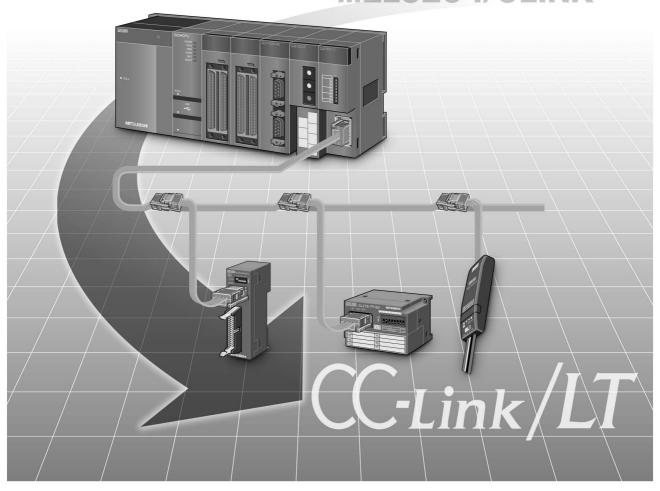




Mitsubishi Programmable Controller

Transition from MELSEC-I/OLINK to CC-Link/LT Handbook

MELSEC-I/OLINK



Feb. 2016 Edition

OSAFETY PRECAUTIONS

(Read these precautions before using this product.)

Before using products introduced in this publication, please read relevant manuals and replacement handbooks carefully and pay full attention to safety to handle the product correctly. In this publication, the safety precautions are classified into two levels:

"/NARNING" and "/NCAUTION".

Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.

!CAUTION

Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "_____CAUTION" may lead to serious consequences.

Observe the precautions of both levels because they are important for personal and system safety. Make sure that the end users read this publication and keep it in a safe place for future reference.

[Design Precautions]

MARNING

- Configure safety circuits external to the programmable controller to ensure that the entire system
 operates safely even when a fault occurs in the external power supply or the programmable
 controller. Failure to do so may result in an accident due to an incorrect output or malfunction.
 - (1) Configure external safety circuits, such as an emergency stop circuit, protection circuit, and protective interlock circuit for forward/reverse operation or upper/lower limit positioning.
 - (2) The programmable controller stops its operation upon detection of the following status, and the output status of the system will be as shown below.

	Q series module	A/AnS series module
Overcurrent or overvoltage protection of the power supply module is activated.	All outputs are turned off	All outputs are turned off
The CPU module detects an error such as a watchdog timer error by the self-diagnostic function.	All outputs are held or turned off according to the parameter setting.	All outputs are turned off

All outputs may turn on when an error occurs in the part, such as I/O control part, where the CPU module cannot detect any error. To ensure safety operation in such a case, provide a safety mechanism or a fail-safe circuit external to the programmable controller. For a fail-safe circuit example, refer to General Safety Requirements in the QCPU User's Manual (Hardware Design, Maintenance and Inspection).

(3) Outputs may remain on or off due to a failure of an output module relay or transistor. Configure an external circuit for monitoring output signals that could cause a serious accident.

[Design Precautions]

WARNING

- In an output module, when a load current exceeding the rated current or an overcurrent caused by a load short-circuit flows for a long time, it may cause smoke and fire. To prevent this, configure an external safety circuit, such as a fuse.
- Configure a circuit so that the programmable controller is turned on first and then the external power supply.
 - If the external power supply is turned on first, an accident may occur due to an incorrect output or malfunction.
- For the operating status of each station after a communication failure, refer to relevant manuals for the network.
 - Incorrect output or malfunction due to a communication failure may result in an accident.
- When changing data of the running programmable controller from a peripheral connected to the CPU module or from a personal computer connected to an intelligent function module/special function module, configure an interlock circuit in the sequence program to ensure that the entire system will always operate safely.

For other forms of control (such as program modification or operating status change) of a running programmable controller, read the relevant manuals carefully and ensure that the operation is safe before proceeding.

Especially, in the case of a control from an external device to a remote programmable controller, immediate action cannot be taken for a problem on the programmable controller due to a communication failure.

To prevent this, configure an interlock circuit in the sequence program, and determine corrective actions to be taken between the external device and CPU module in case of a communication failure.

⚠ CAUTION

- Do not install the control lines or communication cables together with the main circuit lines or power cables.
 - Keep a distance of 100mm (3.94 inches) or more between them.
 - Failure to do so may result in malfunction due to noise.
- When a device such as a lamp, heater, or solenoid valve is controlled through an output module, a large current (approximately ten times greater than normal) may flow when the output is turned from off to on.
 - Take measures such as replacing the module with one having a sufficient current rating.
- After the CPU module is powered on or is reset, the time taken to enter the RUN status varies
 depending on the system configuration, parameter settings, and/or program size. Design circuits so
 that the entire system will always operate safely, regardless of the time.

[Installation Precautions]

CAUTION

- Use the programmable controller in an environment that meets the general specifications in the QCPU User's Manual (Hardware Design, Maintenance and Inspection).
 - Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- To mount the module, while pressing the module mounting lever located in the lower part of the module, fully insert the module fixing projection(s) into the hole(s) in the base unit and press the module until it snaps into place.
 - Incorrect mounting may cause malfunction, failure or drop of the module.
 - When using the programmable controller in an environment of frequent vibrations, fix the module with a screw.
 - Tighten the screw within the specified torque range.
 - Undertightening can cause drop of the screw, short circuit or malfunction.
 - Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.
- When using an extension cable, connect it to the extension cable connector of the base unit securely.
 Check the connection for looseness.
 - Poor contact may cause incorrect input or output.
- When using a memory card, fully insert it into the memory card slot.
 - Check that it is inserted completely.
 - Poor contact may cause malfunction.
- When using an SD memory card, fully insert it into the SD memory card slot. Check that it is inserted completely. Poor contact may cause malfunction.
- Securely insert an extended SRAM cassette into the cassette connector of the CPU module. After insertion, close the cassette cover to prevent the cassette from coming off. Poor contact may cause malfunction.
- Shut off the external power supply for the system in all phases before mounting or removing the module. Failure to do so may result in damage to the product.
 - A module can be replaced online (while power is on) on any MELSECNET/H remote I/O station or in the system where a CPU module supporting the online module change function is used.
 - Note that there are restrictions on the modules that can be replaced online, and each module has its predetermined replacement procedure.
 - For details, refer to the relevant sections in the QCPU User's Manual (Hardware Design, Maintenance and Inspection) and in the manual for the corresponding module.
- Do not directly touch any conductive parts and electronic components of the module, memory card, SD memory card, or extended SRAM cassette. Doing so can cause malfunction or failure of the module.
- When using a Motion CPU module and modules designed for motion control, check that the combinations of these modules are correct before applying power. The modules may be damaged if the combination is incorrect. For details, refer to the user's manual for the Motion CPU module.

[Wiring Precautions]

WARNING

- Shut off the external power supply for the system in all phases before wiring.
 Failure to do so may result in electric shock or damage to the product.
- After wiring, attach the included terminal cover to the module before turning it on for operation.
 Failure to do so may result in electric shock.

CAUTION

- Individually ground the FG and LG terminals of the programmable controller with a ground resistance of 100 ohms or less. Failure to do so may result in electric shock or malfunction.
- Use applicable solderless terminals and tighten them within the specified torque range. If any spade solderless terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
- Check the rated voltage and terminal layout before wiring to the module, and connect the cables correctly.
 - Connecting a power supply with a different voltage rating or incorrect wiring may cause a fire or failure.
- Connectors for external connection must be crimped or pressed with the tool specified by the manufacturer, or must be correctly soldered.
 - Incomplete connections could result in short circuit, fire, or malfunction.
- Securely connect the connector to the module. Poor contact may cause malfunction.
- Do not install the control lines or communication cables together with the main circuit lines or power cables. Keep a distance of 100mm or more between them. Failure to do so may result in malfunction due to noise.
- Place the cables in a duct or clamp them. If not, dangling cable may swing or inadvertently be pulled, resulting in damage to the module or cables or malfunction due to poor contact.
- Check the interface type and correctly connect the cable. Incorrect wiring (connecting the cable to an incorrect interface) may cause failure of the module and external device.
- Tighten the terminal screw within the specified torque range.
 - Undertightening can cause short circuit, fire, or malfunction.
 - Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.
- Prevent foreign matter such as dust or wire chips from entering the module.
 - Such foreign matter can cause a fire, failure, or malfunction.
- A protective film is attached to the top of the module to prevent foreign matter, such as wire chips, from entering the module during wiring.
 - Do not remove the film during wiring.
 - Remove it for heat dissipation before system operation.

[Wiring Precautions]

CAUTION

- When disconnecting the cable from the module, do not pull the cable by the cable part. For the cable with connector, hold the connector part of the cable. For the cable connected to the terminal block, loosen the terminal screw. Pulling the cable connected to the module may result in malfunction or damage to the module or cable.
- Mitsubishi programmable controllers must be installed in control panels.
 Connect the main power supply to the power supply module in the control panel through a relay terminal block.

Wiring and replacement of a power supply module must be performed by maintenance personnel who is familiar with protection against electric shock. (For wiring methods, refer to the QCPU User's Manual (Hardware Design, Maintenance and Inspection)).

[Startup and Maintenance Precautions]

! WARNING

- Do not touch any terminal while power is on.
 Doing so will cause electric shock or malfunction.
- Correctly connect the battery connector.
 Do not charge, disassemble, heat, short-circuit, solder, or throw the battery into the fire. Also, do not expose it to liquid or strong shock. Doing so will cause the battery to produce heat, explode, ignite, or leak, resulting in injury and fire.
- Shut off the external power supply for the system in all phases before cleaning the module or retightening the terminal screws or module fixing screws.
 Failure to do so may result in electric shock.

!CAUTION

- Before performing online operations (especially, program modification, forced output, and operation status change) for the running CPU module from the peripheral connected, read relevant manuals carefully and ensure the safety.
 - Improper operation may damage machines or cause accidents.
- Do not disassemble or modify the modules.
 Doing so may cause failure, malfunction, injury, or a fire.
- Use any radio communication device such as a cellular phone or PHS (Personal Handy-phone System) more than 25cm (9.85 inches) away in all directions from the programmable controller.
 Failure to do so may cause malfunction.
- Shut off the external power supply for the system in all phases before mounting or removing the module. Failure to do so may cause the module to fail or malfunction.
 - A module can be replaced online (while power is on) on any MELSECNET/H remote I/O station or in the system where a CPU module supporting the online module change function is used.
 - Note that there are restrictions on the modules that can be replaced online, and each module has its predetermined replacement procedure.
 - For details, refer to the relevant sections in the QCPU User's Manual (Hardware Design, Maintenance and Inspection) and in the manual for the corresponding module.

[Startup and Maintenance Precautions]

CAUTION

- After the first use of the product, do not mount/remove the module to/from the base unit, and the terminal block to/from the module, and do not insert/remove the extended SRAM cassette to/from the CPU module more than 50 times (IEC 61131-2 compliant) respectively. Exceeding the limit may cause malfunction.
- After the first use of the product, do not insert/remove the SD memory card to/from the CPU module more than 500 times. Exceeding the limit may cause malfunction.
- Do not drop or apply shock to the battery to be installed in the module.
 Doing so may damage the battery, causing the battery fluid to leak inside the battery.
 If the battery is dropped or any shock is applied to it, dispose of it without using.
- Before handling the module, touch a grounded metal object to discharge the static electricity from the human body.
 - Failure to do so may cause the module to fail or malfunction.

[Disposal Precautions]

CAUTION

When disposing of this product, treat it as industrial waste.
 When disposing of batteries, separate them from other wastes according to the local regulations.
 (For details of the battery directive in EU member states, refer to the QCPU User's Manual (Hardware Design, Maintenance and Inspection).)

[Transportation Precautions]

CAUTION

When transporting lithium batteries, follow the transportation regulations.
 (For details of the regulated models, refer to the QCPU User's Manual (Hardware Design, Maintenance and Inspection).)

●CONDITIONS OF USE FOR THE PRODUCT ■

- (1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
 - i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
 - ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.
- (2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.

MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT. ("Prohibited Application")

Prohibited Applications include, but not limited to, the use of the PRODUCT in;

- Nuclear Power Plants and any other power plants operated by Power companies, and/or any
 other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above, restrictions Mitsubishi may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTs are required. For details, please contact the Mitsubishi representative in your region.

REVISIONS

* The handbook number is given on the bottom left of the back cover.

