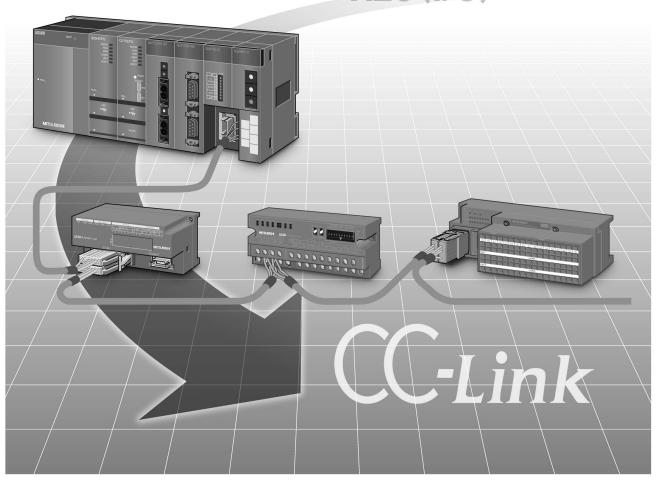
MITSUBISHI

Mitsubishi Programmable Controller

Transition from MELSECNET/MINI-S3, A2C (I/O) to CC-Link Handbook

MELSECNET/MINI-S3 A2C (I/O)

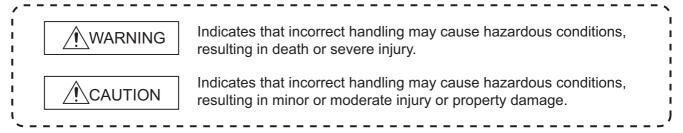


SAFETY PRECAUTIONS

(Read these precautions before using this product.)

Before using this product, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the product correctly.

In this manual, the safety precautions are classified into two levels: "/NWARNING" and "/NCAUTION".



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 manual and then keep the manual in a safe place for future reference.

[Design Precautions]

WARNING

- 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. Incorrect output or malfunction due to a communication failure may result in an accident.
 - (1) Emergency stop circuits, protection circuits, and protective interlock circuits for conflicting operations (such as forward/reverse rotations or upper/lower limit positioning) must be configured external to the programmable controller.
 - (2) When the programmable controller detects the following problems, it will stop calculation and turn off all outputs in the case of (a).

In the case of (b), it will hold or turn off all outputs according to the parameter setting. Note that the A series module will turn off the output in either of cases (a) and (b).

	Q series module	A series module
(a) The power supply module has over current protection equipment and over voltage protection equipment.	Output OFF	Output OFF
(b) The programmable controller CPU self- diagnosis functions, such as the watchdog timer error, detect problems.	Hold or turn off all output according to the parameter setting.	Output OFF

Also, all outputs may be turned on if an error occurs in a part, such as an 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 the MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection).

(3) Outputs may remain on or off due to a failure of a component such as a transistor in an output circuit. Configure an external circuit for monitoring output signals that could cause a serious accident. 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.
- In the case of a communication failure in the network, the status of the error station will be as follows:
 Check the communication status information and configure an interlock circuit in the sequence program to ensure that the entire system will operate safely.
 - Incorrect output or malfunction due to a communication failure may result in an accident.
 - (1) All inputs from remote I/O stations are turned off.
 - (2) All outputs from remote I/O stations are turned off.
- When connecting a peripheral with the CPU module or connecting an external device, such as a personal computer, with an intelligent function module to modify data of a running programmable controller, configure an interlock circuit in the 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, when a remote programmable controller is controlled by an external device, immediate action cannot be taken if a problem occurs in the programmable controller due to a communication failure.

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

[Design Precautions]

! CAUTION

- Use the programmable controller in an environment that meets the general specifications in a product manual.
 - Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- 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.
- During control of an inductive load such as a lamp, heater, or solenoid valve through an output module, a large current (approximately ten times greater than normal) may flow when the output is turned from off to on. Therefore, use a module that has a sufficient current rating.

[Installation Precautions]

CAUTION

- Connectors for external devices must be crimped with the tool specified by the manufacturer, or must be correctly soldered. Securely connect the connector to the module.
- 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 interconnection 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 screws 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.

• Shut off the external power supply (all phases) used in the system before cleaning 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 QCPU User's Manual (Hardware Design, Maintenance and Inspection) and the online module change in the manual for the module corresponding the online module change.

Do not directly touch any conductive parts of the module.

Doing so can cause malfunction or failure of the module.

[Wiring Precautions]

WARNING

- Shut off the external power supply (all phases) used in the system 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.

[Wiring Precautions]

! CAUTION

- Individually ground the FG terminal of the programmable controller with a ground resistance of 100Ω or less. Failure to do so may result in electric shock or malfunction.
- 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 devices must be crimped or pressed with the tool specified by the manufacturer, or must be correctly soldered.
 - Incomplete connections may cause short circuit, fire, or malfunction.
- Tighten the screws 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.
- Tighten any unused terminal screws within the specified torque range (42 to 50N•cm).
 Failure to do so may cause a short circuit due to contact with a solderless terminal.
- Use applicable solderless terminals and tighten them within the specified torque range.
 If any spade solderless terminal is used, it may be disconnected when a terminal screw comes loose, resulting in failure.
- 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.
- 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.
- Do not install the control lines together with the communication cables.
 - Failure to do so may result in malfunction due to noise.
- When disconnecting the communication cable or power 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. Loosen the screws of a cable without a connector before disconnecting the cable. Failure to do so may result in damage to the module or cable or malfunction due to poor contact.

[Startup and Maintenance Precautions]

WARNING

- Do not touch any terminal or connector while power is on.
 - Failure to do so may result in electric shock.
- Shut off the external power supply (all phases) used in the system before cleaning the module or retightening the terminal screws or module fixing screws.

Failure to do so may result in electric shock.

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.

[Startup and Maintenance Precautions]

CAUTION

- Before performing online operations (especially, program modification, forced output, and operating status change) for the running CPU module from the peripheral device connected, read relevant manuals carefully and ensure the safety.
 - Improper operation may damage machines or cause accidents.
- Do not disassemble or modify the module.
 - 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 away in all directions from the programmable controller.
 - Failure to do so may cause malfunction.
- Do not drop or apply strong shock to the module.
 - Doing so may damage the module.
- Shut off the external power supply (all phases) used in the system before mounting or removing a module.
 - Failure to do so may cause the module to fail or malfunction.
- After the first use of the product, do not mount/remove the module to/from the base unit more than 50 times (IEC 61131-2 compliant) respectively.
 - Exceeding the limit may cause malfunction.
- Before handling the module, touch a conducting object such as a grounded metal 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.

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.

Print Date	* Handbook Number	Revision
Dec., 2005	L(NA)-08061ENG-A	First edition
Aug., 2007	L(NA)-08061ENG-B	Model addition
		Addition of modules to be replaced
		AJ65DBTB1-32D, AJ65BTB1-16D, AJ65BTB2-16D, AJ65DBTB1-32R,
		AJ65DBTB1-32T1, AJ65BTB1-16T, AJ65DBTB1-32DR, AJ65DBTB1-32DT1,
		AJ65BT-R2N, A6ADP-1MC16D, A6ADP-1MC16T, A6ADP-2MC16D
		Partial correction
		SAFETY PRECAUTIONS, Section 1.1, Section 1.2, Section 5.1, Section 5.2.1,
		Section 5.2.2, Section 5.2.3, Section 5.3, Chapter 8, Section 9.2, Appendix 1.3
Mar., 2008	L(NA)-08061ENG-C	Model addition
		Renewal tool for A0J2
		Partial correction
		Section 1.1, Section 1.2 to Section 1.4 → Section 1.3 to Section 1.5,
		Section 1.3, Section 5.1, Section 5.2.1 to Section 5.2.3, Section 8.2,
		Appendix 1 → Appendix 2, Appendix 2.1, Appendix 2.4, Appendix 2.5
Mar., 2013	L(NA)-08061ENG-D	Deletion of the AJ65BT-R2 from the alternative models
		Addition
		CONDITIONS OF USE FOR THE PRODUCT, GENERIC TERMS AND
		ABBREVIATIONS, Specifications comparison between AX80Y10C and
		AJ65DBTB1-32DR
		Partial correction
		SAFETY PRECAUTIONS, Section 1.3.2, Section 1.5, Section 2.1, Section 2.2.1,
		Section 2.2.2, Section 8.1, Section 8.2, Section 9.2, Appendix 2, WARRANTY

Japanese Handbook Version L-08057-F

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- For the products shown in handbooks for transition, catalogues, and transition examples, refer to the manuals for the relevant products and check the detailed specifications, precautions for use, and restrictions before replacement.
 - For the products manufactured by Mitsubishi Electric Engineering Co., Ltd., Mitsubishi Electric System & Service Co., Ltd., and other companies, refer to the catalogue for each product and check the detailed specifications, precautions for use, and restrictions before use.
 - The manuals and catalogues for our products, products manufactured by Mitsubishi Electric Engineering Co., Ltd., and Mitsubishi Electric System & Service Co., Ltd. are shown in Appendix of each handbook for transition.
- Products shown in this handbook are subject to change without notice.

GENERIC TERMS AND ABBREVIATIONS

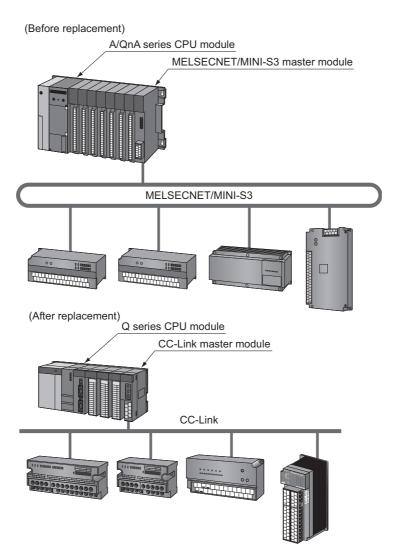
Unless otherwise specified, this handbook uses the following generic terms and abbreviations.

Generic term/abbreviation	Description	
■Series		
A contra	The abbreviation for large types of Mitsubishi MELSEC-A series programmable	
A series	controllers	
And corine	The abbreviation for compact types of Mitsubishi MELSEC-A series programmable	
AnS series	controllers	
A/AnS series	A generic term for A series and AnS series	
On A series	The abbreviation for large types of Mitsubishi MELSEC-QnA series programmable	
QnA series	controllers	
On A.S. parion	The abbreviation for compact types of Mitsubishi MELSEC-QnA series programmable	
QnAS series	controllers	
QnA/QnAS series	A generic term for QnA series and QnAS series	
A/AnS/QnA/QnAS series	A generic term for A series, AnS series, QnA series, and QnAS series	
Q series	The abbreviation for Mitsubishi MELSEC-Q series programmable controllers	
■CPU module type		
CPU module	A generic term for A series, AnS series, QnA series, QnAS series, Q series, and L	
CFO Module	series CPU modules	
Basic model QCPU	A generic term for the Q00JCPU, Q00CPU, and Q01CPU	
	A generic term for the Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, and Q25HCPU	
High Performance model QCPU	* This handbook mainly explains the Q02CPU, Q02HCPU, Q06HCPU, and	
	Q12HCPU.	
Process CPU	A generic term for the Q02PHCPU, Q06PHCPU, Q12PHCPU, and Q25PHCPU	
Redundant CPU	A generic term for the Q12PRHCPU and Q25PRHCPU	
	A generic term for the Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU,	
	Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU,	
	Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU,	
	Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, and	
	Q100UDEHCPU	
Universal model QCPU	* This handbook mainly explains about the Q00UJCPU, Q00UCPU, Q01UCPU,	
	Q02UCPU, Q03UDCPU, Q04UDHCPU, and Q06UDHCPU, which can replace the	
	AnS/QnAS series.	
	The specifications and functions of the Q10UDEHCPU to Q100UDEHCPU are the	
	same as those of the modules described above, although the program and memory	
	capacities increase.	
LCPU	A generic term for the L02CPU, L02CPU-P, L26CPU-BT, and L26CPU-PBT	
■CPU module model	7 goriono terminor dio 20201 0, 20201 0 1, 22001 0 11, did 22001 0 1 11	
ACPU	A generic term for MELSEC-A series CPU modules	
AnSCPU	A generic term for MELSEC-AnS series CPU modules	
	A generic term for the A1NCPU, A1NCPUP21/R21, A1NCPUP21-S3, A2NCPU,	
AnNCPU	A2NCPU-S1, A2NCPUP21/R21, A2NCPUP21/R21-S1, A2NCPUP21-S3(S4),	
	A3NCPU, A3NCPUP21/R21, and A3NCPUP21-S3	
	A generic term for the A2ACPU, A2ACPU-S1, A3ACPU, A2ACPUP21/R21,	
AnACPU	A2ACPUP21/R21-S1, and A3ACPUP21/R21	
AnUCPU	A generic term for the A2UCPU, A2UCPU-S1, A3UCPU, and A4UCPU	
AnUS(H)CPU	A generic term for the A2USCPU, A2USCPU-S1, A2USHCPU-S1	
A/AnSCPU	A generic term for MELSEC-A series and -AnS series CPU modules	
AnN/AnACPU	A generic term for the AnNCPU and AnACPU	
AnN/AnA/AnSCPU	A generic term for the AnNCPU, AnACPU, and AnSCPU	
QnACPU A generic term for MELSEC-QnA series CPU modules		
QnASCPU	A generic term for MELSEC-QnAS series CPU modules	

Generic term/abbreviation	Description
QnA/QnASCPU	A generic term for MELSEC-QnA series and -QnAS series CPU modules
A/AnS/QnA/QnASCPU	A generic term for MELSEC-A series, -AnS series, -QnA series, and -QnAS series CPU modules
QCPU	A generic term for MELSEC-Q series CPU modules
LCPU	A generic term for MELSEC-L series CPU modules

1.1 Replacing with Q series

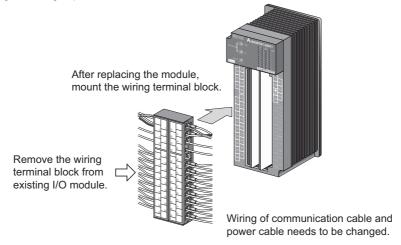
The Q series does not have a MELSECNET/MINI-S3 master module. For this reason, it is recommended to use the CC-Link system when replacing the MELSECNET/MINI-S3 system with the Q series.



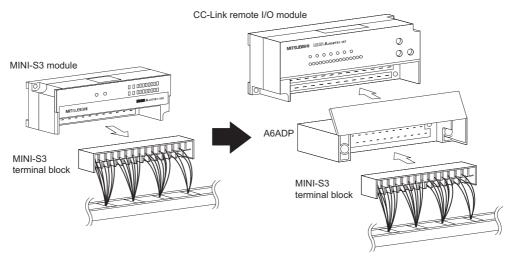
1.2 Suggestions for Replacement with the Remote I/O Module of CC-Link System

Module before		Corresponding module		
replacement (current status)	Туре	Outline	(before replacement → after replacement)	
	CC-Link system compact type remote I/O module	Reconfiguration of the system is easy. Selecting the best match model from the wide selection of modules for a module before replacement is possible.	(All models)	
MELSECNET/MINI-S3- compatible module (AJ35□-□) A2C (I/O) module (A□C)	CC-Link system remote I/O module (A2C shape)	Module mounting size is the same. This A2C shape CC-Link I/O module has the same shape (same mounting dimensions) with A2C (I/O) module. No processing for mounting holes is required when replacing the module. I/O signal wiring is the same. Since the terminal block of the same shape is used, I/O signal wiring is the same.* Optional products are available. The A6DIN1C and A2CCOM-TB (sold separately) are available. If the A2C (I/O) is used before replacement, it can be utilized.	AX41C/AX81C → AJ65DBTB1-32D AY51C → AJ65DBTB1-32T1 AX40Y50C → AJ65DBTB1-32DT1 AY13C → AJ65DBTB1-32R AX40Y10C → AJ65DBTB1-32DR	
	CC-Link system remote I/O module	Change in wiring is unnecessary. By using a wiring conversion adapter, terminal block of the module before replacement can be utilized to the module after replacement "2 (regarding communication cable and power cable, wiring change is required).	AJ35TB1-16D → AJ65BTB1-16D AJ35TB2-16D → AJ65BTB2-16D AJ35TB1-16T → AJ65BTB1-16T	

^{*1} Man-hour taken for wiring change can be reduced since wiring to the external device can also be used by partially changing the wiring of power cable and communication cable.



