs are sold separately (compatible wire size: 0.08 to 0.5mm ² , depending on the connector plug used). Refer to the CC-Link/LT Catalog.)						
Module installation method		DIN rail installation, Can be installed in six directions						

Screw type common terminal block CL2TE-5 Spring clamp type common terminal block CL2TE-10S

Item	Specifications	CL2TE-5	CL2TE-10S
Applicable wire size		0.3 to 1.25mm ² (AWG22 to 16)	0.3 to 1.5mm ² (AWG22 to 16)
Applicable terminal		RAV1.25-3 (JIS C 2805-compliant), V1.25-3 (J.S.T. Mfg Co., Ltd.), TG1.25-3, TG1.25-3N (NICHIFU Co., Ltd.), V1.25-3 (FUJI TERMINAL INDUSTRY Co., Ltd.), 170780-1 (AMP).	-
Wire peeling length		-	8 to 11mm
Terminal block terminal screw tightening torque range (M3 screw)		0.425 to 0.575 N·m	-
Terminal block mounting screw tightening torque range (M3 screw)		0.425 to 0.575 N·m	0.425 to 0.575 N·m
Applicable models		CLX8-D1B2, CL2Y8-TP1B2	CL2X8-D1S2
Weight		0.02 kg	0.03 kg

General Specifications

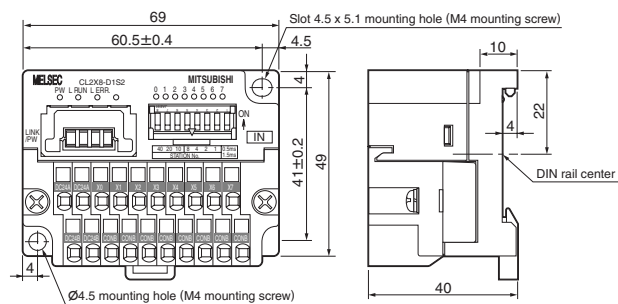
Item	Specifications					
Operating ambient temperature	0 to 55°C					
Storage ambient temperature	-25 to 75°C					
Operating ambient humidity	5 to 95%RH, non-condensing					
Storage ambient humidity	5 to 95%RH, non-condensing					
Vibration resistance	Conforming to JIS B 3502, IEC 61131-2	Under intermittent vibration	Frequency	Acceleration	Amplitude	Sweep count 10 times each in X, Y, Z directions (for 80 min.)
			10 to 57Hz	–	0.075mm	
		Under continuous vibration	57 to 150Hz	9.8m/s ²	–	
			10 to 57Hz	–	0.035mm	
57 to 150Hz	4.9m/s ²	–				
Shock resistance	Conforming to JIS B 3502, IEC 61131-2 (147 m/s ² , 3 times in each of 3 directions X, Y, Z)					
Operating atmosphere	No corrosive gases					
Operating altitude	2000m max.					
Installation location	Inside control panel *3					
Overvoltage category *1	II max.					
Pollution degree *2	2 max.					

- *1. Classification based on limiting (or controlling) the values of prospective transient overvoltages in a circuit (or within an electrical system having different nominal voltages). Category II applies to a device supplied power from a fixed facility. The surge resistance voltage is 2500V for a device having a rating up to 300V.
- *2. For purpose of evaluating clearances and creepage distances, three degrees of pollution in the micro-environment are established. At pollution degree 2, normally, only non-conductive pollution occurs. Occasionally, however, a temporary conductivity caused by condensation must be expected.
- *3. The module can be used externally of outside the control panel providing that the environment satisfies the conditions such as the working ambient temperature and working ambient humidity.