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Mar. 2008	L(NA)08062ENG-B	Partial correction
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		Chapter 6 to Appendix 1, Appendix1 to Appendix 2
		Partial correction
		SAFETY PRECAUTIONS
Feb. 2016	L(NA)08062ENG-D	Partial correction
		Cover, WARRANTY

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INTRODUCTION

1.1 Replacing with the Q Series

The Q Series does not have an MELSEC-I/OLINK Remote I/O System Master Module. For this reason, examine replacing with the CC-Link/LT system when replacing the MELSEC-I/OLINK Remote I/O System with the Q Series.

1.2 Precautions for Replacement

- (a) Before replacing MELSEC-I/OLINK with CC-Link/LT, be sure to refer to the manuals for each of the CC-Link/LT modules, and confirm the functions, specifications and methods of use of the modules.
- (b) After replacing MELSEC-I/OLINK with CC-Link/LT, be sure to check operation of the entire system before starting actual operation.

PERFORMANCE SPECIFICATIONS COMPARISONS

2.1 Performance Specifications Comparison of MELSEC-I/OLINK and CC-Link/LT

			Specificati		. Compatible, A.		Precautions for
Ite	m	MELSEC-I/OLINK		CC-Link/LT		Compati- bility	replacement
		WIELSEC-I/OLINK	4-point mode	8-point mode	16-point mode	Dility	replacement
Max. number of link Per single stations		16 stations (1 station 4 points)		64 stations			
master Max. station number of control I/O points	128 points (when the same number is used on X and Y)	512 points (when the same number is used on X and Y)	1024 points (when the same number is used on X and Y)	2048 points (when the same number is used on X and Y)	0		
Link scan time*		Approx. 5.4ms	0.32 to 4.15ms	0.38 to 5.17ms	0.51 to 7.22ms	Δ	In the 16-point mode and 156 kbps, the link scan takes longer (7.22ms).
Overall distar	ice	200m	35m (2.5 Mbps) 100m (625 kbps) 500m (156 kbps)			Δ	The overall distance changes according to the transmission speed.
Communicati	on speed	38.4kbps	2.51	/lbps/625kbps/156	kbps	0	
Error control	method	Parity check		CRC		0	
Network Topo	logy	Bus (T-branch possible)	T-branch		0		
Connection c	able	Twisted pair cable, Cabtire cable	•		×	New cable must be installed.	
Terminating re	esistor	Not required	Required		×	A terminal resistor is mandatory.	
Power supply	adapter	Not required	Required		×	A power supply adapter is mandatory.	
Number of oc points	cupied I/O	16, 32, 48, 64 points	16, 32, 48,	64, 128, 256, 512,	1024 points	0	

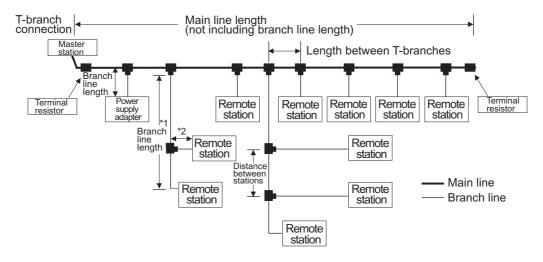
^{*} The link scan time of CC-Link/LT are the based on following calculations: Minimum: Value of when 16 stations are connected at a transmission speed of 2.5 Mbps Maximum: Value of when 16 stations are connected at a transmission speed of 156 kbps

2.2 Wiring in CC-Link/LT

New cables must be laid when replacing MELSEC-I/OLINK with CC-Link/LT as the two systems differ in the applicable cable types. Also, a power supply adapter is mandatory with CC-Link/LT.

2.2.1 Transmission distance

Item		Remarks				
Transmission speed	2.5Mbps	625kbps	156kbps	_		
Distance between		Unrestricted		_		
stations		Onlestricted		_		
Max. number of						
stations connected on a		8 stations				
branch line		_				
(per 1 branch)						
				Cable length between terminating		
Main line length	35m	100m	500m	resistors		
				(not inlouding branch line length)		
Length between T		Unrestricted				
branches		_				
Max. branch line length	4m	16m	60m	Cable length per 1 branch		
Overall branch line	15m	50m	200m	Total branch line length		
length	13111	50111	200111	Total branch line length		



^{*1:} Branch line length includes length *2. (Max. branch line length and overall branch line length include length *2.)

2.2.2 Cable specifications

(1) CC-Link/LT dedicated flat cable specifications

Item	Specifications	Cross-section
Cable type	Flat cable	
Service temperature	-10 to 80 °C	Ground color (light blue) Polarity mark (orange)
range	-10 10 00 C	- Tolarity mark (orange)
Rated voltage	30V	
Number of cores	4	2.54mm
Conductor resistance	23.4 Ω /km or less	
(at 20°C)	25.4 §2 /KIII OI IESS	2.54mm
Safety	UL Subject758	10.16mm
Fire retardance	UL VW-1 • -F-	<u> </u>

(2) VCTF cable specifications (extracted from JIS 3306)

	Number of	Conductor Nominal Number of			Conductor	Sheath	Conductor
Туре	cores	cross- sectional area	component wires/wire diameter	Outside diameter	thickness	thickness	resistance (20°C)
/inyl cabtire ound cable	4 cores	0.75mm ²	30/0.18mm	1.1mm	0.6mm	1.0mm	25.1 Ω /km

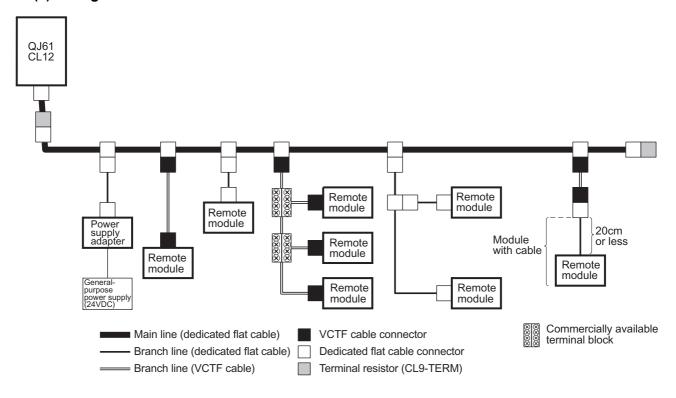
(3) CC-Link Partner Association approved dedicated movable cables supplies

Use the following dedicated movable cables approved by the CC-Link Partner Association.

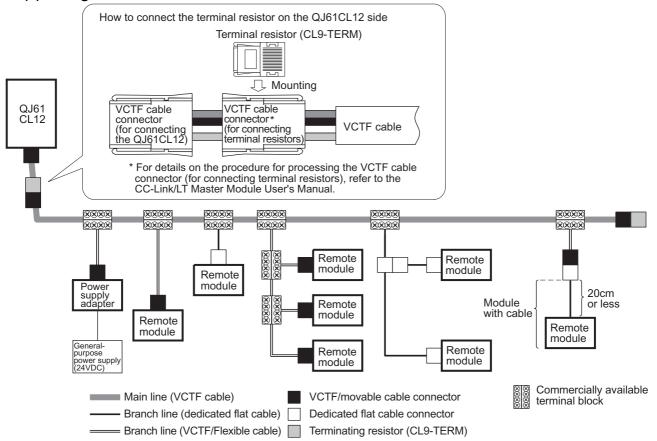
Name of manufacturer	Dedicated movable cable model name
Mitsubishi Electric System Service Co.,Ltd	CL9-MV4-075
DAIDEN Co., Ltd.	CM/LT(2586)AWG19/4C
Yoshinogawa Electric Wire & Cable Co., Ltd.	CRFV-A075C04-LT
KURAMO ELECTRIC CO., LTD.	FANC-Z/LT

2.2.3 Connection system

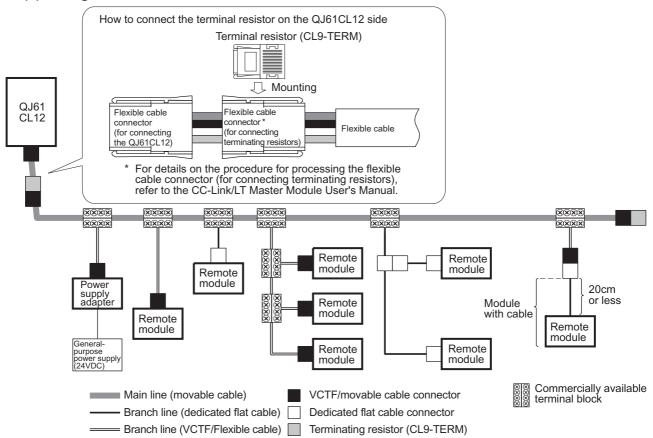
(1) Using the dedicated flat cable for the main line



(2) Using the VCTF cable for the main line



(3) Using the movable cable for the main line



3

FUNCTIONAL COMPARISONS

3.1 Functional Comparisons of MELSEC-I/OLINK and CC-Link/LT

	ltom	Fund	tions	Compati-	Precautions for replacement	
	Item	MELSEC-I/OLINK	CC-Link/LT	bility		
	e station unication	Communication with up to 16 slave stations is possible.	Communication with up to 64 slave stations is possible.	0	In the CC-Link/LT 4-point mode, I/O devices do not need to be changed on the program.	
	Detection of faulty station (display)	Faulty stations can be known by the LED display (ERROR STATION) on the master station.	Faulty stations can be known in the CC-Link/LT diagnostics screen on GX Developer.	Δ		
RAS functi	Method of notifying the CPU module of error detection Method of notifying the CPU module is notified by fuse blown detection (M 9000). External output is also performed from the RUN A/B terminals on the MELSEC-I/OLINK Master Module.		An error can be known by the buffer memory error detailed information (address 16) on the CC-Link/LT Master Module. Note, however, that there is no external output from terminals.	Δ	The error detection method	
on	Line check	Cable breaks can be checked by the lit state of the LEDs on the master station and slave stations.	The line can be diagnosed by line test and other station monitoring in the CC-Link/LT diagnostics screen on GX Developer.	Δ	differs. Review the program.	
	Disconne ction of faulty station	Stations not to be detected as faulty stations can be set by the ON LINE STATION switch on the master station.	An equivalent function is not available. Note, however, that errors are not detected on disconnected stations that are assgined the final station number, which is set in the final station number setting, or higher numbers.	Δ		

4

REPLACING THE MASTER MODULE

4.1 List of Alternative Master Module Models

MELSEC-I/OLINK		Alternative model for CC-Link/LT		
Product name	Model name	Model name	Remarks	
Master module	AJ51T64	QJ61CL12	Examine replacement with CC-Link/LT. For details,	
Master Module	A1SJ51T64	QJ01CL12	refer to the User's Manual for the respective module.	

5

REPLACING THE I/O MODULES

5.1 List of Alternative I/O Module Models

MELSEC	C-I/OLINK		Alternative models for CC-Link/LT
Product name	Model name	Model name	Remarks (restrictions)
	AJ55TB3-4D	CL1X4-D1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Not required (3) Program changes
Input module	AJ55TB3-8D	CL2X8-D1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Not required (3) Program changes
	AJ55TB3-16D	CL2X8-D1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Required (2 modules necessary) (3) Program changes

MELSEC	-I/OLINK		Alternative models for CC-Link/LT
Product name	Model name	Model name	Remarks (restrictions)
	AJ55TB2-4R	CL1Y4-R1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Not required (3) Program changes Change in number of occupied I/O points: Not required. (in 4-point mode) (4) Specifications change Change in rated output voltage: Required Change in rated output current: Not required (5) Change in functions: Not required
	AJ55TB2-8R	CL1Y4-R1B2	(1) Change in external wiring: Required (2) Change in number of modules: Required (2 modules necessary) (3) Program changes Change in number of occupied I/O points: Not required. (in 4-point mode) (4) Specifications change Change in rated output voltage: Required Change in rated output current: Not required (5) Change in functions: Not required
Output module	AJ55TB2-16R	CL1Y4-R1B2	(1) Change in external wiring: Required (2) Change in number of modules: Required (4 modules necessary) (3) Program changes Change in number of occupied I/O points: Not required. (in 4-point mode) (4) Specifications change Change in rated output voltage: Required Change in rated output current: Not required (5) Change in functions: Not required
	AJ55TB2-4T	CL1Y4-T1B2	(1) Change in external wiring: Required (2) Change in number of modules: Not required (3) Program changes Change in number of occupied I/O points: Not required. (in 4-point mode) (4) Specifications change Change in rated output voltage: Not required Change in rated output current: Required (5) Change in functions: Not required
	AJ55TB2-8T	CL2Y8-TP1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Not required (3) Program changes
	AJ55TB2-16T	CL2Y8-TP1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Required (2 modules necessary) (3) Program changes Change in number of occupied I/O points: Not required. (in 4-point mode) (4) Specifications change Change in rated output voltage: Not required Change in rated output current: Required (5) Change in functions: Not required