*2 Image figure of replacement using wiring conversion adapter



1.3 Suggestions for Replacement with Renewal tool for A0J2

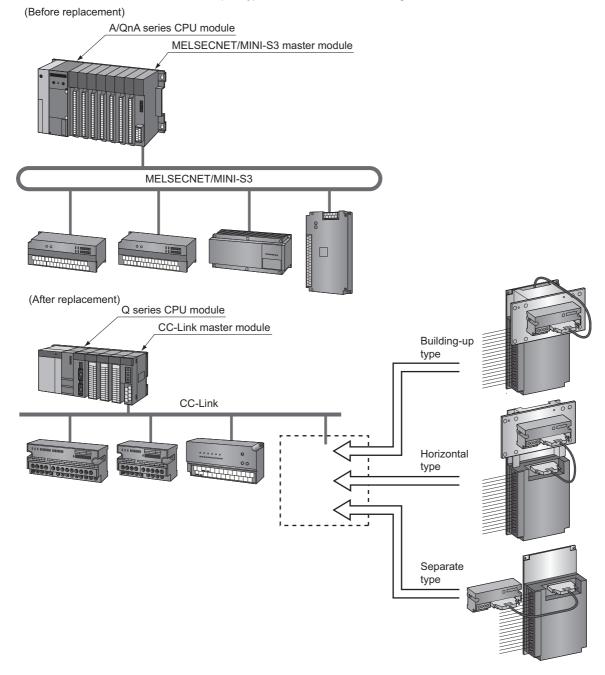
1.3.1 Advantages of using renewal tool for A0J2 (manufactured by Mitsubishi Electric System & Service Co., Ltd.)

(1) The MELSECNET/MINI-S3 system can be replaced with CC-Link without changing existing wiring.

Although the CPU module, A/QnA series is replaced with the Q series, the external wiring terminal block attached to the existing MELSECNET/MINI-S3 I/O module*1 can be utilized to the interface module. It allows to replace the modules without external wiring change. (The module is replaced with FCN connector type DC input/output module of CC-Link.)

Also, new wiring is unnecessary since the CC-Link I/O module is connected to the interface module with dedicated cable.

*1: The MELSECNET/MINI-S3 compact type remote I/O module is the target module.



⊠POINT

For specifications comparison and functional comparison between the existing MELSECNET/MINI-S3 compact type remote I/O module and the renewal tool for A0J2 after replacement, refer to APPENDICES.

(2) Processing the mounting holes is unnecessary.

Mounting dimensions of the base adapter included with renewal tool for A0J2 is the same with dimensions of existing A0J2 I/O module. Replacement without processing the mounting holes is possible.

(3) I/O address change is unnecessary.

By replacing the MELSECNET/MINI-S3 compact type remote I/O module with FCN connector type DC input/output module of CC-Link, the I/O address assignment of the MELSECNET/MINI-S3 compact type remote I/O module can be utilized.

It eliminates I/O address change and allows substantial reduction of program correction.

MPOINT

1) Renewal tool for A0J2

This tool is used for the following replacement.

- · Replacing the A0J2 (H) system with Q series
- Replacing the A0J2 (H) system with AnS series
- Replacing the MELSECNET/MINI-S3 compact type remote I/O module with FCN connector type DC input/output module of CC-Link

It is composed of interface module to which wiring terminal block of existing I/O module can be attached and base adapter for utilizing the existing mounting hole, etc.

Installation method can be selected according to the installation space.

2) Interface module

This module has the conversion function that converts DC output into relay output or AC input into DC input. Therefore, it can be replaced in combination with FCN connector type DC input/output module of CC-Link.

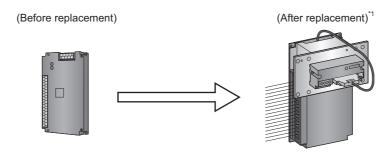
Wire between the interface module and the CC-Link I/O module with dedicated connection cable. (List of models supporting interface module)

Discontinued modules (MELSECNET/MINI(-S3))		Alternative modules (CC-Link)		
Product name Model name		Alternative programmable controller I/O module	Interface module	
Output module	AJ35PTF-24R	AJ65SBTCF1-32T	SC-A0JQIF24R	
I/O module	AJ35PTF-28DR	AJ65SBTCF1-32D, AJ65SBTCF1-32T	SC-A0JQIF28DR	
	AJ35PTF-28DT	AJ65SBTCF1-32D, AJ65SBTCF1-32T	SC-A0JQIF28DT	
	AJ35PTF-56AR	AJ65SBTCF1-32D, AJ65SBTCF1-32T	SC-A0JQIF56AR	
	AJ35PTF-56DR	AJ65SBTCF1-32D, AJ65SBTCF1-32T	SC-A0JQIF56DR	
	AJ35PTF-56DT	AJ65SBTCF1-32D, AJ65SBTCF1-32T	SC-A0JQIF56DT	

1.3.2 Proposal of replacement with renewal tool for A0J2

(1) Building-up type

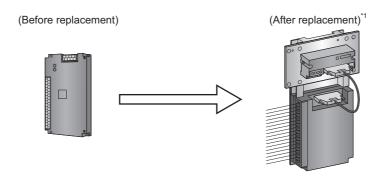
The CC-Link I/O module can be built up to the existing panel if there is room for depth in front of existing module, and can be installed on the installation surface of the existing panel.



^{*1:} Up to two interface modules can be used for each renewal tool for A0J2.

(2) Horizontal type

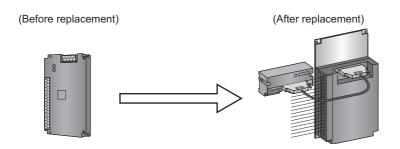
The CC-Link I/O module can be installed horizontally, if there is room above the existing module.



^{*1:} Up to two interface modules can be used for each renewal tool for A0J2.

(3) Separate type

Only the CC-Link I/O module can be installed separately (Only this method is available for the AnS series).





Other than CC-Link, replacement to the QCPU or AnSCPU is possible. For details, contact your local Mitsubishi sales representative. (refer to Section 1.5).

1.4 Precautions for Replacement

- (a) Before replacing MELSECNET/MINI-S3 with CC-Link, be sure to refer to the manuals for each of the CC-Link modules, and confirm the functions, specifications and methods of use of the modules.
- (b) For replacement using renewal tool for A0J2, always refer to the following manual. Select correct products after checking the functions, specifications, and usage. (Reference manual)
 - Renewal tool for A0J2 series transition from MELSEC-A0J2(H) series to renewal system using renewal tool (Refer to Appendix 2.5.)
- (c) When stations installing a MELSECNET/MINI-S3 CC-Link module wiring conversion adapter to the CC-Link remote I/O module (AJ65BTB1-16D, AJ65BTB2-16D or AJ65BTB1-16T) is mixed, the maximum number of connected modules is 32 with the use of a version 1.10 compatible CC-Link dedicated cable. (No restrictions when using cables other than a version 1.10 compatible CC-Link dedicated cable.)
- (d) After replacing MELSECNET/MINI-S3 with CC-Link, be sure to check operation of the entire system before starting actual operation.

1.5 Contact of the Relevant Products

Renewal tool manufactured by Mitsubishi Electric Engineering Co., Ltd.

For products manufactured by Mitsubishi Electric Engineering Co., Ltd., contact your local sales representative.

Introduction of "replacement of MELSEC-A series, system renewal service, and renewal tool for A0J2"

For replacement of MELSEC-A series and system renewal service, contact your local sales representative.

PERFORMANCE SPECIFICATIONS **COMPARISONS**

2.1 Performance Specifications Comparisons between MELSECNET/MINI-S3 and CC-Link

○: Compatible. A: Partial change required. x: Not compatible

		Specifications			nge required, × . Not compatible
	Item	MELSECNET/MINI-S3 CC-Link		bility	Precautions for replacement
Per master station	Max. number of link stations	64 stations (8 points/station)	64 stations (32 points/station)	0	
Per ma	Maximum control I/O points	1024 points *1	4096 points + 512 words	0	
Number of master modules mounted		Max. 64 modules (according to the specifications for the CPU module used.)	When setting parameters with GX Developer: 8 modules *2*3*4 When setting parameters with dedicated instructions: Max. 64 modules (according to the specifications for the CPU module used.)	0	
Communication speed		1.5Mbps	156k/625k/2.5M/5M/10Mbps	0	
Transmission method		Ring	Bus	×	New cable must be laid.
Overall cable distance		No restriction	1200m (at 156kbps)	×	When the transmission distance exceeds 1200m, use a CC-Link repeater module.
Max. transmission distance between stations		Optical data link: 50m (35m)* ⁵ Twisted pair data link: 100m (50m)* ⁶	1200m (at 156kbps)	0	
Number of occupied I/O points per stations		In I/O dedicated mode: 32 points In extended mode: 48 points	32 points	0	

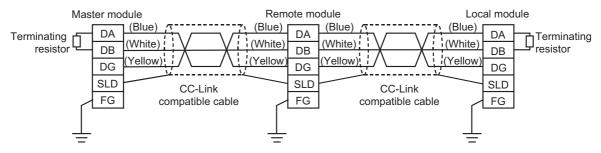
- *1: When 16 separate refresh type remote I/O modules AJ35PTF-128DT (number of occupied stations: 4) are connected, 1024 I/O points each can be controlled.
- *2: The following CPU modules have the restriction of the number of modules mounted.
 - Q00J/Q00/Q01CPU: 2
 - Q00UJ/Q00U/Q01UCPU: 2
 - Q02UCPU: 4
- *3: When more than 4 modules are used by the parameter setting in GX Developer, refer to the following to check the version for the CPU module and GX Developer.
 - MELSEC-Q CC-Link System Master/Local Module User's Manual
- *4: Total number of CC-Link master stations and local stations.
- *5: When a 2VTPE-1 optical combined vinyl-insulated sheath cable (manufactured by Mitsubishi Cable Industries, Ltd.) is used, the max. transmission distance between stations is 35m.
- *6: The max. transmission distance between stations varies according to the size of the twisted pair cable.
 - 0.2mm² or more to less than 0.5mm² ... 50m,
 - 0.5mm² or more ... 100m

2.2 Wiring in CC-Link

New cables must be laid when replacing MELSECNET/MINI-S3 with CC-Link as the two systems differ in the applicable cable types.

2.2.1 CC-Link Ver.1.00 cable specifications

(1) Connection method

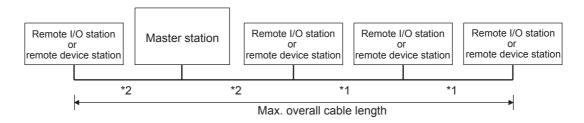


In the CC-Link system, the terminal resistor to be connected varies according to the cable to be used.

Cable type	Terminal resistor	
CC-Link dedicated cable	110Ω 1/2 W (brown/brown)	
CC-Link dedicated high-performance cable	130 Ω 1/2 W (brown/orange/brown)	

(2) Cable length between stations, max. overall cable length

1) When the system is composed of only remote I/O stations and remote device stations



- *1: Cable length between remote I/O stations or remote device stations
- *2: Cable length between master station and next stations

CC-Link dedicated cable (110 Ω used as terminal resistor)

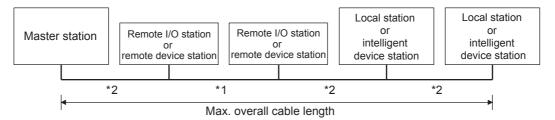
Transmission speed	Cable length between stations		Max. overall cable length	
mansimssion speed	*1	*2	Max. Overall cable leligill	
156kbps			1200m	
625kbps	30cm or more		600m	
2.5Mbps			200m	
5Mbps	30cm to 59cm*	1m or more	110m	
Sivibps	60cm or more	- IIII oi illole	150m	
	30cm to 59cm*		50m	
10Mbps	60cm to 99cm*		80m	
	1m or more		100m	

CC-Link dedicated high-performance cable (130 Ω used as terminal resistor)

Transmission speed		Cable length b	Max. overall cable length	
		*1	*2	Max. Overall cable length
156	kbps			1200m
625	kbps			900m
2.5	Mbps			400m
5N	lbps	30cm or more		150m
	Number of	300m of more		
	connected		1m or more	100m
	modules			100111
	:1 to 32			
	Number of	30cm to 39cm*	illi oi illoie	80m
10Mbps	connected			
TOWIDPS	modules	40cm or more		100m
	:33 to 48			
	Number of	30cm to 39cm*		20m
	connected	40cm to 69cm*		30m
	modules	70cm or more		100m
	:49 to 64	7 OGHI OF HIGHE		130111

^{*} When an actual cable length between remote I/O stations or remote device stations is in this range at even one location, the above max. overall cable length applies.

2) When the system is composed of remote I/O stations, remote device stations, local stations, and intelligent device stations



^{*1:} Cable length between remote I/O stations or remote device stations

CC-Link dedicated cable (110 Ω used as terminal resistor)

Transmission speed	Cable length be	Max. overall cable length		
Transmission speed	*1	*2	Max. Overall cable length	
156kbps			1200m	
625kbps	30cm or more		600m	
2.5Mbps			200m	
5Mbps	30cm to 59cm*	2m or more	110m	
Sivibps	60cm or more	ZIII OI IIIOIE	150m	
	30cm to 59cm*		50m	
10Mbps	60cm to 99cm*		80m	
	1m or more		100m	

CC-Link dedicated high-performance cable (130 Ω used as terminal resistor)

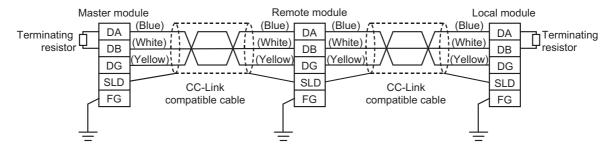
Transmission speed	Cable length b	Max. overall cable length	
Transmission speed	*1	*2	Max. Overall cable length
156kbps			1200m
625kbps	30cm or more		600m
2.5Mbps			200m
5Mbps	30cm to 59cm*	2m or more	110m
Sivibps	60cm or more		150m
10Mbps	70cm to 99cm*		50m
TOWIDPS	1m or more		80m

^{*} When an actual cable length between remote I/O stations or remote device stations is in this range at even one location, the above max. overall cable length applies.

^{*2:} Cable length between master/local stations or intelligent device stations and next stations

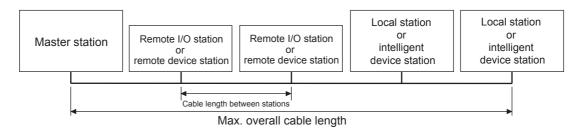
2.2.2 CC-Link Ver.1.10 cable specifications

(1) Connection method



Cable type	Terminal resistor
Ver1.10-compatible CC-Link dedicated cable	110 Ω 1/2 W (brown/brown)

(2) Cable length between stations, max. overall cable length



Ver.1.10-compatible CC-Link dedicated cable (110 Ω used as terminal resistor)

Transmission speed	Cable length between stations	Max. overall cable length	
156kbps		1200m	
625kbps		900m	
2.5Mbps	20cm or more	400m	
5Mbps		160m	
10Mbps		100m	

3

FUNCTIONAL COMPARISONS

3.1 Functional Comparisons between MELSECNET/MINI-S3 and CC-Link

○: Compatible, △: Partial change required, ×: Not compatible

lto		Specifi	Compati-	Precautions for replacement	
Item		MELSECNET/MINI-S3 CC-Link		bility	Precautions for replacement
Commur with rem station		Communication with batch refresh type remote I/O modules, separate refresh type remote I/O modules and remote terminal modules is possible.	Communication with remote I/O stations, remote device stations, local stations, and intelligent device stations is possible.	×	Create new programs as the two systems are not compatible in the program.
RAS function	Communication / line error detection	Communications with all stations sometimes is discontinued when an error occurs on even one station. The faulty station is detected on the master station and is stored to buffer memory.	Only the faulty station is disconnected, and communication with other stations is continued normally. The faulty station is detected on the master station and is stored to buffer memory.	Δ	The method of confirmation is different. Review the program.
RA%		Breakage of the optical cables and twisted pair cables can be checked by changing the operation mode of the master station.	Breakage of twisted pair cables can be checked by changing the operation mode of the master station.	Δ	program.
Others	Monitor station function	The I/O status of the remote I/O module can be monitored by the LEDs on the master station.	None	×	Connect the programming tool and check by the device monitor.