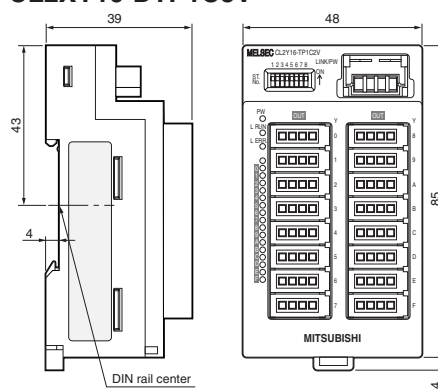
External Dimensions

Unit: mm

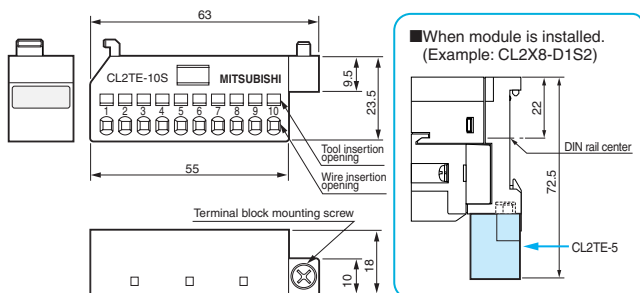
CL2X8-D1S2 CL2Y8-TP1S2



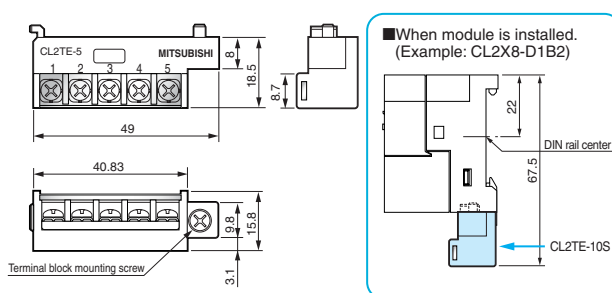
CL2Y16-TP1C2V CL2X16-D1C3V CL2XY16-DTP1C5V



CL2TE-5



CL2TE-10S



Manuals

Relevant manuals

Manual name	Manual supply status	IB/SH No.	Model code
CL2X8-D1S2 CC-Link/LT Remote I/O module User's manual	Included with product	IB-0800256	13JP23
CL2Y8-TP1S2 CC-Link/LT Remote I/O Module User's manual	Included with product	IB-0800257	13JP24
CL2X16-D1C3V CC-Link/LT Remote I/O Module User's manual	Included with product	IB-0800258	13JP25
CL2Y16-TP1C2V CC-Link/LT Remote I/O Module User's manual	Included with product	IB-0800259	13JP26
CL2XY16-DTP1C5V CC-Link/LT Remote I/O Module User's manual	Included with product	IB-0800260	13JP27
CL2TE-5 Common Terminal Block User's manual	Included with product	IB-0800264	13JP32
CL2TE-10S Spring Clamp Type Common Terminal Block User's manual	Included with product	IB-0800265	13JP33

Related products

Item	Model	Specifications
Open sensor connector (e-CON)	ECN-AO****	A type plug 20-piece set
	ECN-MO****	M type plug 20-piece set
Terminal block tool	KD-5339	For clamp terminal block type

Country/Region	Sales office	Tel/Fax	Country/Region	Sales office	Tel/Fax
U.S.A	Mitsubishi Electric Automation Inc. 500 Corporate Woods Parkway Vernon Hills, IL 60061	Tel : +1-847-478-2100 Fax : +1-847-478-2396	Taiwan	Setuyo Enterprise Co., Ltd. 6F., No.105 Wu-Kung 3rd.RD, Wu-Ku Hsiang, Taipei Hsine, Taiwan	Tel : +886-2-2299-2499 Fax : +886-2-2299-2509
Brazil	MELCO-TEC Rep. Com.e Assessoria Tecnica Ltda. AV. Paulista 1471, Conj. 308, Sao Paulo City, Sao Paulo State, Brazil	Tel : +55-11-283-2423 Fax : +55-11-288-3047	Korea	HAN NEUNG TECHNO CO., LTD. 1F Dong Seo Game Channel Bldg., 660-11.Deungchon-dong Kangsec-ku, Seoul, Korea	Tel : +82-2-3660-9552 Fax : +82-2-3664-8372
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France	Mitsubishi Electric Europe B.V. French Branch 25 Boulevard des Bouvets, F-92741 Nanterre Cedex, France	Tel : +33-1-5568-5568 Fax : +33-1-5568-5685	Australia	Mitsubishi Electric Australia Pty. Ltd. 348 Victoria Road, PostalBag, No 2, Rydalmere, N.S.W 2116, Australia	Tel : +61-2-9684-7777 Fax : +61-2-9684-7245
South Africa	Circuit Breaker Industries LTD. Tripswitch Drive, Elandsfontein Gauteng, South Africa	Tel : +27-11-928-2000 Fax : +27-11-392-2354			
Hong Kong	Ryoden Automation Ltd. 10th Floor, Manulife Tower, 169 Electric Road, North Point, Hong Kong	Tel : +852-2887-8870 Fax : +852-2887-7984			
China	Ryoden Automation Shanghai Ltd. 3F Block5 Building Automation Instrumentation Plaza 103 Cao Bao Rd. Shanghai 200233 China	Tel : +86-21-6475-3228 Fax : +86-21-6484-6996			



HEAD OFFICE: 1-8-12, OFFICE TOWER Z 14F HARUMI CHUO-KU 104-6212, JAPAN
NAGOYA WORKS: 1-14, YADAMINAMI 5, HIGASIKU, NAGOYA, JAPAN