MELSEC	-I/OLINK		Alternative models for CC-Link/LT
Product name	Model name	Model name	Remarks (restrictions)
	AJ55TB32-4DR	CL1XY4-DR1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Not required (3) Program changes
I/O module	AJ55TB32-8DR	CL1XY8-DR1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Not required (3) Program changes
	AJ55TB32-16DR	CL1XY8-DR1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Required (2 modules necessary) (3) Program changes Change in number of occupied I/O points: Not required. (in 4-point mode) (4) Specifications change Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Required Change in rated output current: Not required (5) Change in functions: Required (input: 3-wire type) → 2-wire type)

MELSEC	-I/OLINK	Α	Iternative models for CC-Link/LT
Product name	Model name	Model name	Remarks (restrictions)
	AJ55TB32-4DT	CL1XY4-DT1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Not required (3) Program changes
I/O module	AJ55TB32-8DT	CL1XY8-DT1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Not required (3) Program changes
	AJ55TB32-16DT	CL1XY8-DT1B2	 (1) Change in external wiring: Required (2) Change in number of modules: Required (2 modules necessary) (3) Program changes

5.2 I/O Module Specifications Comparisons

5.2.1 Input module specifications comparisons

(1) Comparisons between AJ55TB3-4D and CL1X4-D1B2

○: Compatible, △: Partially changed, x: Not compatible					
Specif	fications	AJ55TB3-4D	CL1X4-D1B2	Compati- bility	Precautions for replacement
Number of it	nput points	4 points	4 points	0	
Isolation me	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	24VDC	24VDC	0	
Rated input	current	Approx. 7mA	Approx. 4mA	Δ	Rated input current is smaller.*1
Operating vo	oltage range	19.2 to 26.4VDC (ripple ratio within 5%)	20.4 to 28.8VDC (ripple ratio within 5%)	Δ	Operating voltage range is different.
Maximum si	imultaneous	(hppie ratio within 370)	(hpple ratio within 370)		different.
on input poi		100%	100%	0	
ON voltage/	ON current	14VDC or more/3.5mA or more	19VDC or more/3mA or more	Δ	Use caution on the voltage level.
OFF voltage/OFF current		6VDC or less/1.7mA or less	11VDC or less/1.7mA or less	Δ	Use caution on the voltage level.
Input resista	ance	Approx. 3.3k Ω	Approx. 5.6k Ω	Δ	Input resistance is greater.*1
			High-speed setting: 0.5ms or		
Response	OFF→ ON	10ms or less	less Standard setting: 1.5ms or less	0	Standard setting: Use at 1.5ms.
time	ON→ OFF	10ms or less	High-speed setting: 0.5ms or less Standard setting: 1.5ms or less	0	Standard setting: Use at 1.5ms.
Common ter		4 points per common (3-wire type terminal block)	4 points per common (2-wire type terminal block)	Δ	To connect a 3-wire type sensor, etc., an external common terminal block is required.
Number of o	occupied	1 station occupied	In 4-, 8- and 16-point modes: 1 station occupied	0	Set to the 4-point mode.
Operation in	ndicator	ON indication (LED)	ON indication (LED)	0	
External wiring method		16-point terminal block (M3 screw) Transmission circuit included	8-point terminal block (M3 screw) Dedicated connector for each of transmission and module power supply	×	Wiring must be changed. A dedicated connector is used to
Applicable wire size		0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for
Applicable crimping terminal		1.25-3, 1.25-YS3A, 2-S3, 2-YS3A V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3, V1.25-3, 1.25-3, TG1-3	×	transmission and module power supply.
I/O	Voltage	15.6 to 27.6VDC	20.4 to 28.8VDC	_	Operating voltage range is
	Voltage	(peak voltage 27.6VDC)	(ripple ratio within 5%)	Δ	different.
module power supply	Current	35mA	40mA	Δ	The current consumption has increased, so the current capacity must be reviewed.
External dim	nensions	50(H) × 82(W) × 66(D)mm	53.5(H) × 50(W) × 40(D) mm	×	The external dimensions is different. Use caution on the mounting.
Weight		0.2kg	0.06kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the CL1X4-D1B2.

(2) Comparisons between AJ55TB3-8D and CL2X8-D1B2

			O: Com		: Partially changed, × : Not compatib
Specif	ications	AJ55TB3-8D	CL2X8-D1B2	Compati- bility	Precautions for replacement
Number of in	nput points	8 points	8 points	0	
Isolation me	thod	Photocoupler	Photocoupler	0	
Rated input	voltage	24VDC	24VDC	0	
Rated input	current	Approx. 7mA	Approx. 4mA	Δ	Rated input current is smaller.*1
O	-14	19.2 to 26.4VDC	20.4 to 28.8VDC		Operating voltage range is
Operating vi	oltage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	different.
Maximum si on input poi		100%	100%	0	
ON voltage/	ON current	14VDC or more/3.5mA or more	19VDC or more/3mA or more	Δ	Use caution on the voltage level.
OFF voltage	e/OFF current	6VDC or less/1.7mA or less	11VDC or less/1.7mA or less	Δ	Use caution on the voltage level.
Input resista	ince	Approx. 3.3k Ω	Approx. 5.6k Ω	Δ	Input resistance is greater.*1
Response	OFF→ON	10ms or less	High-speed setting: 0.1 ms or less Standard setting: 1.5ms or less	0	Standard setting: Use at 1.5ms.
time	ON→OFF	10ms or less	High-speed setting: 0.5ms or less Standard setting: 1.5ms or less	0	Standard setting: Use at 1.5ms.
Common ter arrangemen		8 points per common (3-wire type terminal block)	8 points per common (2-wire type terminal block)	Δ	With the optional common terminal block (CL2TE-5), the terminal block can be used as a 3-wire type terminal block.
Number of costations	occupied	2 stations occupied	In 4-point mode: 2 stations occupied In 8- and 16-point mode: 1 station occupied	0	Set to the 4-point mode.
Operation in	dicator	ON indication (LED)	ON indication (LED)	0	
External wiring method		24-point terminal block (M3 screw) Transmission circuit included	14-point terminal block (M3 screw) Dedicated connector for each of transmission and module power supply	×	Wiring must be changed. A dedicated connector is used to
Applicable wire size		0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for
Applicable crimping terminal		1.25-3, 1.25-YS3A, 2-S3, 2-YS3A V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3, V1.25-3, 1.25-3, TG1-3	×	transmission and module power supply.
I/O module	Voltage	15.6 to 27.6VDC (peak voltage 27.6VDC)	20.4 to 28.8VDC (ripple ratio within 5%)	Δ	Operating voltage range is different.
power supply	Current	45 mA	40 mA or less	0	
External dim	nensions	50(H) × 114(W) × 66(D)mm	53.5(H) × 64(W) × 40(D) mm	×	The external dimensions is different. Use caution on the mounting.
Weight		0.3kg	0.09 kg	0	

 $^{^{\}star}$ 1: Confirm the specifications of the sensors or switches to be connected to the CL2X8-D1B2.

(3) Comparisons between AJ55TB3-16D and CL2X8-D1B2

			O: Com	ipatible, △	: Partially changed, \times : Not compatible
Specif	ications	AJ55TB3-16D	CL2X8-D1B2	Compati- bility	Precautions for replacement
Number of i	nput points	16 points	8 points	×	When nine or more points are used, use two CL2X8-D1B2 modules.
Isolation me	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	24VDC	24VDC	0	
Rated input	current	Approx. 7mA	Approx. 4mA	Δ	Rated input current is smaller.*1
Operating v	oltage range	19.2 to 26.4VDC (ripple ratio within 5%)	20.4 to 28.8VDC (ripple ratio within 5%)	Δ	Operating voltage range is different.
Maximum si on input poi	imultaneous nt	100%	100%	0	
ON voltage/		14VDC or more/3.5mA or more	19VDC or more/3mA or more	Δ	Use caution on the voltage level.
OFF voltage	e/OFF current	6VDC or less/1.7mA or less	11VDC or less/1.7mA or less	Δ	Use caution on the voltage level.
Input resista	ince	Approx. 3.3k Ω	Approx. 5.6k Ω	Δ	Input resistance is greater.*1
Response	OFF→ON	10ms or less	High-speed setting: 0.1 ms or less Standard setting: 1.5ms or less	0	Standard setting: Use at 1.5ms.
time	ON→OFF	10ms or less	High-speed setting: 0.5ms or less Standard setting: 1.5ms or less	0	Standard setting: Use at 1.5ms.
Common te arrangemer		16 points per common (3-wire type terminal block)	8 points per common (2-wire type terminal block)	Δ	With the optional common terminlal block (CL2TE-5), the terminal block can be used as a 3-wire type terminal block.
Number of o	occupied	4 stations occupied	In 4-point mode: 2 stations occupied In 8- and 16-point mode: 1 station occupied	Δ	Set to the 4-point mode.
Operation in	ndicator	ON indication (LED)	ON indication (LED)	0	
External wiring method		40-point terminal block (M3 screw) Transmission circuit included	14-point terminal block (M3 screw) Dedicated connector for each of transmission and module power supply	×	Wiring must be changed. A dedicated connector is used to
Applicable wire size		0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for
Applicable crimping terminal		1.25-3, 1.25-YS3A, 2-S3, 2-YS3A V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3, V1.25-3, 1.25-3, TG1-3	×	transmission and module power supply.
I/O	Voltage	15.6 to 27.6VDC (peak voltage 27.6VDC)	20.4 to 28.8VDC (ripple ratio within 5%)	Δ	Operating voltage range is different.
module power supply	Current	60mA	40 mA or less	Δ	Using two CL2X8-D1B2 moduels requires higher current consumption, so the current capacity must be reviewed.
External din	nensions	50(H) × 177(W) × 66(D)mm	53.5(H) × 64(W) × 40(D) mm	×	The external dimensions is different. Use caution on the mounting.
Weight		0.4kg	0.09 kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the CL2X8-D1B2.

5.2.2 Comparison of output unit specifications

(1) Comparisons between AJ55TB2-4R and CL1Y4-R1B2

 \bigcirc : Compatible, \triangle : Partially changed, \times : Not compatible Compati **Specifications** AJ55TB2-4R CL1Y4-R1B2 **Precautions for replacement** bility Number of output points 4 points 4 points 0 Isolation method Photocoupler Photocoupler 0 24VDC 2A (resistance load)/ 30VDC 2A/point Rated load voltage/ Common current capacity is 240VAC 2A/point Δ 240VAC 2A (COS ϕ =1)/point current smaller 4A/common 8A/common 5VDC 1mA 5VDC 2mA Minimum switching load Δ Confirm the specifications of the Maximum switching 250VAC, 110VDC 250VAC, 30VDC load to be used. Δ voltage Response OFF → ON 10ms or less 10ms or less \bigcirc ON→ OFF time 12ms or less 10ms or less 0 Mechanical life 20 million times or more Rated switching voltage/ current load 200VAC 1.5A, 240VAC 1A 100,000 times or more $(COS \phi = 0.7) 100,000 times$ 200VAC 1.5A, 240VAC 1A or more $(COS \phi = 0.7) 100,000 times$ 200VAC 1A, 240VAC0.1A or more Electrical life $(COS \phi = 0.35) 100,000 times$ 0 200VAC 1A, 240VAC 0.5A or more $(COS \phi = 0.35) 100,000 times$ 24VDC 1A, 100VDC 0.1A or more (L/R=7ms) 100.000 times or 24VDC 1A, 100VDC 0.1A more (L/R=7ms) 100,000 times or more Maximum switching 3,600 times/hr frequency $24VDC \pm 10\%$ 20.4 to 28.8VDC External Voltage 0 Ripple voltage 4Vp-p or less (ripple ratio within 5%) power 23mA Included in I/O unit power Current supply (24VDC TYP. all points ON) supply Surge suppressor None None 0 Common terminal 4 points per common 4 points per common 0 arrangement (2-wire type terminal block) (2-wire type terminal block) In 4-, 8- and 16-point modes: 1 Number of occupied 1 station occupied 0 Set to the 4-point mode. stations station occupied Operation indicator ON indication (LED) ON indication (LED) 0 16-point terminal block 16-point terminal block (M3 screw) External wiring method (M3 screw) Dedicated connector for each × Wiring must be changed. Transmission circuit included of transmission and module A dedicated connector is used to power supply make wiring connection for Applicable wire size 0.75 to 2mm² 0.3 to 1.25mm² × transmission and module power 1.25-3, 1.25-YS3A, supply. Applicable crimping 2-S3, 2-YS3A RAV1.25-3. V1.25-3. × terminal V1.25-3. V1.25-YS3A. 1.25-3. TG1-3 V2-S3, V2-YS3A 15.6 to 27.6VDC 20.4 to 28.8VDC Operating voltage range is I/O Voltage Δ (peak voltage 27.6VDC) (ripple ratio within 5%) different. module The current consumption has power 50mA 65mA Current increased, so the current capacity Δ supply must be reviewed. The external dimensions is External dimensions $50(H) \times 82(W) \times 66(D)mm$ $53.5(H) \times 80(W) \times 40(D)$ mm Use caution on the mounting. 0.2kg Weight 0.11kg 0