REPLACING MASTER MODULE/REMOTE MODULE

4.1 Replacing Master Module

4.1.1 List of alternative master module models

MELSECNET/MINI-S3 models to be discontinued		Alternative model for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
	AJ71PT32-S3	- QJ61BT11N	Examine replacement with CC-Link. For details, refer to the User's Manual for the respective
Master module	AJ71T32-S3		
Master Module	A1SJ71PT32-S3		module.
	A1SJ71T32-S3		module.

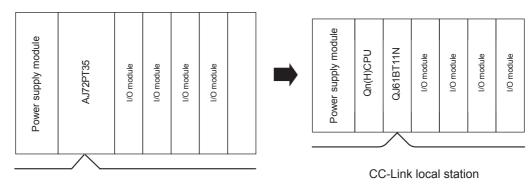
4.2 Replacing Remote Module

CC-Link does not have a remote module that uses a building block type I/O module. When changing the remote module, it is recommended to replace with the respective remote modules or a local station (QCPU+QJ61BT11N) of CC-Link.

4.2.1 List of alternative remote module models

MELSECNET/MINI-S3 models to be discontinued		Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
	AJ72PT35	None	It is recommended to replace with the respective remote
Remote module	AJ72T35	None	module or a local station*1 (QCPU+QJ61BT11N) of CC-Link.

*1: A program is required for local station QJ61BT11N as it cannot directly control I/O modules. For this reason, the following system changes are required.



MELSECNET/MINI-S3 remote station

5

REPLACING I/O MODULE

5.1 List of Aternative I/O Module Models

	MELSECNET/MINI-S3, A2C models to be discontinued		Alternative model for CC-Link
Product name	Model name	Model name	Remarks (restrictions)
			Change in external wiring: Required
			2) Change in number of modules (2 modules necessary)
			3) Change in program
			Change in number of occupied I/O points: Required
			4) Change in specifications
	AX11C	AJ65SBTB2N-16A	Change in rated input voltage: Not required
			Change in rated input current: Required
			Change in ON voltage/ON current: Not required
			Change in OFF voltage/OFF current: Required
			Change in input resistance: Required
			5) Change in functions: Required (2-wire type for inputs)
	AX21C	None	No alternative model
			Change in external wiring: Required
			Change in number of modules: Not required
			3) Change in program
			Change in number of occupied I/O points: Not required
		AJ65SBTB1-32D	4) Change in specifications
			Change in rated input voltage: Required (12/24VAC,
	AX31C		12VDC not allowed)
			Change in rated input current: Not required
Input module			Change in ON voltage/ON current: Required
			Change in OFF voltage/OFF current: Required
			Change in input resistance: Required
			Change in input response time: Required
			(35/30ms→ 1.5ms)
			5) Change in functions: Required (12/24VAC, 12VDC not
			allowed)
			1) Change in external wiring: Required
			2) Change in number of modules: Not required
			3) Change in program
			Change in number of occupied I/O points: Not required
			4) Change in specifications
			Change in rated input voltage: Required (12VDC not
	AX41C	AJ65SBTB1-32D	allowed)
			Change in rated input current: Not required
			Change in ON voltage/ON current: Required
			Change in OFF voltage/OFF current: Required
			Change in input resistance: Not required
			Change in input response time: Required
			(10ms → 1.5ms)
			5) Change in functions: Required (12VDC not allowed)

MELSECNET/MINI-S3, A2C models to be discontinued			Alternative models for CC-Link
Product name	Model name	Model name	Remarks (restrictions)
	AX41C	AJ65DBTB1-32D	1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) 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 input response time: Not required 5) Change in functions: Required (12VDC not allowed)
Input module	AX81C	AJ65SBTB1-32D	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Not required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) 5) Change in functions: Required (12VDC not allowed)
		AJ65DBTB1-32D	1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) 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 input response time: Not required 5) Change in functions: Required (12VDC not allowed)

	I-S3, A2C models to be		Alternative models for CC-Link
Product name	Model name	Model name	Remarks (restrictions)
	AJ35PTF-32D	AJ65SBTB1-32D	 1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) 5) Change in functions: Required (12VDC not allowed, no optics)
Input module	AJ35TB1-16A	AJ65SBTB2N-16A	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Required Change in input resistance: Required 5) Change in functions: Required (2-wire type for inputs)
	AJ35TB3-8D	AJ65SBTB3-8D	 1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) 5) Change in functions: Not required
	AJ35TB1-16D	AJ65SBTB1-16D	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms →1.5ms) 5) Change in functions: Not required

	IINI-S3, A2C models iscontinued	Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
	AJ35TB1-16D	AJ65BTB1-16D	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Not required 5) Change in functions: Not required
Input module	AJ35TB2-16D	AJ65SBTB3-16D AJ65BTB2-16D	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) 5) Change in functions: Required (2-wire type → 3-wire type) 1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required
	AJ35TC1-32D	AJ65SBTCF1-32D	Change in input response time: Not required 5) Change in functions: Not required 1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms)

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
Output module	Model name	Model name AJ65SBTB2N-16R	Remarks (restrictions) 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required
	AY13C	AJ65DBTB1-32R	(2-wire type for outputs) 1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required
	AY15CEU	AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required (Note that a connect life is half.) 5) Change in functions: Required (2-wire type for outputs)
		AJ65DBTB1-32R	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: : Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required
	AY23C	AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Required (2-wire type for outputs)
	AY51C	AJ65SBTB1-32T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Not required

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
Output module	AY51C	AJ65DBTB1-32T1	1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Not required
		AJ65SBTB1-16TE	 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Required (5VDC not allowed) Change in rated output current: Required (2A → 0.1A) 5) Change in functions: Required (5VDC not allowed)
	AY61CE	AJ65SBTB1-32TE1	 Change in external wiring: Required Change in number of modules: Not required Change in program Change in number of occupied I/O points: Not required Change in specifications Change in rated output voltage: Required (5VDC not allowed) Change in rated output current: Required (2A → 0.5A) Change in functions: Required (5VDC not allowed)
	AY81C	AJ65SBTB1-16TE	 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Required (0.5A → 0.1A) 5) Change in functions: Not required
		AJ65SBTB1-32TE1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: : Not required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required
	AJ35PTF-24S	AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, no high-speed type fuse, no optics)

	MINI-S3, A2C models liscontinued		Alternative models for CC-Link
Product name	Model name	Model name	Remarks (restrictions)
	AJ35PTF-24T	AJ65SBTB1-32T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (no optics)
	AJ35TB1A-8R	AJ65SBTB2N-8R	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (Change to 16 points per common (2-wire type))
	AJ35TB2-8R	AJ65SBTB2N-8R	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required
Output module	AJ35TB1-16R	AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs)
	AJ35TB1A-8T	AJ65SBTB1-8T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Required 5) Change in functions: Required (Change to 16 points per common (2-wire type))
	AJ35TB2-8T	AJ65SBTB2-8T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (5VDC not allowed) Change in rated output current: Not required 5) Change in functions: Required (5VDC not allowed)

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative model for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
Product Haine	AJ35TB1-16T	AJ65SBTB1-16T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Required 5) Change in functions: Not required	
	AJ351B1-161	AJ65BTB1-16T	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Not required	
Output module	AJ35TB2-16T	AJ65SBTB2-16T1	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Required 5) Change in functions: Not required	
	AJ35TC1-32T	AJ65SBTCF1-32T	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated output voltage: Required Change in rated output current: Not required 5) Change in functions: Not required 6) Others: External wiring connectors not attached	
	AJ35PTF-24R ^{*1}	AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules: Required (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, no optics)	

^{*1:} Replacement using renewal tool for A0J2 is possible (refer to Appendix 1).

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative model for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
	AX10Y10C	AJ65SBTB2N-16A + AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for I/Os)	
I/O module	AX10Y22C	AJ65SBTB2N-16A + AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Required (2-wire type for I/Os)	

	IINI-S3, A2C models iscontinued	Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
Product name		AJ65SBTB1-16D + AJ65SBTB2N-16R AJ65SBTB32-16DR	Remarks (restrictions) 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, 12VDC not allowed) 1) Change in external wiring: Required 2) Change in number of modules: Required (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required	
I/O module			4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (12VDC not allowed)	
	AX40Y10C	AJ65DBTB1-32DR	1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) 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: Not required Change in rated output current: Not required Change in rated output current: Not required 5) Change in functions: Required (12VDC not allowed)	

MELSECNET/MINI-S3, A2C models		Alternative models for CC-Link		
	iscontinued	Madal name		
Product name	Model name	Model name	Remarks (restrictions) 1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications	
I/O module	AX40Y50C	AJ65SBTB1-32DT2	Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms →1.5ms) Change in rated output voltage: Required (12VDC not allowed) Change in rated output current: Required 5) Change in functions: Required (12VDC not allowed)	
		AJ65DBTB1-32DT1	1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) 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 input response time: Not required Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Required (12VDC not allowed)	

	INI-S3, A2C models		Alternative models for CC-Link
Product name	Model name	Model name	Remarks (restrictions)
Troduct name		AJ65SBTB1-16D + AJ65SBTB2N-16R AJ65SBTB2N-2DR	Remarks (restrictions) 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, 12VDC not allowed) 1) Change in external wiring: Required (Communication cable and power cable only) 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Not required
I/O module			4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) 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: Not required Change in rated output current: Not required 5) Change in functions: Required (12VDC not allowed)
	AX80Y14CEU	AJ65SBTB1-16D + AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in rated output voltage: Not required Change in rated output current: Not required (Note that a connect life is half.) 5) Change in functions: Required (2-wire type for outputs, 12VDC not allowed)

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link		
	Model name	Model name	Pomarks (restrictions)	
Product name	AX80Y80C	AJ65SBTB1-16D + AJ65SBTB1-16TE	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms →1.5ms) Change in rated output voltage: Required Change in rated output current: Required (0.5A →0.1A) 5) Change in functions: Required (12VDC not allowed)	
I/O module	AX80Y80C	AJ65SBTB1-32DTE1	 Change in external wiring: Required Change in number of modules: Not required Change in program Change in number of occupied I/O points: Not required Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required Change in functions: Required (12VDC not allowed) 	
	AJ35PTF-56AR* ¹	AJ65SBTB2N-16A + AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules: Required (4 modules necessary: AJ65SBTB2N-16A × 2 modules AJ65SBTB2N-16R × 2 modules) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications 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: Not required Change in rated output current: Not required Change in rated output current: Not required (Note that a connect life is half.) 5) Change in functions: Required (2-wire type for I/Os, no optics)	

^{*1:} Replacement using renewal tool for A0J2 is possible (refer to Appendix 1).

	IINI-S3, A2C models iscontinued	Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
	AJ35PTF-56AS	AJ65SBTB2N-16A + AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules: Required (4 modules necessary: AJ65SBTB2N-16A × 2 modules	
I/O module	AJ35PTF-28DS	AJ65SBTB1-16D + AJ65SBTB2N-16S	 Change in external wiring: Required Change in number of modules (2 modules necessary) Change in program Change in number of occupied I/O points: Required Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, no optics, 12VDC not allowed) 	
	AJ35PTF-56DS	AJ65SBTB1-32D + AJ65SBTB2N-16S	1) Change in external wiring: Required 2) Change in number of modules: Required (3 modules necessary: AJ65SBTB1-32D × 1 module AJ65SBTB2N-16S × 2 modules) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, no optics, 12VDC not allowed)	

	MNI-S3, A2C models	Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)	
I/O module	AJ35PTF-28DR ^{*1}	AJ65SBTB1-32D + AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules: Required (2 modules necessary: AJ65SBTB1-32D × 1 module AJ65SBTB2N-16R × 1 modules) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Required Change in rated output current: Required 5) Change in functions: Required (2-wire type for outputs, no optics, 12VDC not allowed)	
"O IIIOUUIG	AJ35PTF-56DR* ¹	AJ65SBTB1-32D + AJ65SBTB2N-16R	1) Change in external wiring: Required 2) Change in number of modules: Required (3 modules necessary: AJ65SBTB1-32D × 1 module AJ65SBTB2N-16R × 2 modules) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs, no optics, 12VDC not allowed)	

^{*1:} Replacement using renewal tool for A0J2 is possible (refer to Appendix 1).

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link			
Product name	Model name	Model name Remarks (restrictions)			
	AJ35PTF-28DT ^{*1}	AJ65SBTB1-32D + AJ65SBTB1-32T1	 Change in external wiring: Required Change in number of modules (2 modules necessary) Change in program Change in number of occupied I/O points: Not required Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required Change in functions: Required (no optics, 12VDC not allowed) 		
I/O module	AJ35PTF-56DT ^{*1}	AJ65SBTB1-32D + AJ65SBTB1-32T1	 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Not required 4) Change in specifications Change in rated input voltage: Required (12VDC not allowed) Change in rated input current: Required Change in ON voltage/ON current: Required Change in OFF voltage/OFF current: Required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required Change in functions: Required (no optics, 12VDC not allowed) 		
	AJ35TB1-16AR	AJ65SBTB2N-8A + AJ65SBTB2N-8R	1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Required Change in input resistance: Required Change in rated output voltage: Not required Change in rated output current: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for I/Os)		

^{*1:} Replacement using renewal tool for A0J2 is possible (refer to Appendix 1).