(2) Comparisons between AJ55TB2-8R and CL1Y4-R1B2

· -	nod bltage/	8 points Photocoupler 24VDC 2A (resistance load)/	CL1Y4-R1B2 4 points Photocoupler	bility ×	Precautions for replacement When five or more points are used, use two CL1Y4-R1B2 modules.
Rated load vo current Minimum switt Maximum switvoltage Response	nod bltage/	Photocoupler 24VDC 2A (resistance load)/	·		· ·
Rated load vo current Minimum switt Maximum switvoltage Response	oltage/	24VDC 2A (resistance load)/	Photocoupler	0	
Minimum switi Maximum switi voltage Response					
Minimum switi Maximum switi voltage Response			30VDC 2A/point		
Minimum swite Maximum swite voltage Response		point	240VAC 2A/point	0	
Maximum swit voltage Response		240VAC 2A (COS ϕ =1)/point	4A/common		
Maximum swit voltage Response		8A/common			
voltage Response	ching load	5VDC 1mA	5VDC 2mA	Δ	Confirm the specifications of the
Response	tching	250VAC, 110VDC	250VAC, 30VDC	Δ	load to be used.
· -		,	·		
	OFF→ON	10ms or less	10ms or less	0	
	ON→OFF	12ms or less	10ms or less	0	
Mechanical life	е	20 million times or more	-		
		Rated switching voltage/			
		current load	200VAC 1.5A, 240VAC 1A		
		100,000 times or more	(COS ϕ =0.7) 100,000 times		
		200VAC 1.5A, 240VAC 1A	or more		
		(COS ϕ =0.7) 100,000 times	200VAC 1A, 240VAC0.1A		
Electrical life		or more	$(\cos \phi = 0.35) 100,000 \text{ times}$	0	
_iootiioai iiie		200VAC 1A, 240VAC 0.5A	or more		
		(COS ϕ =0.35) 100,000 times	24VDC 1A, 100VDC 0.1A		
		or more	(L/R=7ms) 100,000 times or		
		24VDC 1A, 100VDC 0.1A	more		
		(L/R=7ms) 100,000 times or	more		
		more			
Maximum swi	tching	3,600 times/hr	_	-	
frequency		24VDC±10%	20.4 to 28.8VDC		
External	Voltage			0	
oower		Ripple voltage 4Vp-p or less 45mA	(ripple ratio within 5%) Included in I/O unit power		
supply	Current		'	-	
Surgo ouppro	ooor	(24VDC TYP. all points ON) None	supply None		
Surge suppres		8 points per common	4 points per common	0	
	IIIIai	(2-wire type terminal block)		0	
arrangement	ounied	(2-wire type terrilinal block)	(2-wire type terminal block) In 4-, 8- and 16-point modes: 1		
Number of occ stations	cupieu	2 station occupied	station occupied	Δ	Set to the 4-point mode.
Operation indi	icator	ON indication (LED)	ON indication (LED)	0	
		,	16-point terminal block		
		24-point terminal block	(M3 screw)		
External wiring method		(M3 screw)	Dedicated connector for each	×	
		Transmission circuit included	of transmission and module		Wiring must be changed.
			power supply		A dedicated connector is used to
Applicable wir	re size	0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for
Applicable crimping		1.25-3, 1.25-YS3A,			transmission and module power
		2-S3, 2-YS3A	RAV1.25-3, V1.25-3,		supply.
terminal	. 0	V1.25-3, V1.25-YS3A,	1.25-3, TG1-3	×	
		V2-S3, V2-YS3A	į į		
		15.6 to 27.6VDC	20.4 to 28.8VDC		Operating voltage range is
//0	Voltage	(peak voltage 27.6VDC)	(ripple ratio within 5%)	Δ	different.
module		. ,	, , ,		Using two CL1Y4-R1B2 modules
nouule		a			requires higher current
oower	Current	65mA	65mA	Δ	consumption, so the current
oower		ı			• •
oower		1	1		Lapacity must be reviewed.
oower					capacity must be reviewed. The external dimensions is
power	nsions	50(H) × 114(W) × 66(D)mm	53.5(H) × 80(W) × 40(D) mm	×	The external dimensions is
power	nsions	50(H) × 114(W) × 66(D)mm	53.5(H) × 80(W) × 40(D) mm	×	

(3) Comparisons between AJ55TB2-16R and CL1Y4-R1B2

Number of output points 16 points 4 points 4 points 4 points X four CL1Y4-R1B2 modules. When sixteen points are used, us four CL1Y4-R1B2 modules. Photocoupler 24VDC 2A (resistance load)' point 240VAC 2A (COS φ = 1) point 8A common Minimum switching load SVDC 1mA Maximum switching 250VAC, 110VDC 250VAC, 30VDC A confirm the specifications of the load to be used. Conf			·	O: Com		Partially changed, x: Not compatible
Solation method Photocoupler O	Specif	ications	AJ55TB2-16R	CL1Y4-R1B2		Precautions for replacement
Rated load voltage 24VDC 2A (residence load)	Number of o	utput points	16 points	4 points	×	When sixteen points are used, use four CL1Y4-R1B2 modules.
Rated switching 240VAC 24/C0S φ =1)point 240VAC 34/C0S φ =1)point	Isolation me	thod	Photocoupler	Photocoupler	0	
Rated lade vollage/ coursent			24VDC 2A (resistance load)/	30VDC 2A/point		
Maintimum switching load SVDC ImA SVDC 2mA ∆ Confirm the specifications of the load to be used.	Rated load	/oltage/	· ·	· ·	0	
Maximum switching load SVDC tmA SVDC 2mA △ Confirm the specifications of the load to be used.	current			<u>'</u>		
Maximum switching voitage 250VAC, 110VDC 250VAC, 30VDC Δ Confirm the specifications of the load to be used.				51/D00 A		
Voltage			5VDC 1mA	5VDC 2mA	Δ	Confirm the specifications of the
Mechanical life		vitching	250VAC, 110VDC	250VAC, 30VDC	Δ	load to be used.
Mechanical life	Response	OFF→ON	10ms or less	10ms or less	0	
Rated switching voltage/	time	ON→OFF	12ms or less	10ms or less	0	
Current load	Mechanical	life	20 million times or more	_	-	
200VAC 1A, 240VAC 0.5A	Flectrical life		current load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 100,000 times	(COS φ =0.7) 100,000 times or more 200VAC 1A, 240VAC0.1A	0	
External power supply	Electrical life		(COS φ =0.35) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 100,000 times or	or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 100,000 times or	0	
External power supply Applicable wire size Applicable crimping terminal Current Applicable crimping terminal Applicable crimping terminal block (M3 screw) Applicable crimping term		witching	·	-	-	
Surge suppressor Surge suppr	External	Voltage			0	
Surge suppressor None None None A points per common (2-wire type terminal block) Number of occupied stations Operation indicator Applicable wire size One terminal Applicable crimping terminal I/O I/O module power supply Voltage Volta	power					
Surge suppressor None None O Common terminal arrangement 8 points per common (2-wire type terminal block) 4 points per common (2-wire type terminal block) O Number of occupied stations 4 stations occupied In 4-, 8- and 16-point modes: 1 station occupied △ Set to the 4-point mode. Station occupied stations occupied stations 40-point terminal block (M3 screw) ON indication (LED) ○ External wiring method (M3 screw) Dedicated connector for each of transmission and module power supply × Applicable wire size 0.75 to 2mm² 0.3 to 1.25mm² × Applicable crimping terminal 2.53, 2.YS3A RAV1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V2.53,	supply	Current			-	
Common terminal arrangement (2-wire type terminal block) (3-wire type terminal block) (4-wire type terminal block) (1-4, 8- and 16-point modes: 1 station occupied stations (2-wire type terminal block) (3-wire type terminal block) (4-point terminal block) (40-point termin	Surge suppl	recor			0	
arrangement (2-wire type terminal block) (2-wire type terminal block) ○ Number of occupied stations 4 stations occupied In 4-, 8- and 16-point modes: 1 station occupied △ Set to the 4-point mode. Operation indicator ON indication (LED) ON indication (LED) ○ Applicable wire size 40-point terminal block (M3 screw) Transmission circuit included (M3 screw) Dedicated connector for each of transmission and module power supply × Applicable wire size 0.75 to 2mm² 0.3 to 1.25mm² × Applicable crimping terminal 2-S3, 2-YS3A, V1.25-33, V1.25-33, V1.25-33, V2.53, V1.25-33, V2.53, V2.53, V2.533, V3.53, V					0	
Number of occupied stations 4 stations occupied ON indication (LED) Not indicator Not indicator			' '		0	
Departion indicator ON indication (LED) 16-point terminal block (M3 screw) Dedicated connector for each of transmission and module power supply Applicable wire size O.75 to 2mm² 1.25-3, 1.25-YS3A, 2-S3, 2-YS3A Applicable crimping terminal Voltage Voltage Voltage Voltage Voltage Ovoltage Ovoltage	Number of o			In 4-, 8- and 16-point modes: 1	Δ	Set to the 4-point mode.
External wiring method 40-point terminal block (M3 screw) Transmission circuit included Applicable wire size 0.75 to 2mm² 1.25-3, 1.25-YS3A, Applicable crimping terminal Voltage Voltage Voltage Voltage Current 85mA 40-point terminal block (M3 screw) Dedicated connector for each of transmission and module power supply RAV1.25-3, V1.25-MS3A, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V2-S3, V2-YS3A, V2-S3, V2-YS3A 1.25-3, TG1-3 Voltage Current 85mA 65mA Wiring must be changed. A dedicated connector is used to make wiring connection for transmission and module power supply. Workspace Current 85mA 65mA Current 85mA 50(H) × 177(W) × 66(D)mm 53.5(H) × 80(W) × 40(D) mm × Wiring must be changed. A dedicated connector is used to make wiring connection for transmission and module power supply. Current Using two or more CL1Y4-R1B2 modules requires higher current capacity must be reviewed. The external dimensions is different. Use caution on the mounting.		dicator	ON indication (LED)	·	0	
Applicable wire size 0.75 to 2mm² 0.3 to 1.25mm² x 1.25-3, 1.25-YS3A,	·		40-point terminal block (M3 screw)	(M3 screw) Dedicated connector for each of transmission and module		A dedicated connector is used to
Applicable crimping terminal 2-S3, 2-YS3A V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V2-S3, V2-S3A V1.25-3, V2-S3A V1.25-3, V2-S3A V1.25-3, TG1-3 Voltage Voltage Voltage Current 85mA Current 85mA FRAV1.25-3, V1.25-3, V1.25-3, V1.25-3, TG1-3 Current 85mA FRAV1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V2-S3A Cirrent 85mA Current 85mA FRAV1.25-3, V1.25-3, V1.25-	Applicable v	rire size	0.75 to 2mm ²	0.3 to 1.25mm ²	×	•
I/O Voltage (peak voltage 27.6VDC) (ripple ratio within 5%) △ different. Using two or more CL1Y4-R1B2 modules requires higher current consumption, so the current capacity must be reviewed. External dimensions 50(H) × 177(W) × 66(D)mm 53.5(H) × 80(W) × 40(D) mm × different. Using two or more CL1Y4-R1B2 modules requires higher current capacity must be reviewed. The external dimensions is different. Use caution on the mounting.			2-S3, 2-YS3A V1.25-3, V1.25-YS3A,		×	•
power supply Current 85mA 65mA \triangle modules requires higher current consumption, so the current capacity must be reviewed. External dimensions $50(H) \times 177(W) \times 66(D)mm$ $53.5(H) \times 80(W) \times 40(D) mm$ \times different. Use caution on the mounting.	I/O	Voltage			Δ	
External dimensions $50(H) \times 177(W) \times 66(D)mm$ $53.5(H) \times 80(W) \times 40(D) mm$ × different. Use caution on the mounting.	power	Current	85mA	65mA	Δ	modules requires higher current consumption, so the current
Weight 0.4kg 0.11kg ○	External dim	nensions	50(H) × 177(W) × 66(D)mm	53.5(H) × 80(W) × 40(D) mm	×	different.
	Weight		0.4kg	0.11kg	0	



(4) Comparisons between AJ55TB2-4T and CL1Y4-T1B2

			\bigcirc : Compatible, \triangle : Partially changed, \times : Not compatible				
Specif	ications	AJ55TB2-4T	CL1Y4-T1B2	Compati- bility	Precautions for replacement		
Number of o	output points	4 points	4 points	0			
Isolation me	ethod	Photocoupler	Photocoupler	0			
Rated load	voltage	12/24 VDC	12/24 VDC	0			
Operating load voltage		10.2 to 30 VDC	10.2 to 28.8VDC		Voltages exceeding 28.8 VDC		
range		(peak voltage 30 VDC)	(ripple ratio within 5%)	Δ	cannot be applied.		
Maximum lo	oad current	0.5 A/point, 2 A/common	0.1 A/point, 0.4 A/common	Δ	The maximum load current per point is smaller. Use caution on selecting the load to use.		
Maximum inrush current		4.0 A, 10 ms or less	0.4A, 10ms or less	Δ	The inrush current value differs. Use caution on selecting the load to use.		
Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0			
Maximum v	oltage drop at	0.9 VDC or less (TYP.) 0.5 A 1.5 VDC or less (MAX.) 0.5 A	0.3 VDC or less (TYP.) 0.1 A 0.6 VDC or less (MAX.) 0.1 A	0			
Deenenee	OFF→ON	2.0 ms or less	1.0ms or less	0			
Response time	ON→ OFF	2.0 ms or less (resistance load)	1.0ms or less (resistance load)	0			
External	Voltage	10.2 to 30 VDC	-	_	External supply power is not required.		
power supply	Current	30 mA (24 VDC TYP. per 1 common)	-	_	External supply power is not required.		
Surge supp	ressor	Zener diode	Zener diode	0			
Common te arrangemer		4 points per common (2-wire type terminal block)	4 points per common (2-wire type terminal block)	0			
Number of o	occupied	1 station occupied	In 4-, 8- and 16-point modes: 1 station occupied	0	Set to the 4-point mode.		
Operation in	ndicator	ON indication (LED)	ON indication (LED)	0			
External wir		16-point terminal block (M3 screw) Transmission circuit included 0.75 to 2mm ²	8-point terminal block (M3 screw) Dedicated connector for each of transmission and module power supply 0.3 to 1.25mm ²	×	Wiring must be changed. A dedicated connector is used to make wiring connection for		
Applicable wire size			0.3 to 1.2511111	×	transmission and module power		
Applicable crimping terminal		1.25-3, 1.25-YS3A, 2-S3, 2-YS3A V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3, V1.25-3, 1.25-3, TG1-3	×	supply.		
I/O	Voltage	15.6 to 27.6VDC	20.4 to 28.8VDC		Operating voltage range is		
	voitage	(peak voltage 27.6VDC)	(ripple ratio within 5%)	Δ	different.		
module power supply	Current	45mA	60mA or less	Δ	The current consumption has increased, so the current capacity must be reviewed.		
External din	nensions	50(H) × 82(W) × 66(D)mm	53.5(H) × 50(W) × 40(D) mm	×	The external dimensions is different. Use caution on the mounting.		
Weight		0.2kg	0.06kg	0			

(5) Comparisons between AJ55TB2-8T and CL2Y8-TP1B2

Number of output points 8 points 8 points 8 points 8 points 8 points CL2Y8-TP1B2 Number of output points 8 points 8 points 9 Photocoupler Photocoupler Photocoupler Photocoupler Operating load voltage 10.2 to 30 VDC (peak voltage 30 VDC) Maximum load current 0.5A/point, 4A/common Maximum inrush current 4.0 A, 10 ms or less On 1.0 y VDC or less (TYP) 0.5 A ON Response time ON→OFF Current ON→OFF Current Current Current Current Current A points sanaler. Use of selecting the load to use. O.1 mA or less O.1 mA or less O.1 mA or less O.1 mA or less O.2 ms or less (resistance load) ON→OFF Current Current Current Current Current Current Current Current Current A points sendler. Use of selecting the load to use. O.2 ms or less (resistance load) ON→OFF Current Current Current Current Campatibility Precautions for replicitions A points A points Cannot be applied. The maximum load current O.1 mA or less O.1 mA or less O.1 mA or less O.2 ma or less (MAX.) 0.5 A 0.8 VDC or less (MAX.) 0.1 A 0.9 VDC or less (MAX.) 0.5 A 0.5 ms or less (resistance load) ON→OFF Current Current Cannot be applied. Voltage O.5 ms or less (resistance load) OSms or less (resistance load) OSm	3.8 VDC urrent per aution on se.
Solation method Photocoupler Photocoupler Photocoupler O	irrent per aution on se.
Rated load voltage 12/24 VDC 12/24 VDC 0 Operating load voltage 10.2 to 30 VDC (peak voltage 30 VDC) (ripple ratio within 5%)	irrent per aution on se.
Operating load voltage range	irrent per aution on se.
range (peak voltage 30 VDC) (ripple ratio within 5%)	irrent per aution on se.
Maximum load current Maximum load curre	aution on se.
Maximum load current 0.5A/point, 4A/common 0.1A/point, 0.8A/common △ point is smaller. Use of selecting the load to be selecting to be selecting the load to be selecting the load to be selecting the load to be selecting to be selecting the load to be selecting to be selecting the load to be selecting to be selecting to be selecting the load to be selecting to	aution on se.
Maximum inrush current 4.0 A, 10 ms or less 0.7A 10ms or less △ Use caution on select to use. Leakage current at OFF 0.1mA or less 0.1mA or less ○ Maximum voltage drop at ON 0.9 VDC or less (TYP.) 0.5 A 1.5 VDC or less (TYP.) 0.1 A 0.6 VDC or less (MAX.) 0.1 A 0.6 VDC or less	ue differs.
Maximum voltage drop at ON 0.9 VDC or less (TYP.) 0.5 A 1.5 VDC or less (MAX.) 0.5 A 1.5 VDC or less (MAX.) 0.5 A 0.6 VDC or less (MAX.) 0.1 A	
ON	
Response time OFF→ON CON→OFF ON→OFF ON→OFF Dividing Supply Current	
Response time ON→OFF 2.0 ms or less (resistance load) O.5ms or less (resistance load) O voltages exceeding 2i cannot be applied. External power supply Current Current Current Current Current Surge suppressor Zener diode Common terminal arrangement Current Response (resistance load) 10.2 to 28.8VDC (ripple ratio within 5%) 15 mA (24 VDC when all points are ON) Common terminal 8 points per common (2-wire type terminal block) Response (resistance load) O voltages exceeding 2i cannot be applied. O cannot be applied. O cannot be applied. O cannot be applied. In 4-point sare ON) In 4-point mode: 2 stations occupied In 8- and 16-point mode: 1 station occupied Operation indicator ON indication (LED) ON indication (LED)	
External power supply	
power supply Current GomA Current GomA (24VDC TYP. per 1 common) Surge suppressor Common terminal arrangement Current Supply Current Current GomA (24VDC TYP. per 1 common) Surge suppressor Common terminal arrangement Supply Common terminal arrangement Current Supply Surge suppressor Common terminal B points per common (2-wire type terminal block) In 4-point mode: 2 stations Occupied In 8- and 16-point mode: 1 station occupied Operation indicator ON indication (LED) ON indication (LED)	3.8 VDC
Surge suppressor Common terminal arrangement Common terminal block) In 4-point mode: 2 stations occupied In 8- and 16-point mode: 1 station occupied Operation indicator ON indication (LED) ON indication (LED)	
Surge suppressor Zener diode Zener diode Zener diode Zener diode Zener diode O Common terminal	
Common terminal 8 points per common (2-wire type terminal block) (2-wire type terminal block) Number of occupied stations On indication (LED) 8 points per common (2-wire type terminal block) In 4-point mode: 2 stations occupied In 8- and 16-point mode: 1 station occupied	
arrangement (2-wire type terminal block) (2-wire type terminal block) Number of occupied stations 2 stations occupied In 8- and 16-point mode: 1 station occupied Operation indicator ON indication (LED) Owner type terminal block) In 4-point mode: 2 stations Occupied In 8- and 16-point mode: 1 station occupied	
Arrangement (2-wire type terminal block) (2-wire type terminal block) Number of occupied stations 2 stations occupied In 8- and 16-point mode: 1 station occupied Operation indicator ON indication (LED) ON indication (LED)	
Number of occupied stations 2 stations occupied In 8- and 16-point mode: 1 station occupied Operation indicator ON indication (LED) Oset to the 4-point mode: 1 station occupied On indication (LED)	
	e.
14-point terminal block	
External wiring method (M3 screw) Transmission circuit included (M3 screw) Dedicated connector for each of transmission and module power supply Wiring must be chang A dedicated connector	r is used to
Applicable wire size 0.75 to 2mm ² 0.3 to 1.25mm ² × transmission and mass	
1.25-3, 1.25-YS3A, Applicable crimping 2-S3, 2-YS3A V1.25-3, V1.25-3, V1.25-3, V1.25-3, V1.25-3, V2-YS3A V2-S3, V2-YS3A V2-S3, V2-YS3A Transmission and mod supply.	uie power
I/O moduleVoltage15.6 to 27.6VDC (peak voltage 27.6VDC)20.4 to 28.8VDC (ripple ratio within 5%)Operating voltage ran different.	
power supply Current 55 mA 40 mA or less O	ge is
External dimensions $ 50(H) \times 114(W) \times 66(D) mm $ $ 53.5(H) \times 64(W) \times 40(D) mm $ $ \times $	ge is
Weight 0.3kg 0.09 kg ○	ons is



(6) Comparisons between AJ55TB2-16T and CL2Y8-TP1B2

			O: Com	patible, △:	Partially changed, x: Not compatible
Specif	ications	AJ55TB2-16T	CL2Y8-TP1B2	Compati- bility	Precautions for replacement
Number of o	output points	16 points	8 points	×	When nine or more points are used, use two CL2Y8-TP1B2 modules.
Isolation me	thod	Photocoupler	Photocoupler	0	
Rated load	voltage	12/24 VDC	12/24 VDC	0	
Operating lo	oad voltage	10.2 to 30 VDC	10.2 to 28.8VDC	_	Voltages exceeding 28.8 VDC
range		(peak voltage 30 VDC)	(ripple ratio within 5%)	Δ	cannot be applied.
Maximum Io	oad current	0.5 A/point, 5.0 A/common	0.1A/point, 0.8A/common	Δ	The maximum load current per point is smaller. Use caution on selecting the load to use.
	nrush current	4.0 A, 10 ms or less	0.7A 10ms or less	Δ	The inrush current value differs. Use caution on selecting the load to use.
Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	oltage drop at	0.9 VDC or less (TYP.) 0.5 A	0.3 VDC or less (TYP.) 0.1 A	0	
ON		1.5 VDC or less (MAX.) 0.5 A	0.6 VDC or less (MAX.) 0.1 A	U	
Response	OFF→ ON	2.0 ms or less	0.5ms or less	0	
time	ON→OFF	2.0 ms or less (resistance load)	0.5ms or less (resistance load)	0	
External	Voltage	10.2 to 30 VDC	10.2 to 28.8VDC		Voltages exceeding 28.8 VDC
power	voltage	10.2 to 30 VDC	(ripple ratio within 5%)	Δ	cannot be applied.
supply	Current	120mA (24VDC TYP. per 1 common)	15 mA (24 VDC when all points are ON)	0	
Surge suppi	ressor	Zener diode	Zener diode	0	
Common te	rminal	16 points per common	8 points per common	_	
arrangemen	nt	(2-wire type terminal block)	(2-wire type terminal block)	0	
Number of o	occupied	4 stations occupied	In 4-point mode: 2 stations occupied In 8- and 16-point mode: 1 station occupied	Δ	Set to the 4-point mode.
Operation in	ndicator	ON indication (LED)	ON indication (LED)	0	
External wiring method		40-point terminal block (M3 screw) Transmission circuit included	14-point terminal block (M3 screw) Dedicated connector for each of transmission and module power supply	×	Wiring must be changed. A dedicated connector is used to
Applicable v	vire size	0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for
Applicable crimping terminal		1.25-3, 1.25-YS3A, 2-S3, 2-YS3A V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3, V1.25-3, 1.25-3, TG1-3	×	transmission and module power supply.
	Voltage	15.6 to 27.6VDC	20.4 to 28.8VDC		Operating voltage range is
I/O	Voltage	(peak voltage 27.6VDC)	(ripple ratio within 5%)	Δ	different.
module power supply	Current	70mA	40 mA or less	Δ	Using two CL2Y8-TP1B2 modules requires higher current consumption, so the current capacity must be reviewed.
External din	nensions	50(H) × 177(W) × 66(D)mm	53.5(H) × 64(W) × 40(D) mm	×	The external dimensions is different. Use caution on the mounting.
Weight		0.4kg	0.09 kg	0	