	MELSECNET/MINI-S3, A2C models to be discontinued		Alternative models for CC-Link		
Product name	Model name	Model name	Remarks (restrictions)		
	AJ35TB1-16DR	AJ65SBTB1-8D + AJ65SBTB2N-8R	 1) Change in external wiring: Required 2) Change in number of modules (2 modules necessary) 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Not required 5) Change in functions: Required (2-wire type for outputs) 		
I/O module	AJ35TB1-16DT	AJ65SBTB1-16DT2	1) Change in external wiring: Required 2) Change in number of modules: Not required 3) Change in program Change in number of occupied I/O points: Required 4) Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Not required Change in rated output current: Required 5) Change in functions: Not required		
	AJ35TC1-32DT	AJ65SBTCF1-32DT	 Change in external wiring: Required Change in number of modules: Not required Change in program Change in number of occupied I/O points: Not required Change in specifications Change in rated input voltage: Not required Change in rated input current: Not required Change in ON voltage/ON current: Not required Change in OFF voltage/OFF current: Not required Change in input resistance: Not required Change in input response time: Required (10ms → 1.5ms) Change in rated output voltage: Required Change in rated output current: Not required Change in functions: Not required Others: External wiring connectors not attached 		

5.2 I/O Module Specifications Comparison

5.2.1 Input module specifications comparison

(1) Specifications comparison between AX11C and AJ65SBTB2N-16A

O: Compatible, △: Partial change required, ×: Not compatible						
Specif	ications	AX11C	AJ65SBTB2N-16A	Compatibility	Precautions for replacement	
Number of input points		32 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16A modules.	
Insulation m	ethod	Photocoupler	Photocoupler	0		
Rated input	voltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0		
Rated input	current	Approx. 6mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	0		
Operating ve	oltage range	85 to 132VAC (50/60Hz ± 5%)	$85 \text{ to } 132\text{VAC}$ (50/60Hz \pm 3%, distortion rate 5% within)	0		
Maximum no simultaneou	umber of s input points	75% simultaneously ON (at 110VAC)	100% simultaneously ON (at 110VAC) 60% simultaneously ON (at 132VAC)	0		
Inrush curre		Max. 200mA, within 1ms (with 132VAC)	Max. 200mA, within 1ms (with 132VAC)	0		
ON voltage/		80V or more/5mA or more	80V or more/5mA or more	0		
OFF voltage	/OFF current	30V or less/1mA or less	30V or less/1.7mA or less	0		
Input imped	ance	Approx. 18k Ω (60Hz), Approx. 21k Ω (50Hz)	Approx. 15k Ω (60Hz), Approx. 18k Ω (50Hz)	0		
Response	OFF→ON	15ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0		
time	ON→OFF	30ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0		
Common ter arrangemen		16 points/common	16 points/common (2-wire type)	0		
Number of costations (number occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	×	The number of points assigned per module is not changed.	
Operation in	dication	ON indication (LED)	ON indication (LED)	0		
External cor method	nnection	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.	
Applicable v	/ire size	0.75 to 2mm ²	0.3 to 2mm ²	0		
Applicable s	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3 , RAP2-3SL, TGV2-3N	×	Change in wiring is required.	
1/0	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.	
I/O module power supply	Current	56mA (at 24V TYP.)	40mA or less (24VDC when all points are ON)	Δ	The current consumption increases by using two AJ65SBTB2N-16As. The current capacity needs to be reconsidered.	
External dim	nensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.	
Weight		0.62kg	0.25kg	0		

(2) Specifications comparison between AX31C and AJ65SBTB1-32D

Specif	ications	AX	31C	AJ65SBTB1-32D	Compatibility	Precautions for replacement
Number of in	nput points	32 r	ooints	32 points	0	replacement
Insulation m			coupler	Photocoupler	0	
Rated input	voltage	12/24VDC	12/24VAC 50/60Hz	24VDC	Δ	12/24VAC, 12VDC cannot be used.*1
Rated input	current	· ·	VAC/DC), 4VAC/DC)	Approx. 7mA	Δ	12/24VAC, 12VDC cannot be used.*1 Rated input current is smaller.*2
Operating vo	oltage range	10.2 to 26.4VDC (ripple ratio within 5%)	10.2 to 26.4VAC (50/60Hz ± 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12/24VAC, 12VDC cannot be used.*1
Maximum nu simultaneou	umber of s input points		aneously ON .4VAC)	100% simultaneously ON	0	
ON voltage/	ON current	7V or more/	2mA or more	14V or more/3.5mA or more	Δ	12/24VAC, 12VDC cannot be used.*1
OFF voltage	/OFF current		or more or less	6V or less/1.7mA or less	Δ	12/24VAC, 12VDC cannot be used.*1
Input resista impedance)	nce (Input	Approx	(2.7k Ω	Approx. 3.3k Ω	Δ	Input resistance is inreased.*2
Response	OFF→ON	30ms or less (12/24VDC)	35ms or less (12/24VAC, 60Hz)	1.5ms or less (at 24VDC)	Δ	The response times differ.
time	ON→OFF	30ms or less (12/24VDC)	35ms or less (12/24VAC, 60Hz)	1.5ms or less (at 24VDC)	Δ	The response times dilier.
Common ter arrangemen		16 points	s/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/common, wiring with a different voltage per common is not possible.
Number of costations (number occupied po	mber of		ations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation in	dication	ON indica	ation (LED)	ON indication (LED)	0	
External cor method	nection	(M3.5 × Transmissio	rminal block 7 screws) on circuit part uded	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	vire size	0.75 to	o 2mm ²	0.3 to 2mm ²	0	
Applicable s terminal	olderless		.5, R2-3.5 .5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL,TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to	31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power	Current	56mA (at 2	4VDC TYP.)	45mA or less (24VDC when all points are ON)	0	
External dim	ensions	170(H) × 64(\	V) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.6	62kg	0.25kg	0	

^{*1:} To use at 24VAC, convert to direct current externally before inputting.

^{*2:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB1-32D.

(3) Specifications comparison between AX41C and AJ65SBTB1-32D

		ı	ic, A. i artial chai	∴ : Partial change required, x : Not compatible ☐ ☐ ☐ ☐ ☐ ☐ ☐		
Specif	ications	AX41C	AJ65SBTB1-32D	Compatibility	Precautions for replacement	
Number of ir	nput points	32 points	32 points	0		
Insulation m	ethod	Photocoupler	Photocoupler	0		
Rated input	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.	
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.	
0		10.2 to 31.2VDC	19.2 to 26.4VDC		40)/20	
Operating vo	oitage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.	
Maximum nu simultaneou	umber of s input points	100% simultaneously ON (at 26.4VDC)	100% simultaneously ON	0		
ON voltage/	ON current	8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.	
OFF voltage	OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.	
Input resista	nce	Approx. 3.3k Ω	Approx. 3.3k Ω	0		
Input method	d	Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0		
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0		
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0		
Common ter arrangemen		16 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/common, wiring with a different voltage per common is not possible.	
Number of o stations (nur occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.	
Operation in	dication	ON indication (LED)	ON indication (LED)	0		
External con method	nection	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.	
Applicable w	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0		
Applicable s terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3 , RAP2-3SL, TGV2-3N	×	Change in wiring is required.	
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.	
module power supply	Current	55mA (at 24VDC TYP.)	45mA or less (24VDC when all points are ON)	0		
External dim	nensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.	
Weight		0.6kg	0.25kg	0		

(4) Specifications comparison between AX41C and AJ65DBTB1-32D

		∴ Compatible, △: Partial change required, ×: Not compa					
Specifi	ications	AX41C	AJ65DBTB1-32D	Compatibility	Precautions for replacement		
Number of in	put points	32 points	32 points	0			
Insulation me	ethod	Photocoupler	Photocoupler	0			
Rated input v	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.		
Rated input of	current	Approx. 3mA/Approx. 7mA	Approx. 5mA	Δ	12VDC cannot be used.		
Operating vo	oltage range	10.2 to 31.2VDC (ripple ratio within 5%)	20.4 to 31.2VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.		
Maximum nu simultaneous	umber of s input points	100% simultaneously ON (at 26.4VDC)	100% (at 26.4VDC)	0			
ON voltage/0	ON current	8V or more/2mA or more	15V or more/3mA or more	Δ	12VDC cannot be used.		
OFF voltage	/OFF current	4V or less/1mA or less	5V or less/1.5mA or less	Δ	12VDC cannot be used.		
Input resistar		Approx. 3.3k Ω	Approx. 4.7k Ω	Δ	Input resistance becomes higher. *1		
Input method	d	Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0			
Response	OFF→ON	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0			
time	ON→OFF	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0			
Common terr		16 points/common	16 points/common (2 points) (terminal block 1-wire type)	0			
Number of or stations (num occupied poi	nber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.		
Operation inc	dication	ON indication (LED)	ON indication (LED)	0			
External con	nection	50-point terminal block (M3.5 × 7 screws) Transmission circuit parts included	50-point terminal block (M3.5 × 7 screws) Transmission circuit parts included	0	The number of applicable solderless terminals inserted is within two.		
Applicable w	rire size	0.75 to 2mm ²	0.75 to 2mm ²	0			
Applicable so terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5	0			
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.		
power supply	Current	55mA (at 24VDC TYP.)	45mA or less (24VDC, when all points are ON)	0			
очьь.)							
External dime	ensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0			

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32D.

(5) Specifications comparison between AX81C and AJ65SBTB1-32D

O: Compatible, △: Partial ch				nge required, \times : Not compatible	
Specif	ications	AX81C	AJ65SBTB1-32D	Compatibility	Precautions for replacement
Number of i	nput points	32 points	32 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
Operating v	oltage range	10.2 to 31.2VDC	19.2 to 26.4VDC		12VDC cannot be used.
Operating v	onage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12 VDC carried be used.
Maximum n	umber of	100% simultaneously ON	100% simultaneously ON		
simultaneou	s input points	(at 26.4VDC)	100% simultaneously ON	0	
ON voltage/	ON current	8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage	/OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resista	ince	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
		Positive/negative common	Positive/negative common		
Input metho	d	shared type	shared type	0	
		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→ OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common te		16 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/common, wiring with a different voltage per common is not possible.
Number of o stations (num occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External cor method	nnection	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable s		R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
module power supply	Current	55mA (at 24VDC TYP.)	45mA or less (24VDC when all points are ON)	0	
External din	nensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.6kg	0.25kg	0	
_					1

(6) Specifications comparison between AX81C and AJ65DBTB1-32D

Number of input points 32 points 32 points 32 points O			O: Compatible, ∆: Partial change required, x: Not com				
Insulation method Photocoupler Photocoupler Q	Specif	ications	AX81C	AJ65DBTB1-32D	Compatibility	Precautions for replacement	
Rated input voltage 12VDC/24VDC 24VDC Δ 12VDC cannot be use Rated input current Approx. 3mA/Approx. 7mA Approx. 5mA Δ 12VDC cannot be use Operating voltage range 10.2 to 31.2VDC (ripple ratio within 5%) 20.4 to 31.2VDC (ripple ratio within 5%) Δ 12VDC cannot be use Maximum number of simultaneous input points 100% simultaneously ON (at 26.4VDC) 100% (at 26.4VDC) 0 ON voltage/ON current 8V or more/2mA or more 15V or more/3mA or more Δ 12VDC cannot be use OFF voltage/OF current 4V or less/1mA or less 5V or less/1.5mA or less Δ 12VDC cannot be use Input resistance Approx. 3.3k Ω Approx. 4.7k Ω Δ Input resistance becomes Input resistance Approx. 3.3k Ω Approx. 4.7k Ω Δ Input resistance becomes Response time OFF → ON 10ms or less (at 24VDC) 10ms or less (at 24VDC) 0 Response time OFF → ON 10ms or less (at 24VDC) 10ms or less (at 24VDC) 0 Common terminal arrangement 4 stations 1 station 1 station 0	Number of i	nput points	32 points	32 points	0		
Rated input current	Insulation m	ethod	Photocoupler	Photocoupler	0		
Operating voltage range 10.2 to 31.2VDC (ripple ratio within 5%) Completed ratio within 5%) Co	Rated input	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.	
Cripple ratio within 5% Cripple ratio within 40% Cripple ratio within 5% Cripple ratio within 5% Cripple ratio within 5% Cripple ratio within 40% Cripple ratio within 5% Cripple rati	Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 5mA	Δ	12VDC cannot be used.	
simultaneous input points (at 26.4VDC) (at 28.4VDC) O ON voltage/ON current 8V or more/2mA or more 15V or more/3mA or more Δ 12VDC cannot be use OFF voltage/OFF current 4V or less/1mA or less 5V or less/1.5mA or less Δ 12VDC cannot be use Input resistance Approx. 3.3k Ω Approx. 4.7k Ω Δ Input resistance becomes Input method Positive/negative common shared type Positive/negative common shared type O Input method Shared type (sink/source shared type) O (sink/source shared type) O O	Operating v	oltage range			Δ	12VDC cannot be used.	
OFF voltage/OFF current 4V or less/1mA or less 5V or less/1.5mA or less Δ 12VDC cannot be use Input resistance Approx. 3.3k Ω Approx. 4.7k Ω Δ Input resistance become Input resistance Input resistance become Input method Positive/negative common Shared type (sink/source shared type) ON→OFF 10ms or less (at 24VDC) 10ms or less (at 24VDC) O ON→OFF 10ms or less (at 24VDC) 10ms or less (at 24VDC) O ON→OFF 16 points/common 16 points/common (2 points) (terminal block 1-wire type) ON→OFF Input resistance become Input resistance Input resi			l '		0		
OFF voltage/OFF current 4V or less/1mA or less 5V or less/1.5mA or less Δ 12VDC cannot be use Input resistance Approx. 3.3k Ω Approx. 4.7k Ω Δ Input resistance become Input resistance Input resistance become Input method Positive/negative common Shared type (sink/source shared type) ON→OFF 10ms or less (at 24VDC) 10ms or less (at 24VDC) O ON→OFF 10ms or less (at 24VDC) 10ms or less (at 24VDC) O ON→OFF 16 points/common 16 points/common (2 points) (terminal block 1-wire type) ON→OFF Input resistance become Input resistance Input resi	ON voltage/	ON current	8V or more/2mA or more	15V or more/3mA or more	^	12VDC cannot be used.	
Input resistance Approx. 3.3k Ω			4V or less/1mA or less	5V or less/1.5mA or less		12VDC cannot be used.	
Input method shared type shared type Shared type O FF → ON (sink/source shared type) O FF → ON (sink/source shared type) O Shared type							

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32D.

(7) Specifications comparison between AJ35PTF-32D and AJ65SBTB1-32D

O: Compatible, △: Partial change required, ×:					i de la companya de
Specif	ications	AJ35PTF-32D	AJ65SBTB1-32D	Compatibility	Precautions for replacement
Number of in	nput points	32 points	32 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
Operating vo	oltage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu	umber of s input points	75% simultaneously ON	100% simultaneously ON	0	
ON voltage/		9.5V or more/2.6mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage	OFF current	6.0V or less/1.0mA or less	6.0V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resista		Approx. 3.4k Ω	Approx. 3.3k Ω	0	
Input metho	d	Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ ON	10ms or less (at 6ms TYP.)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
Common ter		16 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/common, wiring with a different voltage per common is not possible.
Number of constant of stations (number occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	-
External cor method	nection	Transmission/module power supply parts: 8-point terminal block (M3 screw) I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	/ire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable s terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
module power supply	Current	110mA	45mA or less (24VDC when all points are ON)	0	
External dim	nensions	254(H) × 132(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.7kg	0.25kg	0	
		·			!

(8) Specifications comparison between AJ35TB1-16A and AJ65SBTB2N-16A

		O: Compatible, ∆: Partial change required, ×: Not compatible						
Specif	fications	AJ35TB1-16A	AJ65SBTB2N-16A	Compatibility	Precautions for replacement			
Number of it	nput points	16 points	16 points	0				
Insulation m	ethod	Photocoupler	Photocoupler	0				
Rated input	voltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0				
Rated input	current	Approx. 6mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	0				
			85 to 132VAC					
Operating vo	oltage range	85 to 132VAC	$(50/60 \text{Hz} \pm 3\%,$	0				
		$(50/60 \text{Hz} \pm 5\%)$	distortion rate 5% within)					
			100% simultaneously ON					
Maximum n	umber of		(at 110VAC)		Use within specification			
simultaneou	s input points	100% simultaneously ON	60% simultaneously ON	Δ	range.			
			(at 132VAC)					
ON voltage/	ON current	80V or more/5mA or more	80V or more/5mA or more	0				
	e/OFF current	30V or less/1mA or less	30V or less/1.7mA or less	0				
		Approx. 18k Ω (60Hz),	Approx. 15k Ω (60Hz),	Ŭ				
Input imped	ance	Approx. 21k Ω (50Hz)	Approx. 18k Ω (50Hz)	0				
Response	OFF→ON	15ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0				
time	ON→ OFF	30ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0				
Common ter		00113 01 1633 (100 0710; 00112)	16 points/common	U				
arrangemen		16 points/common	(2-wire type)	0				
arrangemen			(2 wife type)		The number of I/O points			
Number of o	occupied	2 stations	1 station		assigned per station is			
stations (nu	mber of	(2 stations × 8 points)	(1 station × 32 points)	×	changed.			
occupied po	oints)	(2 stations x 8 points)	(1 Station × 32 points)		_			
Operation in	diagtica	ON indication (LED)	ON indication (LED)	0	(8 points → 32 points)			
Operation in	luication	ON indication (LED)	ON indication (LED)	0				
			Transmission/module power					
		34-point terminal block	supply parts:					
External cor	nnection	(M3 screw)	7-point terminal block					
method		Transmission circuit part	(M3 × 5.2 screws)	×	Change in wiring is required.			
		included	I/O part:					
			34-point terminal block					
		2	(M3 × 5.2 screws)					
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0				
Applicable s	olderless	R1.25-3, R2-3	RAV1.25-3		In some cases, the			
terminal		RAV1.25-3, RAV2-3	(Conforming to JIS C 2805)	Δ	solderless terminal must be			
		·	V2-MS3, RAP2-3SL, TGV2-3N		changed.			
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC	Δ	The operating voltage range			
module	- Tartaige	(peak voltage 31.2VDC)	(ripple ratio within 5%)		differs.			
power			40mA or less					
supply	Current	50mA (at 24VDC)	(24VDC when all points	0				
			are ON)					
					The overall size differs.			
External dim	nensions	$55(H) \times 166(W) \times 50(D) \text{ mm}$	$54(H) \times 179(W) \times 40(D) \text{ mm}$	×	Pay attention to the mounting			
					dimensions.			
Weight		0.35kg	0.25kg	0				

(9) Specifications comparison between AJ35TB3-8D and AJ65SBTB3-8D

		○: Compatible, △: Partial change required, ×: Not co					
Specif	ications	AJ35TB3-8D	AJ65SBTB3-8D	Compatibility	Precautions for replacement		
Number of i	nput points	8 points	8 points	0			
Insulation m	ethod	Photocoupler	Photocoupler	0			
Rated input	voltage	24VDC	24VDC	0			
Rated input	current	Approx. 7mA	Approx. 7mA	0			
Operation	altaga ranga	19.2 to 26.4VDC	19.2 to 26.4VDC	0			
Operating v	oltage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0			
Maximum n simultaneou	umber of s input points	100% simultaneously ON	100% simultaneously ON	0			
ON voltage/	ON current	14V or more/3.5mA or more	14V or more/3.5mA or more	0			
OFF voltage	e/OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0			
Input resista	ince	Approx. 3.3k Ω	Approx. 3.3k Ω	0			
Input metho	d	Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0			
Response	OFF→ON	10ms or less	1.5ms or less (at 24VDC)	0			
time	ON→OFF	10ms or less	1.5ms or less (at 24VDC)	0			
Common te arrangemen		8 points/common (3-wire type)	8 points/common (3-wire type)	0			
Number of o stations (nu occupied po	mber of	1 station (1 station × 8 points)	1 station (1 station × 32 points)	×	The number of I/O points assigned per station is changed. (8 points → 32 points)		
Operation in	dication	ON indication (LED)	ON indication (LED)	0			
External cor method	nnection	26-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.		
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0			
Applicable sterminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.		
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.		
power supply	Current	69mA (at 24VDC)	40mA or less (24VDC when all points are ON)	0			
External din	nensions	55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.		
Weight		0.3kg	0.18kg	0			

(10) Specifications comparison between AJ35TB1-16D and AJ65SBTB1-16D

O: Compatible	. Dartial	change required	x : Not compatible	_
(): Compatible.	л : Рапіаі	change required.	x : Not compatible	3

		O. Compatible, A. Partial change required, X. Not compa						
Specif	ications	AJ35TB1-16D	AJ65SBTB1-16D	Compatibility	Precautions for replacement			
Number of ir	nput points	16 points	16 points	0				
Insulation m	ethod	Photocoupler	Photocoupler	0				
Rated input	voltage	24VDC	24VDC	0				
Rated input	current	Approx. 7mA	Approx. 7mA	0				
		19.2 to 26.4VDC	19.2 to 26.4VDC	_				
Operating vo	oltage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0				
Maximum nu	umber of	70% simultaneously ON						
simultaneou	s input points	(at 26.4VDC)	100% simultaneously ON	0				
ON voltage/	ON current	14V or more/3.5mA or more	14V or more/3.5mA or more	0				
	/OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0				
Input resista		Approx. 3.3k Ω	Approx. 3.3k Ω	0				
<u> </u>		Positive/negative common	Positive/negative common					
Input metho	d	shared type	shared type	0				
		(sink/source shared type)	(sink/source shared type)	· ·				
Response	OFF→ON	10ms or less	1.5ms or less (at 24VDC)	0				
time	ON→OFF	10ms or less	1.5ms or less (at 24VDC)	0				
Common ter		16 points/common		Ŭ				
arrangemen		(2 terminals)	16 points/common	0				
Number of o stations (nur occupied po	mber of	2 stations (2 stations × 8 points)	1 station (1 station × 32 points)	×	The number of I/O points assigned per station is changed. (8 points → 32 points)			
Operation in	dication	ON indication (LED)	ON indication (LED)	0				
External con method	nection	26-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.			
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²	0				
Applicable s terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.			
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.			
power supply	Current	45mA or less (at 24VDC)	35mA or less (24VDC when all points are ON)	0				
External dim	ensions	55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.			
Weight		0.3kg	0.18kg	0				

(11) Specifications comparison between AJ35TB1-16D and AJ65BTB1-16D

Number of input points 16 points 16 points 16 points 16 points 16 points 16 points 17 points 18 points 18 points 19 2 to 24 VDC 24 VDC 0 perating voltage range 0 (ripple ratio within 5%) 19 2 to 26 AVDC 0 (ripple ratio within 5%) 19 2 to 26 AVDC 0 (ripple ratio within 5%) 10 yet all a voltage of control of the voltage			1	: Compatib	le, 🛕: Partial chai	nge required, x : Not compatible
Insulation method	Specif	ications	AJ35TB1-16D	AJ65BTB1-16D	Compatibility	Precautions for replacement
Rated input voltage 24VDC 24VDC O Rated input current Approx. 7mA Approx. 7mA O Operating voltage range 19 2 to 26 4VDC (ripple ratio within 5%) 19 2 to 28 8VDC The operating voltage range differs. Maximum number of simultaneous input points 6 20 simultaneously ON (at 26 4VDC) 100% O ON voltage/ON current 14V or more/3.5mA or more 0 O OFF voltage/OFF current 6.0V or less/1.7mA or less 0 O Input resistance Approx. 3.3 k Q Approx. 3.3 k Q O Positive/negative common shared type 6.0V or less/1.7mA or less O Input method 10ms or less 10ms or less O Response time OFF → ON 10ms or less 10ms or less O Response time OFF → ON 10ms or less 10ms or less O Number of occupied stations (number of occupied points) 2 stations 1 station x The number of I/O points assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) ON indication (LED) O T	Number of i	nput points	16 points	16 points	0	
Rated input current Operating voltage range (ipple ratio within 5%) (ipple ratio within 5%) Maximum number of (ip	Insulation m	ethod	Photocoupler	Photocoupler	0	
Departing voltage range 19.2 to 28.4VDC 19.2 to 28.8VDC (ripple ratio within 5%) (ripple ra	Rated input	voltage	24VDC	24VDC	0	
Cripple ratio within 5% Cripple ratio within 5% Cripple ratio within 5% A differs.	Rated input	current	Approx. 7mA	Approx. 7mA	0	
Maximum number of	Operating v	oltage range	19.2 to 26.4VDC	19.2 to 28.8VDC		The operating voltage range
Simultaneous input points (at 26.4VDC) 100% 0 100% 0 0 0 0 0 0 0 0 0	Operating v	onage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	differs.
Simultaneous input points (at 26.4VDC) ON voltage/ON current 14V or more/3.5mA or more 0F voltage/OF current 6.0V or less/1.7mA or less 6.0V or less/1.7mA or less 0	Maximum n	umber of	70% simultaneously ON	100%	0	
Description	simultaneou	s input points	(at 26.4VDC)	100 %	O	
Input resistance	ON voltage/	ON current	14V or more/3.5mA or more	14V or more/3.5mA or more	0	
Positive/negative common shared type Csink/source shared type Csink/	OFF voltage	/OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input method	Input resista	ince	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
Common terminal arrangement Common terminal arrangement Common terminal attations (number of occupied stations (number of occupied points) Common terminal attations (2 stations x 8 points) Common terminal block 1-wire type) Common terminal block (M3 tatation x 32 points) Common terminal block (M3 tatation x 32 points) Common terminal block (M3 tatation x 32 points) Common terminal block (M3.5 screws) Transmission circuit part included Common terminal block (M3.5 screws) Transmission circuit and module power supply terminal block (M3.5 screws) Transmission circuit and module power supply terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. Applicable solderless terminal Voltage Common terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. I/O module power supply Common terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. I/O module power supply Current Common terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. I/O module power supply Current Common terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. I/O module power supply Current Common terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. I/O module power supply Current Common terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. I/O module power supply Current Common terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. I/O module power supply Current Common terminal block of the AJ35TB1-16D c			Positive/negative common	Positive/negative common		
Response time	Input metho	d	shared type	shared type	0	
time ON→OFF 10ms or less 10ms or less O Common terminal arrangement 16 points/common (2 terminals) 18 points/common (2 stations (number of occupied points) 2 stations (2 stations × 8 points) 1 station (1 station × 32 points) 2 points) 2 points) Operation indication ON indication (LED) ON indication (LED) O External connection method 26 point terminal block (M3 screws) Transmission circuit part included 10 power supply terminal included 10 power supply 10 part included 10 power supply 10 power 10 power supply 10 power 10			(sink/source shared type)	(sink/source shared type)		
Common terminal arrangement 16 points/common (2 terminals) 16 points/common (terminal block 1-wire type) Number of occupied stations (number of occupied points) Operation indication ON indication (LED) On indication (LED) On indication (LED) External connection method Applicable wire size One terminal plock (M3 screws) Transmission circuit part included Applicable solderless terminal Navi 2-3, Rav2-3 Rav1.25-3, Rav2-3 Rav1.25-3, Rav2-3 Rav1.25-3, Rav2-3 The number of I/O points assigned per station is changed. (8 points → 32 points) On indication (LED)	Response	OFF→ON	10ms or less	10ms or less	0	
Number of occupied stations (number of occupied points) 2 stations 1 station × The number of I/O points assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) O External connection method 26 point terminal block (M3 screws) Transmission circuit part included 27 point terminal block (M3.5 screws) Transmission circuit and module power supply terminal included The existing terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. Applicable wire size 0.75 to 2mm² O Applicable solderless terminal R1.25-3, R2-3 RAV2-3 RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5 The existing terminal block of the AJ35TB1-16D can be used by using wiring conversion adapter *1. I/O module power supply terminal 15.6 to 31.2VDC 15.6 to 28.8VDC The operating voltage range differs. I/O module power supply terminal 45mA or less (at 24VDC TYP.) 60mA or less (at 24VDC TYP.) The operating current differs. External dimensions 55(H) × 135(W) × 50(D) mm 65(H) × 151.9(W) × 46(D) mm *2 × Pay attention to the mounting dimensions.	time	ON→ OFF	10ms or less	10ms or less	0	
Number of occupied stations (number of occupied stations (number of occupied points) Operation indication ON indication (LED) On in	Common te	rminal	16 points/common	16 points/common	_	
Number of occupied stations (number of occupied stations (number of occupied points) Operation indication ON indication (LED) OPeration indication ON indication (LED) ON indication (LED) 26 point terminal block (M3 screws) Transmission circuit part included Applicable wire size O.75 to 2mm² O.75 to	arrangemen	t	(2 terminals)	(terminal block 1-wire type)	0	
External connection method 26 point terminal block (M3 screws) Transmission circuit part included Applicable wire size 0.75 to 2mm² Applicable solderless terminal Notational Voltage module power supply (peak voltage 31.2VDC) Power supply Current supply External dimensions 26 point terminal block (M3 screws) Transmission circuit and module power supply terminal block (M3.5 screws) Transmission circuit and module power supply terminal included 0.75 to 2mm² 0.75 to	stations (nu	mber of			×	assigned per station is changed. (8 points → 32
External connection method 26 point terminal block (M3 screws) Transmission circuit part included Applicable wire size 0.75 to 2mm² Applicable solderless terminal Notational Voltage module power supply (peak voltage 31.2VDC) Power supply Current supply External dimensions 26 point terminal block (M3 screws) Transmission circuit and module power supply terminal block (M3.5 screws) Transmission circuit and module power supply terminal included 0.75 to 2mm² 0.75 to	Operation in	dication	ON indication (LED)	ON indication (LED)	0	
Applicable solderless terminal RAV1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV2-3.5	External cor		screws) Transmission circuit	screws) Transmission circuit and module power supply	Δ	of the AJ35TB1-16D can be used by using wiring
Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5 Conforming to JIS C 2805) RAV2-3.5 Conforming to JIS C 2805) RAV2-3.5 Conforming to JIS C 2805) RAV2-3.5 Conforming to JIS C 2805) RAV2-3.5 Conforming to JIS C 2805) RAV2-3.5 Conforming to JIS C 2805) RAV2-3.5 Conforming to JIS C 2805) RAV2-3.5 Conforming to JIS C 2805) RAV2-3.5 Conforming to JIS C 2805) Conversion adapter *1. The operating voltage range differs. The operating current differs. Conforming to JIS C 2805) Conforming	Applicable v	vire size	0.75 to 2mm ²	0.75 to 2mm ²	0	
module power supply Current	• •	olderless	· '	(Conforming to JIS C 2805)	Δ	of the AJ35TB1-16D can be used by using wiring
power supply Current Current	I/O	Voltage	15.6 to 31.2VDC	15.6 to 28.8VDC		The operating voltage range
	module	voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
supply(at 24VDC)(at 24VDC TYP.)differs.External dimensions $55(H) \times 135(W) \times 50(D)$ mm $65(H) \times 151.9(W) \times 46(D)$ mm *2×Pay attention to the mounting dimensions.	power	Current	45mA or less	60mA or less		The operating current
External dimensions $55(H) \times 135(W) \times 50(D) \text{ mm}$ $65(H) \times 151.9(W) \times 46(D) \text{ mm *2}$ × Pay attention to the mounting dimensions.	supply	Carrent	(at 24VDC)	(at 24VDC TYP.)	^	differs.
Weight 0.3kg 0.32kg ×	External din	nensions	55(H) × 135(W) × 50(D) mm	65(H) × 151.9(W) × 46(D) mm *2	×	Pay attention to the mounting
	Weight		0.3kg	0.32kg	×	

^{*1:} The A6ADP-1MC16D, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter can be used. For the mounting image, refer to *1 of Section 1.1.

^{*2:} When using the A6ADP-1MC16D, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter, the external dimensions are increased by 5.1mm (0.20inch)(height) and 28.5mm (1.12inch) (depth).