5.2.3 I/O module specifications comparisons

(1) Comparisons between AJ55TB32-4DR and CL1XY4-DR1B2

			O: Com		Partially changed, x: Not compatible
Input spe	cifications	AJ55TB32-4DR	CL1XY4-DR1B2	Compati- bility	Precautions for replacement
Number of ir	nput points	2 points	2 points	0	
Isolation me		Photocoupler	Photocoupler	0	
Rated input	voltage	24VDC	24VDC	0	
Rated input	current	Approx. 7mA	Approx. 4mA	Δ	Rated input current is smaller.*1
Operating vo	oltage range	21.6 to 26.4VDC	20.4 to 28.8VDC	0	
oporating ve		(ripple voltage 4Vp-p or less)	(ripple ratio within 5%)	O	
Maximum sin on input poir		100%	100%	0	
ON voltage/0	ON current	14VDC or more/3.5mA or more	19VDC or more/3mA or more	Δ	Use caution on the voltage level.
OFF voltage	/OFF current	6VDC or less/1.7mA or less	11VDC or less/1.7mA or less	Δ	Use caution on the voltage level.
Input resista	nce	Approx. 3.3k Ω	Approx. 5.6k Ω	Δ	Input resistance is greater.*1
Response	OFF→ON	10ms or less	1.5ms or less	0	
time	ON→OFF	10ms or less	1.5ms or less	0	
Common ter		2 points per common	2 points per common	Δ	To connect a 3-wire type sensor, etc., an external common terminal
arrangemen	t	(3-wire type terminal block)	(2-wire type terminal block)		block is required.
Output sp	ecifications	AJ55TB32-4DR	CL1XY4-DR1B2	Compati- bility	Precautions for replacement
Number of o	utput points	2 points	2 points	0	
Isolation me	thod	Photocoupler	Photocoupler	0	
		24VDC 2A (resistance load)/			
Rated load v	voltage/	point	30VDC 2A/point		
current		240VAC 2A (COS ϕ =1)/point	240VAC 2A/point	0	
		4A/common	4A/common		
Minimum sw	ritching load	5VDC 1mA	5VDC 2mA	Δ	
Maximum sv			0.202		Confirm the specifications of the
voltage		250VAC, 110VDC	250VAC, 30VDC	Δ	load to be used.
Response	OFF → ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	10ms or less	0	
Mechanical I	life	20 million times or more	_	-	
		Rated switching voltage/ current load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 100,000 times or more	200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 100,000 times or more 200VAC 1A, 240VAC0.1A		
Electrical life		200VAC 1A, 240VAC 0.5A (COS φ =0.35) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 100,000 times or more	$(\cos \phi = 0.35) \ 100,000 \ times$ or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 100,000 times or more	0	
Maximum sv frequency	vitching	3,600 times/hr	-	_	
External	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	20.4 to 28.8VDC (ripple ratio within 5%)	0	
power supply	Current	12mA (24VDC TYP. all points ON)	Included in I/O module power supply	-	
Surge suppr	essor	None	None	0	
Surge suppressor		2 nainta nar aamman	2 points per common		
Common ter	minai	2 points per common	2 points per common	0	

 \bigcirc : Compatible, \triangle : Partially changed, \times : Not compatible

Specifications		AJ55TB32-4DR	CL1XY4-DR1B2	Compati- bility	Precautions for replacement
Number of	occupied	1 stations occupied	In 4-, 8- and 16-point mode: 1	0	Set to the 4-point mode.
stations			station occupied		
Operation in	ndicator	ON indication (LED)	ON indication (LED)	0	
			16-point terminal block		
External wiring method		16-point terminal block	(M3 screw)	×	Wiring must be changed. A dedicated connector is used to
		(M3 screw)	Dedicated connector for each		
		Transmission circuit included	of transmission and module		
			power supply		
Applicable	wire size	0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for transmission and module power supply.
		1.25-3, 1.25-YS3A,		×	
Applicable (crimping	2-S3, 2-YS3A	RAV1.25-3, V1.25-3,		
terminal		V1.25-3, V1.25-YS3A,	1.25-3, TG1-3		
		V2-S3, V2-YS3A			
I/O module	Voltage	15.6 to 27.6VDC	20.4 to 28.8VDC	Δ	Operating voltage range is
		(peak voltage 27.6VDC)	(ripple ratio within 5%)		different.
	Current	40mA	60mA	Δ	The current consumption has
power supply					increased, so the current capacity
					must be reviewed.
External dimensions		50(H) × 82(W) × 66(D)mm	53.5(H) × 80(W) × 40(D) mm	×	The external dimensions is
					different.
					Use caution on the mounting.
Weight		0.2kg	0.11kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the CL1XY4-DR1B2.

Input specifications Number of input points

Isolation method

on input point

Input resistance

Common terminal

Response

time

Rated input voltage Rated input current

Operating voltage range

Maximum simultaneous

ON voltage/ON current

OFF voltage/OFF current

 $OFF \rightarrow ON$

ON→OFF

(2) Comparisons between AJ55TB32-8DR and CL1XY8-DR1B2

AJ55TB32-8DR

4 points

Photocoupler 24VDC

Approx. 7mA

21.6 to 26.4VDC

(ripple voltage 4Vp-p or less)

100%

14VDC or more/3.5mA or

more

6VDC or less/1.7mA or less

Approx. $3.3k \Omega$

10ms or less

10ms or less

4 points per common

○: Compatible, △: Partially changed, ×: Not con					
CL1XY8-DR1B2	Compati- bility	Precautions for replacement			
4 points	0				
Photocoupler	0				
24VDC	0				
Approx. 4mA	Δ	Rated input current is smaller.*1			
20.4 to 28.8VDC (ripple ratio within 5%)	0				
100%	0				
19VDC or more/3mA or more	Δ	Use caution on the voltage level.			
11VDC or less/1.7mA or less	Δ	Use caution on the voltage level.			
Approx. 5.6k Ω	Δ	Input resistance is greater.*1			
1.5ms or less	0				
1.5ms or less	0				
4 points per common (2-wire type terminal block)	Δ	To connect a 3-wire type sensor, etc., an external common terminal block is required.			
CL1XY8-DR1B2	Compati- bility	Precautions for replacement			
4 points	0				
Photocoupler	0				
30VDC 2A/point 240VAC 2A/point 4A/common	Δ	The specifications of the common current are halved. Use caution on the total value of load currents to use simultaneously.			
5VDC 2mA	Δ	Confirm the specifications of the			
	1				

arrangement		(3-wire type terminal block)	(2-wire type terminal block)	Δ	etc., an external common terminal
<u> </u>		,	,		block is required.
Output specifications		AJ55TB32-8DR	CL1XY8-DR1B2	Compati- bility	Precautions for replacement
Number of c	output points	4 points	4 points	0	
Isolation me	thod	Photocoupler	Photocoupler	0	
Rated load voltage/ current		24VDC 2A (resistance load)/ point 240VAC 2A (COS ϕ =1)/point 8A/ common	30VDC 2A/point 240VAC 2A/point 4A/common	Δ	The specifications of the common current are halved. Use caution on the total value of load currents to use simultaneously.
Minimum sw	vitching load	5VDC 1mA	5VDC 2mA	Δ	0 5 11 15 11 11
Maximum switching voltage		250VAC, 110VDC	250VAC, 30VDC	Δ	Confirm the specifications of the load to be used.
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	10ms or less	0	
Mechanical life		20 million times or more	_	-	
Electrical life		Rated switching voltage/ current load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 100,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ =0.35) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 100,000 times or more	200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 100,000 times or more 200VAC 1A, 240VAC0.1A (COS ϕ =0.35) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 100,000 times or more	0	
Maximum switching frequency		3,600 times/hr	-	-	
External power	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	20.4 to 28.8VDC (ripple ratio within 5%)	0	
supply	Current	23mA (24VDC TYP. all points ON)	Included in I/O module power supply	-	
Surge suppressor		None	None	0	
Common terminal arrangement		4 points per common (2-wire type terminal block)	4 points per common (2-wire type terminal block)	0	

 \bigcirc : Compatible, \triangle : Partially changed, \times : Not compatible

Specifications		AJ55TB32-8DR	CL1XY8-DR1B2	Compati- bility	Precautions for replacement
Number of occupied		1 stations occupied	In 4-, 8- and 16-point mode: 1	0	Set to the 4-point mode.
stations			station occupied		
Operation indicator		ON indication (LED)	ON indication (LED)	0	
			16-point terminal block		
		24-point terminal block	(M3 screw)		
External wiring method		(M3 screw)	Dedicated connector for each	×	Wiring must be changed.
		Transmission circuit included	of transmission and module		
			power supply		A dedicated connector is used to make wiring connection for transmission and module power supply.
Applicable	wire size	0.75 to 2mm ²	0.3 to 1.25mm ²	×	
		1.25-3, 1.25-YS3A,		×	
Applicable	crimping	2-S3, 2-YS3A	RAV1.25-3, V1.25-3,		
terminal		V1.25-3, V1.25-YS3A,	1.25-3, TG1-3		
		V2-S3, V2-YS3A			
I/O	Voltage	15.6 to 27.6VDC	20.4 to 28.8VDC	Δ	Operating voltage range is
module		(peak voltage 27.6VDC)	(ripple ratio within 5%)		different.
	Current	50mA	70mA	Δ	The current consumption has
power					increased, so the current capacity
supply					must be reviewed.
External dimensions		50(H) × 114(W) × 66(D)mm	53.5(H) × 80(W) × 40(D) mm	×	The external dimensions is
					different.
					Use caution on the mounting.
Weight		0.3kg	0.11kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the CL1XY8-DR1B2.

Common terminal

arrangement

8 points per common

(2-wire type terminal block)

(3) Comparisons between AJ55TB32-16DR and CL1XY8-DR1B2

○: Compatible, △: Partially changed, x: Not compatible Compati-AJ55TB32-16DR CL1XY8-DR1B2 Precautions for replacement Input specifications bility When five or more points are used. Number of input points 8 points 4 points × use two CL1XY8-DR1B2 modules. Isolation method Photocoupler Photocoupler 0 Rated input voltage 24VDC 24VDC 0 Rated input current Approx. 7mA Approx. 4mA Rated input current is smaller.*1 Δ 21.6 to 26.4VDC 20.4 to 28.8VDC Operating voltage range 0 (ripple voltage 4Vp-p or less) (ripple ratio within 5%) Maximum simultaneous 100% 100% 0 on input point 19VDC or more/3.0mA or 14VDC or more/3.5mA or ON voltage/ON current Use caution on the voltage level. Δ more more OFF voltage/OFF current 6VDC or less/1.7mA or less 11VDC or less/1.7mA or less Use caution on the voltage level. Δ Input resistance Approx. 3.3k Ω Approx. 5.6k Ω Input resistance is greater.*1 OFF → ON 10ms or less Response 1.5ms or less 0 time ON→OFF 10ms or less 1.5ms or less 0 To connect a 3-wire type sensor, Common terminal 8 points per common 4 points per common etc., an external common terminal Δ arrangement (3-wire type terminal block) (2-wire type terminal block) block is required. Compati AJ55TB32-16DR CL1XY8-DR1B2 **Output specifications** Precautions for replacement bility When five or more points are used, Number of output points 8 points 4 points use two CL1XY8-DR1B2 modules. Isolation method Photocoupler Photocoupler 0 24VDC 2A (resistance load)/ 30VDC 2A/point Rated load voltage/ point 240VAC 2A/point 0 240VAC 2A (COS ϕ =1)/point current 4A/common 8A/common 5VDC 2mA Minimum switching load 5VDC 1mA Δ Confirm the specifications of the Maximum switching 250VAC, 110VDC 250VAC, 30VDC load to be used. Λ voltage $OFF \rightarrow ON$ 10ms or less 10ms or less Response 0 ON → OFF 12ms or less 10ms or less time 0 Mechanical life 20 million times or more Rated switching voltage/ current load 200VAC 1.5A, 240VAC 1A 100,000 times or more $(COS \phi = 0.7) 100,000 times$ 200VAC 1.5A, 240VAC 1A or more $(COS \phi = 0.7) 100,000 times$ 200VAC 1A, 240VAC0.1A or more $(COS \phi = 0.35) 100,000 times$ Electrical life 0 200VAC 1A, 240VAC 0.5A or more (COS ϕ =0.35) 100,000 times 24VDC 1A, 100VDC 0.1A or more (L/R=7ms) 100,000 times or 24VDC 1A, 100VDC 0.1A more (L/R=7ms) 100,000 times or more Maximum switching 3,600 times/hr frequency 24VDC ± 10% 20.4 to 28.8VDC External Voltage 0 (ripple ratio within 5%) Ripple voltage 4Vp-p or less power Included in I/O module power 45mA supply Current (24VDC TYP. all points ON) supply Surge suppressor None None 0