(12) Specifications comparison between AJ35TB2-16D and AJ65SBTB3-16D

		O: Compatible, ∆: Partial change required, ×: Not col					
Speci	ications	AJ35TB2-16D	AJ65SBTB3-16D	Compatibility	replacement		
Number of i	nput points	16 points	16 points	0			
Insulation m	ethod	Photocoupler	Photocoupler	0			
Rated input	voltage	24VDC	24VDC	0			
Rated input	current	Approx. 7mA	Approx. 7mA	0			
		19.2 to 26.4VDC	19.2 to 26.4VDC	_			
Operating v	oltage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0			
Maximum n	umber of	100% simultaneously ON	()				
	s input points	(at 26.4VDC)	100% simultaneously ON	0			
ON voltage/		14V or more/3.5mA or more	14V or more/3.5mA or more	0			
	e/OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0			
Input resista		Approx. 3.3k Ω	Approx. 3.3k Ω	0			
input resiste		Positive/negative common	Positive/negative common	U			
Innut mothe	d	· ·					
Input metho	u	shared type	shared type	0			
<u> </u>	OFF ON	(sink/source shared type)	(sink/source shared type)				
Response	OFF→ON	10ms or less	1.5ms or less (at 24VDC)	0			
time	ON→OFF	10ms or less	1.5ms or less (at 24VDC)	0			
Common te		16 points/common	16 points/common	0			
arrangemer	ıt	(terminal block 2-wire type)	(3-wire type)				
Number of o	occupied				The number of I/O points		
stations (nu	*	2 stations	1 station (1 station × 32 points)	×	assigned per station is		
•		(2 stations × 8 points)		×	changed.		
occupied po	oints)				(8 points → 32 points)		
Operation in	dication	ON indication (LED)	ON indication (LED)	0			
· · · · · · · · · · · · · · · · · · ·		, ,	Transmission/module power	_			
			supply parts:				
		34-point terminal block	7-point terminal block				
External cor	nnection	(M3 screw)	(M3 × 5.2 screws)	×	Change in wiring is required.		
method		Transmission circuit part	,	^	Change in wining is required.		
		included	I/O part:				
			34-point terminal block				
		2	(M3 × 5.2 screws)	_			
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0			
Applicable s	olderless	R1.25-3, R2-3	RAV1.25-3		In some cases, the		
terminal		RAV1.25-3, RAV2-3	(Conforming to JIS C 2805)	Δ	solderless terminal must be		
terriiriai		10.01.200,10.020	V2-MS3, RAP2-3SL, TGV2-3N		changed.		
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range		
module	voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.		
			45mA or less				
power	Current	45mA or less (at 24VDC)	(24VDC when all points	0			
supply			are ON)				
			,		The overall size differs.		
External din	nensions	55(H) × 166(W) × 50(D) mm	54(H) × 179(W) × 40(D) mm	×	Pay attention to the mounting		
		-5() · · · · · · · · · · · · · · · · · ·			dimensions.		
Weight		0.35kg	0.25kg	0			
TTOIGHT		U.Jong	0.25kg	J	l .		

(13) Specifications comparison between AJ35TB2-16D and AJ65BTB2-16D

			○: Compatible, △: Partial change required, ×: Not con					
Specif	ications	AJ35TB2-16D	AJ65BTB2-16D	Compatibility	Precautions for replacement			
Number of input points		16 points	16 points	0				
Insulation m	ethod	Photocoupler	Photocoupler	0				
Rated input	voltage	24VDC	24VDC	0				
Rated input	current	Approx. 7mA	Approx. 7mA	0				
Operating v	oltage range	19.2 to 26.4VDC	19.2 to 28.8VDC		The operating voltage range			
Operating v	ollage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	differs.			
Maximum n	umber of	100% simultaneously ON	100%	0				
simultaneou	s input points	(at 26.4VDC)	10070	O				
ON voltage/	ON current	14V or more/3.5mA or more	14V or more/3.5mA or more	0				
OFF voltage	e/OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0				
Input resista	ince	Approx. 3.3k Ω	Approx. 3.3k Ω	0				
		Positive/negative common	Positive/negative common					
Input metho	d	shared type	shared type	0				
		(sink/source shared type)	(sink/source shared type)					
Response	OFF→ON	10ms or less	10ms or less	0				
time	ON→OFF	10ms or less	10ms or less	0				
Common te	rminal	16 points/common	16 points/common	0				
arrangemer	t	(terminal block 2-wire type)	(terminal block 2-wire type)	O				
Number of o stations (nu occupied po	mber of	2 stations (2 stations × 8 points)	1 station (1 station × 32 points)	×	The number of I/O points assigned per station is changed. (8 points → 32 points)			
Operation in	ndication	ON indication (LED)	ON indication (LED)	0				
External cor method	nnection	34 point terminal block (M3 screws) Transmission circuit part included	37 point terminal block (M3.5 screws) Transmission circuit and module power supply terminal included	Δ	The existing terminal block of the AJ35TB2-16D can be used by using wiring conversion adapter *1.			
Applicable v	vire size	0.75 to 2mm ²	0.75 to 2mm ²	0				
Applicable s	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5	Δ	The existing terminal block of the AJ35TB2-16D can be used by using wiring conversion adapter *1.			
I/O	Valtage	15.6 to 31.2VDC	15.6 to 28.8VDC		The operating voltage range			
module	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.			
power	Current	45mA or less	60mA or less	.,	The operating current			
supply	Current	(at 24VDC)	(at 24VDC TYP.)	×	differs.			
External din	nensions	55(H) × 166(W) × 50(D) mm	65(H) × 197.4(W) × 46(D) mm *2	×	The overall size differs. Pay attention to the mounting dimensions.			
Weight		0.35kg	0.4kg	×				

^{*1:} The A6ADP-2MC16D, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter can be used. For the mounting image, refer to *1 of Section 1.1.

^{*2:} When using the A6ADP-2MC16D, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter, the external dimensions are increased by 5.1mm (0.20inch)(height) and 28.5mm (1.12inch) (depth).

(14) Specifications comparison between AJ35TC1-32D and AJ65SBTCF1-32D

Number of alpact points 32 points 32 points 0				○: Compatib	le, △: Partial char	nge required, x: Not compatible
Rated input voltage 24/DC 24/DC 34/DC	Specif	fications	AJ35TC1-32D	AJ65SBTCF1-32D	Compatibility	
Rated input voltage 24VDC	Number of input points		32 points	32 points	0	
Related input current			Photocoupler	Photocoupler	0	
Departing voltage range 19.2 to 26.4VDC (ripple ratio within 5%) C	Rated input	voltage	24VDC	24VDC	0	
Operation voltage range	Rated input	current	Approx. 5mA	Approx. 5mA	0	
Common terminal arrangement Common terminal arrangement Common terminal block (M3 screws) Common terminal terminal block (M3 screws) Comm	Operating	altaga ranga	19.2 to 26.4VDC	19.2 to 26.4VDC	0	
Simultaneous input points (at 26.4VDC) 100% simultaneously ON O	Operating v	ollage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Simultaneous input points (26.4VDC) (17.5V or more)3.5mA or more (17.5V or more)3.5mA	Maximum n	umber of	85% simultaneously ON	1009/ simultanequaly ON	0	
OFF voltage/OFF current Gov or less/1.7mA or less Gov	simultaneou	is input points	(at 26.4VDC)	100% simultaneously ON	O	
OFF voltage/OFF current 6.0V or less/1.7mA or less 6.0V or less/1.7	ON voltage/	ON current	17.5V or more/3.5mA	14V or more/3.5mA	0	
Input resistance	ON Voltage/	ON Current	or more	or more		
Positive/negative common shared type (sink/source shared type) (sink	OFF voltage	e/OFF current	6.0V or less/1.7mA or less	6.0V or less/1.7mA or less	0	
Input method	Input resista	ance	Approx. 4.7k Ω	Approx. 4.7k Ω	0	
Response OFF—ON 10ms or less 1.5ms or less (at 24VDC) O Common terminal arrangement 32 points/common 32 points/common O N=OFF 10ms or less 1.5ms or less (at 24VDC) O Common terminal arrangement 32 points/common 32 points/common O Number of occupied stations (number of occupied points) 1 station 1 station 32 points/common O Number of occupied points O O Indication (LED) O O O Depration indication O O Indication (LED) O O O O O O O O O			Positive/negative common	Positive/negative common		
Response Intime	Input metho	d	shared type	shared type	0	
time			(sink/source shared type)	(sink/source shared type)		
Common terminal arrangement 32 points/common 32 points/common O	Response	OFF→ON	10ms or less	1.5ms or less (at 24VDC)	0	
arrangement 32 points/common O Number of occupied stations (number of occupied points) 4 stations × 8 points) 1 station ○ The number of points assigned per module is not changed. Operation indication ON indication (LED) ON indication (LED) ○ Transmission circuit: 8-point terminal block (M3 screws) Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) Change in wiring is required. Transmission circuit: 8-point terminal block (M3 screws) I/O part: 40-pin connector ○ The existing connector can be attached without change. Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² 2 of less (for A6CON1, A6CON4) ○ The existing connector can be attached without change. Applicable wire size 1 external wiring connector: 0.3mm² 40-pin connector: 0.3mm² (for A6CON2) ○ 40-pin connectors for external wiring are sold separately. Accessory 1 external wiring connector None × 40-pin connectors for external wiring are sold separately. Applicable solderless terminal R1.25-3, R2-3 (Conforming to JISC 2805) V2-M33, RAP2-3SL, TGV2-3N △ In some cases, the solderless terminal must be changed. I/O Voltage 15.6 to 31.2VDC (time	ON→OFF	10ms or less	1.5ms or less (at 24VDC)	0	
Applicable wire size Applicable wire size Applicable solderless terminal Applicable solderless terminal Accessory Applicable solderless terminal Applicable solderless terminal solderless terminal Applicable solderless terminal solderle	Common te	rminal	32 points/common	32 points/common	0	
Stations (number of occupied points) Operation indication ON indication (LED) Transmission circuit: 8-point terminal block (M3 screws) I/O part: 40-pin connector I/O part: 40-pin connector Applicable wire size Applicable solderless terminal Applicable solderless terminal must be changed. Applic			. ,	. ,	Ŭ	
Occupied points) (4 stations × 8 points) (1 station × 32 points) changed. Operation indication ON indication (LED) ON indication (LED) O External connection method Transmission circuit: 8-point terminal block (M3 screws) Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) × Change in wiring is required. I/O part: 40-pin connector I/O part: 40-pin connector O The existing connector can be attached without change. Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² 40-pin connector: 0.3mm² 6 riess (for A6CON1, A6CON4) (2.2 to 0.08mm², \$\phi 0.25mm\$ (for A6CON3) O Accessory 1 external wiring connector None × 40-pin connectors for external wiring are sold separately. Applicable solderless terminal R1.25-3, R2-3 (Conforming to JIS C 2805) (V2-MS3, RAP2-3SL, TGV2-3N) A solderless terminal must be changed. I/O module power supply 15.6 to 31.2VDC (peak voltage 31.2VDC) (peak voltage 31.2VDC) 20.4 to 26.4VDC (ripple ratio within 5%) A The operating voltage range differs. External dimensions 55(H) × 166(W) × 50(D) mm 54(H) × 118(W) × 40(D) mm × Pay attention to the mounting dimensions.		•	4 stations	1 station		· ·
Operation indication Operation Operation Operation Operation indication Operation Operation Operation Operation Operation indication Operation Operation Operation Operation indication Operation Operat	,				0	assigned per module is not
Transmission circuit: 8-point terminal block (M3 screws) I/O part: 40-pin connector Applicable wire size Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² (for A6CON1) Accessory Applicable solderless terminal Terminal wiring connector Applicable solderless terminal I/O bart: 40-pin connector Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² (for A6CON2) Twisted cable of 0.08mm², φ 0.25mm (for A6CON3) Accessory Applicable solderless terminal Transmission/module power supply parts: Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² (for A6CON4) 0.2 to 0.08mm² (for A6CON3) Accessory 1 external wiring connector None X 40-pin connectors for external wiring are sold separately. Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N LO (peak voltage 31.2VDC) (peak voltage 31.2VDC) (peak voltage 31.2VDC) 45mA or less (24VDC when all points are ON) The overall size differs. Pay attention to the mounting dimensions.						changed.
External connection method Transmission circuit: 8-point terminal block (M3 screws) I/O part: 40-pin connector Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² or less (for A6CON1, A6CON4) 0.2 to 0.08mm² (for A6CON2) Twisted cable of 0.08mm², \$\phi 0.25mm\$ (for A6CON3) Accessory 1 external wiring connector R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 I/O voltage I/O voltage Transmission circuit: 8-point terminal block: 0.75 to 2mr² 40-pin connector: 0.3mr² or less (for A6CON4) 0.2 to 0.08mm² (for A6CON2) Twisted cable of 0.08mm², \$\phi 0.25mm\$ (for A6CON3) Accessory 1 external wiring connector None x 40-pin connectors for external wiring are sold separately. In some cases, the solderless terminal must be changed. I/O woltage 15.6 to 31.2VDC (peak voltage 31.2VDC) (peak voltage 31.2VDC) (peak voltage 31.2VDC) (peak voltage 31.2VDC) (peak voltage 31.2VDC) A5MA or less (24VDC when all points are ON) The overall size differs. Pay attention to the mounting dimensions.	Operation in	ndication	ON indication (LED)	` '	0	
External connection method (M3 screws) (N6 part: 40-pin connector can be attached without change. (For A6CON1) (For A6CON2) (For A6C			Transmission circuit: 8-point	· •		
M3 x 5.2 screws			terminal block 7-poin	1 1 1	×	Change in wiring is required.
I/O part: 40-pin connector I/O part: 40-pin connector O The existing connector can be attached without change.		nnection		•		
Applicable wire size Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² or less (for A6CON1, A6CON4) 0.2 to 0.08mm² 40-pin connector: 0.3mm² Terminal block: 0.75 to 2mm² (for A6CON2) Twisted cable of 0.08mm², \$\phi 0.25mm\$ (for A6CON3) The operating voltage range differs. The overall size differs. Pay attention to the mounting dimensions.	method			(M3 × 5.2 screws)		
Applicable wire size Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² or less (for A6CON1, A6CON4) 0.2 to 0.08mm² (for A6CON2) Twisted cable of 0.08mm², \$\phi 0.25mm\$ (for A6CON3) Accessory 1 external wiring connector None X 40-pin connectors for external wiring are sold separately. Applicable solderless terminal RAV1.25-3, R2-3 RAV1.25-3, RAV2-3 I/O module power supply Current S5mA (at 24VDC) External dimensions Terminal block: 0.3 to 2mm² 40-pin connector: 0.3mm² or less (for A6CON1) RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless terminal must be changed. The operating voltage range differs. Pay attention to the mounting dimensions.			I/O part: 40-pin connector	I/O part: 40-pin connector	0	=
Applicable wire size Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² Twisted cable of 0.08mm², \$\phi 0.25mm\$ (for A6CON3) Accessory 1 external wiring connector None X Applicable solderless terminal RAV1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 I/O module power supply Voltage Current S5mA (at 24VDC) Terminal block: 0.75 to 2mm² (for A6CON1, A6CON4) 0.2 to 0.08mm² (for A6CON2) Twisted cable of 0.08mm², \$\phi 0.25mm\$ (for A6CON3) X 40-pin connectors for external wiring are sold separately. In some cases, the solderless terminal must be changed. In some cases, the solderless terminal must be changed. The operating voltage range differs. A 55mA (at 24VDC) A 55mA (at 24VDC) A 55mA or less (24VDC when all points are ON) The overall size differs. Pay attention to the mounting dimensions.				Terminal block: 0.3 to 2mm ²		3
Applicable wire size Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² Terminal block: 0.75 to 2mm² 40-pin connector: 0.3mm² Twisted cable of 0.08mm², \$\phi 0.25mm\$ (for A6CON3) Accessory 1 external wiring connector None X Applicable solderless terminal RAV1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 I/O module power supply Voltage Current S5mA (at 24VDC) Terminal block: 0.75 to 2mm² (for A6CON1, A6CON4) 0.2 to 0.08mm² (for A6CON2) Twisted cable of 0.08mm², \$\phi 0.25mm\$ (for A6CON3) X 40-pin connectors for external wiring are sold separately. In some cases, the solderless terminal must be changed. In some cases, the solderless terminal must be changed. The operating voltage range differs. A 55mA (at 24VDC) A 55mA (at 24VDC) A 55mA or less (24VDC when all points are ON) The overall size differs. Pay attention to the mounting dimensions.				40-pin connector: 0.3mm ² or less		
Applicable wire size Terminal block: 0.75 to 2mm² (for A6CON2) Twisted cable of 0.08mm², \$\overline{0}\$ 0.25mm (for A6CON3) Accessory 1 external wiring connector None X 40-pin connectors for external wiring are sold separately. Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 I/O Woltage Total connectors for external wiring are sold separately. R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Voltage Total connectors for external wiring are sold separately. In some cases, the solderless terminal must be changed. The operating voltage range differs. The operating voltage range differs. External dimensions 55(H) × 166(W) × 50(D) mm 54(H) × 118(W) × 40(D) mm X The overall size differs. Pay attention to the mounting dimensions.				· ·		
Accessory 1 external wiring connector None X 40-pin connectors for external wiring are sold separately. Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 V2-MS3, RAP2-3SL, TGV2-3N Voltage None 15.6 to 31.2VDC (peak voltage 31.2VDC) Current S5mA (at 24VDC) (peak voltage 31.2VDC) (peak voltage			Terminal block: 0.75 to 2mm ²			
Twisted cable of 0.08mm^2 , $\phi 0.25 \text{mm}$ (for A6CON3) Accessory 1 external wiring connector None X 40-pin connectors for external wiring are sold separately. R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 In some cases, the solderless terminal must be changed. Voltage The operating voltage range differs. Voltage voltage 31.2VDC (peak voltage 31.2VDC) The operating voltage range differs. External dimensions $55(H) \times 166(W) \times 50(D) \text{ mm}$ $54(H) \times 118(W) \times 40(D) \text{ mm}$ Twisted cable of 0.08mm^2 , $\phi 0.25 \text{mm}$ A0-pin connectors for external wiring are sold separately. In some cases, the solderless terminal must be changed. The operating voltage range differs.	Applicable v	vire size	40-pin connector: 0.3mm ²	(for A6CON2)	0	
Accessory 1 external wiring connector None \times 40-pin connectors for external wiring are sold separately. Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RA				` ′ -		
Accessory 1 external wiring connector None X 40-pin connectors for external wiring are sold separately. In some cases, the solderless terminal must be changed. RAV1.25-3, RAV2-3 I/O Woltage Module power supply Current S5mA (at 24VDC) External dimensions (for A6CON3) (for A6CON3) X 40-pin connectors for external wiring are sold separately. In some cases, the solderless terminal must be changed. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N 20.4 to 26.4VDC (ripple ratio within 5%) 45mA or less (24VDC when all points are ON) The overall size differs. Pay attention to the mounting dimensions.				•		
Accessory 1 external wiring connector None X 40-pin connectors for external wiring are sold separately. RAV1.25-3 RAV1.25-3, R2-3 RAV1.25-3, RAV2-3 In some cases, the solderless terminal must be changed. Voltage Module power supply Voltage Current 55mA (at 24VDC) External dimensions Applicable solderless R1.25-3, R2-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Applicable solderless (Conforming to JIS C 2805) Applicable solderless				(for A6CON3)		
Accessory 1 external wiring connector None X external wiring are sold separately. RAV1.25-3 RAV1.25-3, R2-3 RAV1.25-3, RAV2-3 In some cases, the solderless terminal must be changed. Y2-MS3, RAP2-3SL, TGV2-3N Voltage Module power supply Current S5mA (at 24VDC) External dimensions 1 external wiring connector None X external wiring are sold separately. In some cases, the solderless terminal must be changed. The operating voltage range differs. Current S5mA (at 24VDC) External dimensions 55(H) × 166(W) × 50(D) mm 54(H) × 118(W) × 40(D) mm X external wiring are sold separately. In some cases, the solderless terminal must be changed. The operating voltage range differs. The overall size differs. Pay attention to the mounting dimensions.				, ,		40-pin connectors for
Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 Conforming to JIS C 2805 V2-MS3, RAP2-3SL, TGV2-3N Voltage	Accessory		1 external wiring connector	None	×	external wiring are sold
Applicable solderless terminal RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N I/O Module power supply Current S5mA (at 24VDC) External dimensions R1.25-3, R2-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N 20.4 to 26.4VDC (ripple ratio within 5%) 45mA or less (24VDC when all points are ON) The overall size differs. Pay attention to the mounting dimensions.			_			separately.
terminal RAV1.25-3, RAV2-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N I/O Module power supply Current Solderless terminal must be changed. Current Solderless terminal must be changed. The operating voltage range differs. 45mA or less (24VDC when all points are ON) The overall size differs. The overall size differs. The overall size differs. Pay attention to the mounting dimensions.	A 1: 1		D4 05 0 D0 0	RAV1.25-3		In some cases, the
V2-MS3, RAP2-3SL, TGV2-3N changed. V2-MS3, RAP2-3SL, TGV2-3N changed. V2-MS3, RAP2-3SL, TGV2-3N changed. V2-MS3, RAP2-3SL, TGV2-3N changed. The operating voltage range differs. A5mA or less (24VDC when all points are ON) External dimensions S5(H) × 166(W) × 50(D) mm The overall size differs. Pay attention to the mounting dimensions.	• •	solderless	· ·	(Conforming to JIS C 2805)	Δ	solderless terminal must be
module power supply Current 55mA (at 24VDC) (ripple ratio within 5%) External dimensions (peak voltage 31.2VDC) (ripple ratio within 5%) 45mA or less (24VDC when all points are ON) The overall size differs. Pay attention to the mounting dimensions.	terminal		RAV1.25-3, RAV2-3	V2-MS3, RAP2-3SL, TGV2-3N		changed.
module power supply Current Current S5mA (at 24VDC) The overall size differs. Pay attention to the mounting dimensions.	1/0	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
power supply Current 55mA (at 24VDC) 45mA or less (24VDC when all points are ON) The overall size differs. External dimensions $55(H) \times 166(W) \times 50(D) \text{ mm}$ $54(H) \times 118(W) \times 40(D) \text{ mm}$ × Pay attention to the mounting dimensions.		voitage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
Supply Current 55mA (at 24VDC) (24VDC when all points are ON) External dimensions $55(H) \times 166(W) \times 50(D)$ mm $54(H) \times 118(W) \times 40(D)$ mm \times Pay attention to the mounting dimensions.				45mA or less		
External dimensions $55(H) \times 166(W) \times 50(D)$ mm $54(H) \times 118(W) \times 40(D)$ mm \times Pay attention to the mounting dimensions.		Current	55mA (at 24VDC)	(24VDC when all points	0	
External dimensions $55(H) \times 166(W) \times 50(D) \text{ mm}$ $54(H) \times 118(W) \times 40(D) \text{ mm}$ \times Pay attention to the mounting dimensions.	supply		· ·	are ON)		
dimensions.						The overall size differs.
	External din	nensions	$55(H) \times 166(W) \times 50(D) \text{ mm}$	54(H) × 118(W) × 40(D) mm	×	Pay attention to the mounting
Weight 0.25kg 0.15kg O						dimensions.
	Weight		0.25kg	0.15kg	0	



5.2.2 Output module specifications comparisons

(1) Specifications comparison between AY13C and AJ65SBTB2N-16R

		1	○ : Compatib	ole, <u>∧</u> : Partial char	nge required, x : Not compatible
Specif	ications	AY13C	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of c	output points	32 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16R modules.
Insulation m	ethod	Photocoupler	Relay isolation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load v		24VDC 2A (resistance load)/ point 240VAC 2A (COS φ =1)/point 4A/common (2A/1 terminal)	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 8A/common	0	
Minimum sw		5VDC 1mA	5VDC 1mA	0	
Maximum sv voltage		250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more Rated switching voltage/ current load 100,000 times or more	20 million times or more Rated switching voltage/current load 100,000 times or more	0	
Electrical life	;	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=7 ms) 100,000 times	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=7 ms) 100,000 times	0	
Maximum sy	witching	or more 3,600 times/hr	or more 3,600 times/hr	0	
External power	Voltage	24VDC± 10% Ripple voltage 4Vp-p or less	None	_	
supply	Current	184mA (24VDC, all points ON)	None	-	
Surge suppr	essor	None	None	0	
Common ter arrangemen	t	8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Number of c stations (nur occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	×	The number of points assigned per module is not changed.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External cor method	nection	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block	×	Change in wiring is required.
Applicable	ire size	0.75 to 2mm ²	(M3 × 5.2 screws) 0.3 to 2mm ²		
Applicable was Applicable sterminal		R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	0.3 to 2mm ² RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.

Specifications		AY13C	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
module power supply	Current	90mA (at 24VDC TYP.)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases, the current capacity needs to be reconsidered.
External dimensions		170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.7kg	0.35kg	0	

(2) Specifications comparison between AY13C and AJ65DBTB1-32R

					ge required, × : Not compatible Precautions for
Specifications		AY13C	AJ65DBTB1-32R	Compatibility	replacement
Number of output points		32 points	32 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated load v	voltage/	24VDC 2A (resistance load)/ point 240VAC 2A (COS ϕ =1)/point	24VDC 2A (resistance load)/point 240VAC 2A (COS φ =1)/point 4A/common (2A/1 terminal)	0	
		4A/common (2A/1 terminal)	·		
Minimum sw	vitching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv voltage	witching	250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more	20 million times or more	0	
Electrical life Maximum so frequency External power supply		Rated switching voltage/ current load $100,000 \text{ times or more}$ $200VAC 1.5A, 240VAC 1A$ $(COS \phi =0.7) 100,000 \text{ times}$ or more $200VAC 1A, 240VAC 0.5A$ $(COS \phi =0.35) 100,000$ $times or more$ $24VDC 1A, 100VDC 0.1A$ $(L/R=7 \text{ ms}) 100,000 \text{ times}$ or more $3,600 \text{ times/hr}$ $24VDC \pm 10\%$ $Ripple voltage 4Vp-p \text{ or less}$ $184\text{mA} (24VDC, all points ON)$	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A ($\cos \phi = 0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A ($\cos \phi = 0.35$) 100,000 times or more 3,600 times/hr 24VDC $\pm 10\%$ Ripple ratio 4Vp-p or less 180mA or less (24VDC, when all	0 0	
0		None	points are ON)	_	
Surge suppr		None	None	0	
Common ter arrangemen	t	8 points/common	8 points/common (terminal block 1-wire type)	Δ	
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External cor method	nnection	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	0	The number of applicable solderless terminals inserted is within two.
Applicable wire size		0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable s terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5	0	
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	90mA (at 24VDC TYP.)	80mA or less (24VDC when all points are ON)	0	
External dim	nensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
External dimensions Weight		0.7kg	0.7kg	0	

(3) Specifications comparison between AY15CEU and AJ65SBTB2N-16R

		<u> </u>		<u> </u>	○: Compatib	le,	nge required, ×: Not compatibl Precautions for
Specif	fications	AY150	CEU	AJ65SB1	B2N-16R	Compatibility	replacement
Number of o	output points	24 pc	pints	16 p	oints	×	When seventeen or more points are used, use two AJ65SBTB2N-16R modules.
Insulation m	ethod	Photoco	oupler	Relay i	solation	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load v	voltage/	24VD0 (resistance) 240VAC 2A (CC) 4A/con	load)/point OS ϕ =1)/point	(resistance 240VAC 2A (C	OC 2A load)/point $\cos \phi = 1$)/point mmon	0	
Minimum sw	vitching load	5VDC	10mA	5VDC	1mA	0	
Maximum sv	witching	264VAC ⁻	125VDC	264VAC,	125VDC	0	
Response	OFF→ON	10ms o	or less	10ms	or less	0	
time	ON→OFF	12ms o	or less	12ms	or less	0	
Mechanical	life	20 million tim	nes or more	20 million tii	mes or more	0	
Electrical life		Rated switching value $= 200,000 \text{ time}$ $= 200,000 \text{ time}$ $= 200 \text{VAC } 2A, 2$ $= 200 \text{VAC } 1.1A, $ $= 200 \text{VAC } 1.1A, $ $= 24 \text{VDC } 1.1A, $	d es or more 140VAC 1.8A 200,000 times ore 240VAC 0.9A 200,000 times ore 100VDC 0.1A 00,000 times	currer 100,000 tin 200VAC 1.5 A (COS ϕ =0.7) or n 200VAC 1A, (COS ϕ = 0 times of 24VDC 1A, 1 (L/R=7 ms) 1	hing voltage/ nt load nes or more A, 240VAC 1A 100,000 times nore 240VAC 0.5A .35) 100,000 or more 100VDC 0.1A 00,000 times nore	×	Reduce the exchange intervals of the modules as Mechanical/Electrical Life is cut to about half.
Maximum sy frequency	witching	3,600 tir	mes/hr	3,600 t	imes/hr	0	
External power	Voltage	24VDC: Ripple voltage		No	one	-	
supply	Current	230mA (24VDC	all points ON)	No	one	_	
Surge suppi	ressor	Nor	ne	No	one	0	
Common ter arrangemen		8 points/c 4 points/c		•	s/common e type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Dielectric wi	ithstand	AC external batch- Relay drive power supply, internal 5V circuit	2,830VAC rms/3 cycle (elevation 2,000m)	Between AC external batch and ground	2,830VAC rms/3 cycle (elevation 2,000m)	0	
Voltage		Relay drive power supply- internal 5V circuit	500VDC 1 minute	Between DC external batch and ground	500VDC 1 minute	0	
Insulation re	esistance	10M Ω or mo		and ground 50 insulation res 10M Ω Between DC and ground 50 insulation res	external batch 10VDC with the 10stance tester	0	

			○: Compatib	ole, 🛆 : Partial char	nge required, \times : Not compatible
Spec	ifications	AY15CEU	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of stations (no occupied p	umber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	×	The number of points assigned per module is not changed.
Operation	indication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable terminal	solderless	RAV1.25-3.5,RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
module power supply	Current	94mA (at 24VDC TYP.)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases, the current capacity needs to be reconsidered.
External di	mensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.75kg	0.35kg	0	

(4) Specifications comparison between AY15CEU and AJ65DBTB1-32R

Specifications		AY15CEU	AJ65DBTB1-32R	Compatibility	Precautions for replacement
Number of output points		24 points	32 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated load current	voltage/	24VDC 2A (resistance load)/ point 240VAC 2A (COS ϕ =1)/point 4A/common	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 4A/common (2A/1 terminal)	0	
Minimum sv	vitching load	5VDC 10mA	5VDC 1mA	0	
Maximum so	witching	264VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→ OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more	20 million times or more	0	
Electrical life	e	Rated switching voltage/ current load 200,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ = 0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 200,000 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 1A, 240VAC 0.5A (COS ϕ = 0.35) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	×	The service life is reduced to almost half. Shorten the exchange intervals of the module.
Maximum switching frequency		3,600 times/hr	3,600 times/hr	0	
External	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	24VDC ± 10% Ripple ratio 4Vp-p or less	0	
supply	Current	230mA (24VDC, all points ON)	180mA or less (24VDC, when all points are ON)	0	

○: Compatible, △: Partial change required, ×: Not compatible

Precautions for **Specifications** AY15CEU AJ65DBTB1-32R Compatibility replacement Surge suppressor None None 0 8 points/common (terminal block Common terminal 8 points/common 0 arrangement 4 points/common 1-wire type) AC external batch - Relay 2,830VAC drive power rms/e cycle Between AC external terminal Δ supply, (elevation batch and ground Dielectric withstand 2000m) 1500VAC 1 minute internal 5V voltage circuit Between DC external terminal Relay drive batch and ground powersupply 500VDC 500VAC 1 minute 0 - internal 5V 1 minute circuit Between AC external terminal batch and ground 500VDC with the insulation resistance tester $10M\,\Omega\,$ or more with the $10M \Omega$ or more Insulation resistance 0 insulation resistance tester Between DC external terminal batch and ground 500VDC with the insulation resistance tester $10M \Omega$ or more Number of occupied The number of points 4 stations 1 station stations (number of 0 assigned per module is not (4 stations × 8 points) (1 station × 32 points) occupied points) changed. Operation indication ON indication (LED) ON indication (LED) 0 50-point terminal block 50-point terminal block External connection $(M3.5 \times 7 \text{ screws})$ $(M3.5 \times 7 \text{ screws})$ Change in wiring is required. method Transmission circuit part Transmission circuit part included

0.75 to 2mm²

RAV1.25-3.5

(Conforming to JIS C 2805)

RAV2-3.5

20.4 to 26.4VDC

(ripple ratio within 5%)

80mA or less

(24VDC when all points are ON)

 $170(H) \times 64(W) \times 80(D) \text{ mm}$

0.7kg

0

0

Δ

0

0

0

Change in wiring is required.

The operating voltage range

differs.

included 0.75 to 2mm²

RAV1.25-3.5, RAV2-3.5

15.6 to 31.2VDC

94mA (at 24VDC TYP.)