4 points per common

(2-wire type terminal block)

 \circ

 \bigcirc : Compatible, \triangle : Partially changed, \times : Not compatible

Spec	ifications	AJ55TB32-16DR	CL1XY8-DR1B2	Compati- bility	Precautions for replacement
Number of stations	occupied	2 stations occupied	In 4-, 8- and 16-point mode: 1 station occupied	Δ	Set to the 4-point mode.
Operation	indicator	ON indication (LED)	ON indication (LED)	0	
External wi	iring method	40-point terminal block (M3 screw) Transmission circuit included	16-point terminal block (M3 screw) Dedicated connector for each of transmission and module power supply	×	Wiring must be changed. A dedicated connector is used to
Applicable	wire size	0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for transmission and module power
Applicable terminal	crimping	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3, V1.25-3, 1.25-3, TG1-3	×	supply.
I/O	Voltage	15.6 to 27.6VDC (peak voltage 27.6VDC)	20.4 to 28.8VDC (ripple ratio within 5%)	Δ	Operating voltage range is different.
module power supply	Current	70mA	70mA	Δ	Using two CL1XY8-DR1B2 modules requires higher current consumption, so the current capacity must be reviewed.
External di	mensions	50(H) × 177(W) × 66(D)mm	53.5(H) × 80(W) × 40(D) mm	×	The external dimensions is different. Use caution on the mounting.
Weight		0.4kg	0.11kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the CL1XY8-DR1B2.

Common terminal

arrangement

(4) Comparisons between AJ55TB32-4DT and CL1XY4-DT1B2

2 points per common

(2-wire type terminal block)

			○: Com	patible. A:	Partially changed, x: Not compatible
Input spe	ecifications	AJ55TB32-4DT	CL1XY4-DT1B2	Compati- bility	Precautions for replacement
Number of i	nput points	2 points	2 points	0	
Isolation me	thod	Photocoupler	Photocoupler	0	
Rated input	voltage	24VDC	24VDC	0	
Rated input	current	Approx. 7mA	Approx. 4mA	Δ	Rated input current is smaller.*1
Operation	altaga ranga	19.2 to 26.4VDC	20.4 to 28.8VDC		Operating voltage range is
Operating v	oltage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	different.
Maximum s on input poi	imultaneous nt	100%	100%	0	
ONLivelteers	ON	14VDC or more/3.5mA or	19VDC or more/3.0mA or		lles souties as the welt-real level
ON voltage/	ON current	more	more	Δ	Use caution on the voltage level.
OFF voltage	e/OFF current	6VDC or less/1.7mA or less	11VDC or less/1.7mA or less	Δ	Use caution on the voltage level.
Input resista	ince	Approx. 3.3k Ω	Approx. 5.6k Ω	Δ	Input resistance is greater.*1
Response	OFF→ON	10ms or less	1.5ms or less	0	
time	ON→ OFF	10ms or less	1.5ms or less	0	
					To connect a 3-wire type sensor,
Common te		2 points per common 2 points per common		etc., an external common terminal	
arrangemer	it	(3-wire type terminal block)	(2-wire type terminal block)		block is required.
Output sp	ecifications	AJ55TB32-4DT	CL1XY4-DT1B2	Compati- bility	Precautions for replacement
Number of o	output points	2 points	2 points	0	
Isolation me	thod	Photocoupler	Photocoupler	0	
Rated load	voltage	24 VDC	12/24VDC	0	
Operating load voltage					
Operating is	oad voitage	19.2 to 26.4VDC	10.2 to 28.8VDC		
range	ad voltage	19.2 to 26.4VDC (peak voltage 26.4VDC)	10.2 to 28.8VDC (ripple ratio within 5%)	0	
				Ο Δ	The maximum load current per point is smaller. Use caution on selecting the load to use.
range Maximum lo		(peak voltage 26.4VDC)	(ripple ratio within 5%)		point is smaller. Use caution on
Maximum lo	pad current	(peak voltage 26.4VDC) 0.5A/point, 1.0A/common	(ripple ratio within 5%) 0.1A/point, 0.2A/common	Δ	point is smaller. Use caution on selecting the load to use. The inrush current value differs. Use caution on selecting the load
Maximum lo	ad current	(peak voltage 26.4VDC) 0.5A/point, 1.0A/common 4.0A 10ms or less	(ripple ratio within 5%) 0.1A/point, 0.2A/common 0.4A, 10ms or less	Δ	point is smaller. Use caution on selecting the load to use. The inrush current value differs. Use caution on selecting the load
Maximum lo	and current orrent at OFF	(peak voltage 26.4VDC) 0.5A/point, 1.0A/common 4.0A 10ms or less 0.1mA or less	(ripple ratio within 5%) 0.1A/point, 0.2A/common 0.4A, 10ms or less 0.1mA or less	Δ	point is smaller. Use caution on selecting the load to use. The inrush current value differs. Use caution on selecting the load
Maximum in Leakage cu Maximum v	oad current rrent at OFF oltage drop at OFF→ON	(peak voltage 26.4VDC) 0.5A/point, 1.0A/common 4.0A 10ms or less 0.1mA or less 0.9VDC or less (TYP.) 0.5A	(ripple ratio within 5%) 0.1A/point, 0.2A/common 0.4A, 10ms or less 0.1mA or less 0.3VDC or less TYP.) 0.1A	Δ	point is smaller. Use caution on selecting the load to use. The inrush current value differs. Use caution on selecting the load
Maximum in Leakage cu Maximum vi ON	oad current arush current rrent at OFF oltage drop at	(peak voltage 26.4VDC) 0.5A/point, 1.0A/common 4.0A 10ms or less 0.1mA or less 0.9VDC or less (TYP.) 0.5A 1.5VDC or less (MAX.) 0.5A	(ripple ratio within 5%) 0.1A/point, 0.2A/common 0.4A, 10ms or less 0.1mA or less 0.3VDC or less TYP.) 0.1A 0.6VDC or less (MAX.) 0.1A	Δ Δ Ο Ο	point is smaller. Use caution on selecting the load to use. The inrush current value differs. Use caution on selecting the load
Maximum in Leakage cu Maximum vi ON Response time External	oad current rrent at OFF oltage drop at OFF→ON	(peak voltage 26.4VDC) 0.5A/point, 1.0A/common 4.0A 10ms or less 0.1mA or less 0.9VDC or less (TYP.) 0.5A 1.5VDC or less (MAX.) 0.5A 2.0ms or less	(ripple ratio within 5%) 0.1A/point, 0.2A/common 0.4A, 10ms or less 0.1mA or less 0.3VDC or less TYP.) 0.1A 0.6VDC or less (MAX.) 0.1A 1.0ms or less	Δ Δ Ο Ο Ο Ο	point is smaller. Use caution on selecting the load to use. The inrush current value differs. Use caution on selecting the load
Maximum in Leakage cu Maximum vi ON Response time	orad current orrent at OFF oltage drop at OFF→ON ON→OFF	(peak voltage 26.4VDC) 0.5A/point, 1.0A/common 4.0A 10ms or less 0.1mA or less 0.9VDC or less (TYP.) 0.5A 1.5VDC or less (MAX.) 0.5A 2.0ms or less 2.0ms or less (resistance load)	(ripple ratio within 5%) 0.1A/point, 0.2A/common 0.4A, 10ms or less 0.1mA or less 0.3VDC or less TYP.) 0.1A 0.6VDC or less (MAX.) 0.1A 1.0ms or less	Δ Δ Ο Ο Ο	point is smaller. Use caution on selecting the load to use. The inrush current value differs. Use caution on selecting the load to use. External supply power is not
Maximum in Leakage cu Maximum vo ON Response time External power	orad current orush current orrent at OFF oltage drop at OFF→ON ON→OFF Voltage Current	(peak voltage 26.4VDC) 0.5A/point, 1.0A/common 4.0A 10ms or less 0.1mA or less 0.9VDC or less (TYP.) 0.5A 1.5VDC or less (MAX.) 0.5A 2.0ms or less 2.0ms or less (resistance load) 19.2 to 26.4VDC	(ripple ratio within 5%) 0.1A/point, 0.2A/common 0.4A, 10ms or less 0.1mA or less 0.3VDC or less TYP.) 0.1A 0.6VDC or less (MAX.) 0.1A 1.0ms or less	Δ Δ Ο Ο Ο	point is smaller. Use caution on selecting the load to use. The inrush current value differs. Use caution on selecting the load to use. External supply power is not required. External supply power is not

2 points per common

(2-wire type terminal block)

0

 \bigcirc : Compatible, \triangle : Partially changed, \times : Not compatible

Spec	ifications	AJ55TB32-4DT	CL1XY4-DT1B2	Compati- bility	Precautions for replacement
Number of occupied		1 stations occupied	In 4-, 8- and 16-point mode: 1		Set to the 4-point mode.
stations		i stations occupied	station occupied	0	Set to the 4-point mode.
Operation	indicator	ON indication (LED)	ON indication (LED)	0	
			16-point terminal block		
		16-point terminal block	(M3 screw)		
External w	iring method	(M3 screw)	Dedicated connector for each	×	Minimum annual bar abanana d
		Transmission circuit included	of transmission and module		Wiring must be changed. A dedicated connector is used to
			power supply		
Applicable	wire size	0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for
		1.25-3, 1.25-YS3A,			transmission and module power
Applicable	crimping	2-S3, 2-YS3A	RAV1.25-3, V1.25-3,		supply.
terminal		V1.25-3, V1.25-YS3A,	1.25-3, TG1-3	×	
		V2-S3, V2-YS3A			
I/O	Valtage	15.6 to 27.6VDC	20.4 to 28.8VDC		Operating voltage range is
module	Voltage	(peak voltage 27.6VDC)	(ripple ratio within 5%)	Δ	different.
					The current consumption has
power	Current	40mA	55mA	Δ	increased, so the current capacity
supply					must be reviewed.
					The external form is different.
External di	imensions	50(H) × 82(W) × 66(D)mm	53.5(H) × 80(W) × 40(D) mm	×	Use caution on the mounting
					dimensions.
Weight		0.2kg	0.1kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the CL1XY4-DT1B2.

(5) Comparisons between AJ55TB32-8DT and CL1XY8-DT1B2

	○: Compatible, △: Partially changed, x: Not compatible					
Input spe	cifications	AJ55TB32-8DT	CL1XY8-DT1B2	Compati- bility	Precautions for replacement	
Number of i	nput points	4 points	4 points	0		
Isolation me	thod	Photocoupler	Photocoupler	0		
Rated input	voltage	24VDC	24VDC	0		
Rated input	current	Approx. 7mA	Approx. 4mA	Δ	Rated input current is smaller.*1	
Operating	oltage range	19.2 to 26.4VDC	20.4 to 28.8VDC		Operating voltage range is	
Operating v	ollage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	different.	
Maximum si		100%	100%	0		
ON voltage/		14VDC or more/3.5mA or	19VDC or more/3.0mA or	Δ	Use caution on the voltage level.	
OIT Voltage/	OTT GUITOIN	more	more	Δ	Coo dation on the voltage level.	
OFF voltage	e/OFF current	6VDC or less/1.7mA or less	11VDC or less/1.7mA or less	Δ	Use caution on the voltage level.	
Input resista	ince	Approx. 3.3k Ω	Approx. 5.6k Ω	Δ	Input resistance is greater.*1	
Response	OFF→ON	10ms or less	1.5ms or less	0		
time	ON→OFF	10ms or less	1.5ms or less	0		
Common te arrangemen		4 points per common (3-wire type terminal block)	4 points per common (2-wire type terminal block) Δ		To connect a 3-wire type sensor, etc., an external common terminal block is required.	
Output sp	ecifications	AJ55TB32-8DT	CL1XY8-DT1B2	Compati- bility	Precautions for replacement	
Number of o	output points	4 points	4 points	0		
Isolation me	thod	Photocoupler	Photocoupler	0		
Rated load	voltage	24 VDC	12/24VDC	0		
Operating lo	ad voltage	19.2 to 26.4VDC	10.2 to 28.8VDC	0		
range		(peak voltage 26.4VDC)	(ripple ratio within 5%)	0		
Maximum lo	ad current	0.5A/1 point, 2.0A/1 common	0.1A/1 point, 0.4A/1 common	Δ	The maximum load current per point is smaller. Use caution on selecting the load to use.	
Maximum ir	rush current	4.0A 10ms or less	0.4A, 10ms or less	Δ	The inrush current value differs. Use caution on selecting the load to use.	
Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0		
Maximum v	oltage drop at	0.9VDC or less (TYP.) 0.5A	0.3VDC or less (TYP.) 0.1A	0		
ON		1.5VDC or less (MAX.) 0.5A	0.6VDC or less (MAX.) 0.1A	O		
Response	OFF→ON	2.0ms or less	1.0ms or less	0		
time	ON→OFF	2.0ms or less (resistance load)	1.0ms or less (resistance load)	0		
External	Voltage	19.2 to 26.4VDC	_	_	External supply power is not required.	
power	Current	30mA (24VDC TYP. per 1 common)		_	External supply power is not required.	
Surge supp	ressor	Zener diode	Zener diode	0		
Common te	rminal	4 points per common	4 points per common			
arrangemer	t	(2-wire type terminal block)	(2-wire type terminal block)	0		

 \bigcirc : Compatible, \triangle : Partially changed, \times : Not compatible

Speci	fications	AJ55TB32-8DT	CL1XY8-DT1B2	Compati- bility	Precautions for replacement
Number of	occupied	1 stations occupied	In 4-, 8- and 16-point mode: 1	0	Set to the 4-point mode.
stations		i stations occupied	station occupied	0	Set to the 4-point mode.
Operation in	ndicator	ON indication (LED)	ON indication (LED)	0	
			16-point terminal block		
		24-point terminal block	(M3 screw)		
External wir	ing method	(M3 screw)	Dedicated connector for each	×	Wiring must be changed.
		Transmission circuit included	of transmission and module		A dedicated connector is used to
			power supply		
Applicable	vire size	0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for
		1.25-3, 1.25-YS3A,			transmission and module power
Applicable of	crimping	2-S3, 2-YS3A	RAV1.25-3, V1.25-3,		supply.
terminal		V1.25-3, V1.25-YS3A,	1.25-3, TG1-3	×	
		V2-S3, V2-YS3A			
I/O	Valtage	15.6 to 27.6VDC	20.4 to 28.8VDC		Operating voltage range is
module	Voltage	(peak voltage 27.6VDC)	(ripple ratio within 5%)	Δ	different.
					The current consumption has
power	Current	50mA	65mA	Δ	increased, so the current capacity
supply					must be reviewed.
					The external dimensions is
External dir	nensions	50(H) × 114(W) × 66(D)mm	53.5(H) × 80(W) × 40(D) mm	×	different.
					Use caution on the mounting.
Weight	0.3kg		0.1kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the CL1XY8-DT1B2.

(6) Comparisons between AJ55TB32-16DT and CL1XY8-DT1B2

			O: Com	patible, △:	Partially changed, ×: Not compatible
Input spe	cifications	AJ55TB32-16DT	CL1XY8-DT1B2	Compati- bility	Precautions for replacement
Number of in	nput points	8 points	4 points	×	When five or more points are used, use two CL1XY8-DT1B2 modules.
Isolation me	thod	Photocoupler	Photocoupler	0	
Rated input	voltage	24VDC	24VDC	0	
Rated input	current	Approx. 7mA	Approx. 4mA	Δ	Rated input current is smaller.*1
Operating vo	oltage range	19.2 to 26.4VDC (ripple ratio within 5%)	20.4 to 28.8VDC (ripple ratio within 5%)	Δ	Operating voltage range is different.
Maximum si on input poir		100%	100%	0	
ON voltage/	ON current	14VDC or more/3.5mA or more	19VDC or more/3.0mA or more	Δ	Use caution on the voltage level.
OFF voltage	/OFF current	6VDC or less/1.7mA or less	11VDC or less/1.7mA or less	Δ	Use caution on the voltage level.
Input resista	nce	Approx. 3.3k Ω	Approx. 5.6k Ω	Δ	Input resistance is greater.*1
Response	OFF→ON	10ms or less	1.5ms or less	0	
time	ON→OFF	10ms or less	1.5ms or less	0	
Common ter		8 points per common (3-wire type terminal block)	4 points per common (2-wire type terminal block)	Δ	To connect a 3-wire type sensor, etc., an external common terminal block is required.
Output sp	ecifications	AJ55TB32-16DT	CL1XY8-DT1B2	Compati- bility	Precautions for replacement
Number of o	utput points	8 points	4 points	×	When five or more points are used, use two CL1XY8-DT1B2 modules.
Isolation me	thod	Photocoupler	Photocoupler	0	
Rated load v	oltage .	24 VDC	12/24VDC	0	
Operating lo	ad voltage	19.2 to 26.4VDC	10.2 to 28.8VDC	0	
range		(peak voltage 26.4VDC)	(ripple ratio within 5%)	Ŭ	
Maximum lo	ad current	0.5A/point, 4.0A/common	0.1A/point, 0.4A/common	Δ	The maximum load current per point is smaller. Use caution on selecting the load to use.
Maximum in	rush current	4.0A 10ms or less	0.4A, 10ms or less	Δ	The inrush current value differs. Use caution on selecting the load to use.
Leakage cui	rent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	oltage drop at	0.9VDC or less (TYP.) 0.5A 1.5VDC or less (MAX.) 0.5A	0.3VDC or less (TYP.) 0.1A 0.6VDC or less (MAX.) 0.1A	0	
Response	OFF→ON	2.0ms or less	1.0ms or less	0	
time	ON→OFF	2.0ms or less (resistance load)	1.0ms or less (resistance load)	0	
External power	Voltage	19.2 to 26.4VDC	-		External supply power is not required.
supply	Current	60mA (24VDC TYP. per 1 common)	-	-	External supply power is not required.
Surge suppr	essor	Zener diode	Zener diode	0	
Common terminal arrangement		8 points per common (2-wire type terminal block)	4 points per common (2-wire type terminal block)	0	

○: Compatible, △: Partially changed, x: Not compatible

Spec	ifications	AJ55TB32-16DT	CL1XY8-DT1B2	Compati- bility	Precautions for replacement
Number of	occupied	2 stations occupied	In 4-, 8- and 16-point mode: 1		Set to the 4-point mode.
stations		2 stations occupied	station occupied	Δ	Set to the 4-point mode.
Operation i	indicator	ON indication (LED)	ON indication (LED)	0	
			16-point terminal block		
		40-point terminal block	(M3 screw)		
External wi	iring method	(M3 screw)	Dedicated connector for each	×	Wiring must be changed.
		Transmission circuit included	of transmission and module		0
			power supply		A dedicated connector is used to
Applicable	wire size	0.75 to 2mm ²	0.3 to 1.25mm ²	×	make wiring connection for
		1.25-3, 1.25-YS3A,			transmission and module power
Applicable	crimping	2-S3, 2-YS3A	RAV1.25-3, V1.25-3,		supply.
terminal		V1.25-3, V1.25-YS3A,	1.25-3, TG1-3	×	
		V2-S3, V2-YS3A			
	Voltage	15.6 to 27.6VDC	20.4 to 28.8VDC		Operating voltage range is
I/O	voltage	(peak voltage 27.6VDC)	(ripple ratio within 5%)	Δ	different.
module					Using two CL1XY8-DT1B2
power	0	70mA	65mA		modules requires higher current
supply	Current	70mA	Amed	Δ	consumption, so the current
					capacity must be reviewed.
					The external dimensions is
External di	mensions	50(H) × 177(W) × 66(D)mm	53.5(H) × 80(W) × 40(D) mm	×	different.
					Use caution on the mounting.
Weight		0.4kg	0.1kg	0	

^{*1:} Confirm the specifications of the sensors or switches to be connected to the CL1XY8-DT1B2.

5.3 Precautions for Replacement of the I/O Module

(1) Wiring

(a) Wire gauge and size of crimping terminals

As CC-Link/LT supports compact modules and terminal blocks, the wire gauge and size of the crimping terminals that can be used on terminal blocks differ from those that can be used on the MELSEC-I/OLINK.

For this reason, when replacing with CC-Link/LT, use wire gages and crimping terminals that match the CC-Link/LT specifications.

(2) Transmission cable

(a) Arranging for transmission cable connectors

Transmission cable connectors are not packaged with CC-Link/LT products. The necessary number of transmission cable connectors (CL9-CN $_{\Box}$ - $_{\Box}$) must be arranged for separately.

(3) Precautions for input module

(a) Change in rated input current specifications

CC-Link/LT supports a smaller rated input current than MELSEC-I/OLINK does. Confirm the specifications of the sensors or switches to be connected.

(4) Precautions for output module

(a) Change in output current values specifications

Some CC-Link/LT output modules support a smaller output current than MELSEC-I/OLINK output modules do. Before using an output module having a smaller output current on CC-Link/LT, confirm the specifications on the load side.

(b) Change in common maximum load current specifications

Sometimes the maximum load current per common differs between CC-Link/LT and MELSEC-I/OLINK. Check the maximum load current per common before use.

APPENDICES

Appendix 1 External Dimensions

For external dimensions of modules shown in this handbook, refer to the user's manual for each module.

Appendix 2 Related Manuals

Appendix 2.1 Replacement Handbooks

(1) Transition guides

No.	Manual Name	Manual No.	Model Name code
1	MELSEC-A/QnA Series Transition Guide	L-08077E	_
2	MELSEC-AnS/QnAS (Small Type) Series Transition Guide	L-08236E	_

(2) Transition handbooks

No.	Manual Name	Manual No.	Model Name code
1	Transition from MELSEC-A/QnA (Large Type) Series to Q Series Handbook (Fundamentals)	L-08043ENG	-
2	Transition from MELSEC-A/QnA (Large Type) Series to Q Series Handbook (Intelligent Function Modules)	L-08046ENG	-
3	Transition from MELSEC-A/QnA (Large Type) Series to Q Series Handbook (Network Modules)	L-08048ENG	-
4	Transition from MELSEC-A/QnA (Large Type) Series to Q Series Handbook (Communications)	L-08050ENG	_
5	Transition from MELSEC-A0J2H Series to Q Series Handbook	L-08060ENG	_
6	Transition from MELSECNET/MINI-S3,A2C(I/O) to CC-Link Handbook	L-08061ENG	_
7	Transition from MELSEC-I/OLINK to CC-Link/LT Handbook	L-08062ENG	_
8	Transition of CPUs in MELSEC Redundant System Handbook (Transition from Q4ARCPU to QnPRHCPU)	L-08117ENG	-

(3) Transition examples manual

No.	Manual Name	Manual No.	Model Name code
1	MELSEC-A/QnA (Large), AnS/QnAS (Small) Transition Examples	L-08121E	-

Appendix 2.2 MELSEC-I/OLINK

No.	Manual Name	Manual No.	Model Name Code
1	MELSEC-I/O Link Remote I/O System Master Module type AJ51T64/ A1SJ51T64 User's Manual	IB-66574	13J748

Appendix 2.3 CC-Link/LT

No.	Manual Name	Manual No.	Model Name Code
1	Open Field Network CC-Link Compatible Product Catalog	L-08038E	_
2	Open Field Network CC-Link Compatible Product databook	L-08039E	_
3	CC-Link/LT Master Module User's Manual	SH-080351E	13JR62
4	CL1X4-D1B2 USER'S MANUAL	JY997D04101	_
5	CL2X8-D1B2 CC-Link/LT Remote I/O Module User's Manual	IB-0800233	13JP03
6	CL1Y4-R1B2 USER'S MANUAL	JY997D04301	_
7	CL1Y4-T1B2 USER'S MANUAL	JY997D04201	_
8	CL2Y8-TP1B2 CC-Link/LT Remote I/O Module User's Manual	IB-0800234	13JP04
9	CL1XY4-DR1B2 USER'S MANUAL	JY997D05701	_
10	CL1XY8-DR1B2 USER'S MANUAL	JY997D04501	_
11	CL1XY4-DT1B2 USER'S MANUAL	JY997D05601	_
12	CL1XY8-DT1B2 USER'S MANUAL	JY997D04401	_

WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.

However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place. Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

- (1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.
- (2) Even within the gratis warranty term, repairs shall be charged for in the following cases.
 - 1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
 - 2. Failure caused by unapproved modifications, etc., to the product by the user.
 - 3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
 - 4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
 - 5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
 - 6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
 - 7. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

2. Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not available after production is discontinued.

3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

4. 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.

5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

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