 $170(H) \times 64(W) \times 80(D) \text{ mm}$

0.75kg

Applicable wire size

Applicable solderless

External dimensions

Voltage

Current

terminal

module

power

vlagus

Weight

I/O

(5) Specifications comparison between AY23C and AJ65SBTB2N-16S

○: Compatible, △: Partial change required, ×:					nge required, ×: Not compatible
Specif	ications	AY23C	AJ65SBTB2N-16S	Compatibility	Precautions for replacement
Number of o	output points	32 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16S modules.
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load	voltage	100-240VAC, 40 to 70Hz	100-240VAC, 50/60Hz ± 5%	0	
Maximum Io	ad voltage	264VAC	264VAC	0	
Maximum lo	ad current	0.3A/point 60% simultaneously ON	0.6A/point, 4.8A/common	0	
Minimum loa	ad voltage/	18VAC 10mA, 100VAC 10mA, 240VAC 10mA	50VAC 100mA, 100VAC 10mA, 240VAC 10mA	0	
Maximum in	rush current	20A 10ms or less	25A 10ms or less	0	
Leakage cu	rrent at OFF	Approx. 1.5mA (120VAC, 60Hz) Approx. 3.0mA (240VAC, 60Hz)	1.5mA (100VAC, 60Hz) 3.0mA (200VAC, 60Hz)	0	
Maximum vo	oltage drop at	1.5V or less (100 to 300mA) 1.8V or less (50 to 100mA) 2.5V or less (10 to 50mA)	1.5V or less (at 0.6A)	0	
Response	OFF→ON	1ms or less	1ms or less	0	
time	ON→OFF	0.5Hz+1ms or less	1/2 cycle + 1ms or less	0	
Surge suppr	ressor	CR absorber (0.01 μ F+68 Ω)	CR absorber (0.01 μ F+47 Ω)	0	
Common tel		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Number of o stations (num occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	×	The number of points assigned per module is not changed.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External cor method	nnection	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable s	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O Voltage module		15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power	Current	180mA (at 24VDC TYP.)	85mA or less (24VDC when all points are ON)	0	
External din	nensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.75kg	0.35kg	0	

(6) Specifications comparison between AY51C and AJ65SBTB1-32T1

			○ : Compatib	le, △: Partial char	nge required, \times : Not compatible
Specifi	cations	AY51C	AJ65SBTB1-32T1	Compatibility	Precautions for replacement
Number of ou	utput points	32 points	32 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated load vo	oltage	12/24VDC	12/24VDC	0	
Operating loa	ad voltage	10.2 to 31.2VDC	10.2 to 26.4VDC	0	
range			(ripple ratio within 5%)		
Maximum loa	ad current	0.3A/point 75% simultaneously ON (7.2A/1 common (2A/1 terminal)	0.5A/point, 4.8A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum inr	ush current	1.2A 10ms or less	1.0A 10ms or less	Δ	The inrush current value differs. Pay attention to the selection of the load used.
Leakage curr	rent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vol	Itage drop at	0.9VDC or less (TYP.) 0.3A	0.3VDC or less (TYP.) 0.5A	0	
ON		1.5VDC or less (MAX.) 0.3A	0.6VDC or less (MAX.) 0.5A	U	
Output metho	od	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less	0	
	0.1	2 0. 1000 (100.010.100 1000)	(resistance load)	Ŭ	
External power	Voltage	10.2 to 31.2VDC	10.2 to 26.4VDC (ripple ratio within 5%)	0	
supply	Current	64mA (24VDC)	50mA or less (24VDC)	0	
Surge suppre	essor	Zener diode	Zener diode	0	
Common terr arrangement		32 points/common	32 points/common	0	
Number of oc stations (num occupied poin	nber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation inc	dication	ON indication (LED)	ON indication (LED)	0	
External coni method	nection	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wi	ire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable so terminal	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power	Current	93mA (at 24VDC TYP.)	65mA or less (24VDC when all points are ON)	0	
External dime	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.7kg	0.25kg	0	

(7) Specifications comparison between AY51C and AJ65DBTB1-32T1

		○: Compatible, △: Partial change required, x: Not compatible					
Specifi	ications	AY51C	AJ65DBTB1-32T1	Compatibility	Precautions for replacement		
Number of output points		32 points	32 points	0			
Insulation method		Photocoupler	Photocoupler	0			
Rated load v	oltage	12/24VDC	12/24VDC	0			
Operating loa	ad voltage		10.2 to 31.2VDC	_			
range		10.2 to 31.2VDC	(ripple ratio within 5%)	0			
Maximum loa	ad current	0.3A/point 75% simultaneously ON (7.2A/1 common (2A/1 terminal))	0.5A/point, 8A/common (2A/1 terminal)	0			
Maximum inr	ush current	1.2A 10ms or less	1.2A 10ms or less	0			
Leakage curi	rent at OFF	0.1mA or less	0.1mA or less	0			
Maximum vo	Itage drop at	0.9VDC or less (TYP.) 0.3A	0.3VDC or less (TYP.) 0.5A	_			
ON		1.5VDC or less (MAX.) 0.3A	0.6VDC or less (MAX.) 0.5A	0			
Output metho	od	sink type	sink type	0			
_	OFF→ON	2ms or less	0.5ms or less	0			
Response			1.5ms or less				
time	ON→OFF	2ms or less (resistance load)	(resistance load)	0			
External	Voltage	10.2 to 31.2VDC	10.2 to 31.2VDC (ripple ratio within 5%)	0			
power	Current	64mA (24VDC)	50mA or less (24VDC, when all points are ON) External load current not included	0			
Surge suppre	essor	Zener diode	Zener diode	0			
Common terr	minal	32 points/common	32 points/common (4 points) (terminal block 1-wire type)	0			
Number of or stations (num occupied poi	ccupied nber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.		
Operation in	dication	ON indication (LED)	ON indication (LED)	0			
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	0	The number of applicable solderless terminals inserted is within two.		
Applicable w	ire size	0.75 to 2mm ²	0.75 to 2mm ²	0			
Applicable so	olderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3.5 (Conforming to JIS C 2805) RAV2-3.5	0			
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.		
power supply	Current	93mA (at 24VDC TYP.)	65mA or less (24VDC when all points are ON)	0			
External dim	ensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0			
Weight		0.7kg	0.7kg	0			

(8) Specifications comparison between AY61CE and AJ65SBTB1-16TE

			O: Compatib	ie, <u>∧</u> ∶Paπiai cnar I	nge required, x : Not compatible Precautions for
Specif	ications	AY61CE	AJ65SBTB1-16TE	Compatibility	replacement
Number of c	output points	32 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB1-16TE modules.
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load v		5/12/24VDC	12/24VDC	Δ	5VDC cannot be used.
Operating lo range	oad voltage	4.5 to 26.4VDC	10.2 to 26.4VDC (ripple ratio within 5%)	Δ	5VDC cannot be used.
Maximum lo	ad current	2.0A/point (Condition: τ =L/R \leq 2.5ms) 5A/common	0.1A/point 1.6A/common	×	The maximum load current per point becomes lower. Pay attention to the selection of the load to be used. The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum in	rush current	8A 10ms or less	1A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leakage cur	rrent at OFF	0.1mA or less	0.1mA or less	0	
	oltage drop at	0.25V or less (TYP.) 2.0A	0.1V or less (TYP.) 0.1A	0	
ON		0.4V or less (MAX.) 2.0A	0.2V or less (MAX.) 0.1A		
Output meth		Source type	Source type	0	
Response	OFF→ON ON→OFF	2ms or less	0.5ms or less	0	
time	ON-OFF	10ms or less (resistance load)	1.5ms or less (resistance load)	0	Wiring of the power supply
External power	Voltage	None	10.2 to 26.4VDC (ripple ratio within 5%)	×	for driving the output transistor is required.
supply	Current	None	30mA or less (24VDC)	×	Wiring of the power supply for driving the output transistor is required.
Surge suppr	ressor	Zener diode	Zener diode	0	<u>'</u>
Common ter	rminal	8 points/common	16 points/common	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Number of o stations (nur occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	×	The number of points assigned per module is not changed.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable s terminal		R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	150mA (at 24VDC TYP.)	50mA or less (24VDC when all points are ON)	0	
					The overall size differs.
External dim	nensions	170(H) × 64(W) × 80(D) mm	54(H) × 118(W) × 40(D) mm	×	Pay attention to the mounting dimensions.

(9) Specifications comparison between AY61CE and AJ65SBTB1-32TE1

		1	⊖: Compatib	le, <u>∧</u> : Partial char	nge required, x : Not compatible
Specif	ications	AY61CE	AJ65SBTB1-32TE1	Compatibility	Precautions for replacement
Number of output points		32 points	32 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated load v	voltage	5/12/24VDC	12/24VDC	Δ	5VDC cannot be used.
Operating load voltage		4.5 to 26.4 VDC	10.2 to 26.4VDC		EVDC connet be used
range		4.5 to 26.4VDC	(ripple ratio within 5%)	Δ	5VDC cannot be used.
Maximum load current		2.0A/point (Condition: τ =L/R ≦ 2.5ms) 5A/common	0.5A/point 4.8A/common	×	The maximum load current per point becomes lower. Pay attention to the selection of the load to be used. The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum inrush current		8A 10ms or less	1A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leakage current at OFF		0.1mA or less	0.1mA or less	0	
Maximum voltage drop at		0.0E\/ a-l /T\/D\ 0.04	0 EV/ on least /TV/D \ 0.44		The value of maximum
	bilage drop at	0.25V or less (TYP.) 2.0A	0.5V or less (TYP.) 0.1A	×	voltage drop at ON
ON		0.4V or less (MAX.) 2.0A	0.8V or less (MAX.) 0.1A		becomes higher.
Output meth	nod	Source type	Source type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→OFF	10ms or less (resistance load)	1.5ms or less (resistance load)	0	
External power supply	Voltage	None	10.2 to 26.4VDC (ripple ratio within 5%)	×	Wiring of the power supply for driving the output transistor is required.
	Current	None	15mA or less (TYP.DC24V, per common) External load current not included	×	Wiring of the power supply for driving the output transistor is required.
Surge suppressor		Zener diode	Zener diode	0	
Common terminal arrangement		8 points/common	32 points/common (terminal block 1-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Number of occupied					The number of points
stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	assigned per module is not changed.
Operation indication		ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required. The number of applicable solderless terminals inserted is within two.
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805)	×	Change in wiring is required.
I/O module power supply	Voltage	15.6 to 31.2VDC	V2-MS3, RAP2-3SL, TGV2-3N 20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
	Current	150mA (at 24VDC TYP.)	60mA or less (24VDC when all points are ON)	0	
External dimensions		170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.7kg	0.26kg	0	

(10) Specifications comparison between AY81C and AJ65SBTB1-16TE

○: Compatible, △: Partial change required, x: Not compatible

		○: Compatible, △: Partial change required, ×: Not compatible						
Speci	fications	AY81C	AJ65SBTB1-16TE	Compatibility	Precautions for replacement			
					When seventeen or more			
Number of o	utput points	32 points	16 points	×	points are used, use two AJ65SBTB1-16TE.			
Insulation m	ethod	Photocoupler	Photocoupler	0				
Rated load v	roltage	24VDC	12/24VDC	0				
Operating lo			10.2 to 26.4VDC					
range	Ŭ	21.6 to 26.4VDC	(ripple ratio within 5%)	0				
Maximum lo	ad current	0.5A/point 60% simultaneously ON	0.1A/point 1.6A/common	×	The maximum load current per point becomes lower. Pay attention to the selection of the load to be used. The maximum load current per common differs. Pay attention to the operating current of the entire module.			
					The inrush current value			
Maximum in	rush current	2A 10ms or less	1A 10ms or less	×	differs. Pay attention to the selection of the load used.			
Leakage cur	rent at OFF	0.1mA or less	0.1mA or less	0				
	oltage drop at	0.9V or less (TYP.) 0.5A	0.1V or less (TYP.) 0.1A					
ON	3	1.5V or less (MAX.) 0.5A	0.2V or less (MAX.) 0.1A	0				
Output meth	od	Source type	Source type	0				
Response	OFF→ON	2ms or less	0.5ms or less	0				
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0				
	Voltage	21.6 to 26.4VDC	10.2 to 26.4VDC (ripple ratio within 5%)	0				
External power supply	Current	17mA (24VDC)	30mA or less (24VDC)	Δ	The current consumption increases. the current capacity needs to be reconsidered.			
Surge suppr		Zener diode	Zener diode	0				
Common ter arrangemen		32 points/common	16 points/common	0				
Number of costations (number occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	×	The number of points assigned per module is not changed.			
Operation in	dication	ON indication (LED)	ON indication (LED)	0				
External con method	nection	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.			
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²	0				
Applicable so terminal		R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3 RAP2-3SL TGV2-3N	×	Change in wiring is required.			
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.			
power supply	Current	100mA (at 24VDC TYP.)	50mA or less (24VDC when all points are ON)	0				
External dim	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.			
Weight		0.7kg	0.18kg	0				

(11) Specifications comparison between AY81C and AJ65SBTB1-32TE1

Specifications A/31C A/35E/181 Compatibility replacement insulation method Photocoupler Photoco			O: Compatible, △: Partial change required, ×: Not com					
Reside to a voltage Photocoupler Photocoupler O O	Specif	fications	AY81C	AJ65SBTB1-32TE1	Compatibility	Precautions for replacement		
Rated load voltage arrange 24/DC 12/24/DC ○	Number of o	utput points	32 points	32 points	0			
Departing load voltage range	Insulation me	ethod	Photocoupler	Photocoupler	0			
The maximum load current SApoint 60% simultaneously ON SApoint 20% of Sapo	Rated load v	roltage	24VDC	12/24VDC	0			
Maximum load current Maximum load current Maximum load current Maximum load current ON ON ABACommon ON ABACommon	Operating lo	ad voltage	04.04.00.41/00	10.2 to 26.4VDC				
Maximum load current O.SApoint 60% simultaneously 0.SApoint 4.8A/common A. aper common differs. Pay attention to the equation to the group current of the entire module. The innush current value differs. Pay attention to the use differs. Pay attention to the user differs. Pay attention to the differs. Pay attention to the user differs. Pay attention to the differs. Pay attention to the user differs. Pay attention to the mounting differs.	range		21.6 to 26.4VDC	(ripple ratio within 5%)	O			
Maximum Inrush current 2A 10ms or less	Maximum lo	ad current			Δ	per common differs. Pay attention to the operating		
Maximum voltage drop at 0.9V or less (TYP.) 0.5A 1.5V or less (MAX.) 0.5A 0.5V or less (MAX.)	Maximum in	rush current	2A 10ms or less	1A 10ms or less	×			
Maximum voltage drop at 0.9V or less (TYP.) 0.5A 1.5V or less (MAX.) 0.5A 0.5V or less (MAX.)	Leakage cur	rent at OFF	0.1mA or less	0.1mA or less	0			
0.0			0.9V or less (TYP.) 0.5A	0.5V or less (TYP.) 0.5A				
Output method Source type Source type ○ Response (imme) OFF ON 2ms or less 0.5ms or less ○ Itime ON → OFF 2ms or less (resistance load) ○ Voltage 21.6 to 26.4VDC (ripple ratio within 5%) ○ External power supply Current 17mA (24VDC) 15mA or less (resistance load) ○ External power supply Current 17mA (24VDC) 15mA or less (resistance load) ○ External power supply Current 17mA (24VDC) 15mA or less (resistance load) ○ Surge suppressor Zener diode 2ms or less (resistance load) ○ ○ Surge suppressor Zener diode 2ms or less (resistance load) ○ ○ Surge suppressor Zener diode ○ ○ ○ Common terminal power supply ports 32 points/common (terminal block 1-wire type) ○ ○ Number of occupied stations (number of occupied stations (number of occupied stations (lation) 4 stations (station x 32 points/common (terminal block (station x 32 points/common (terminal block (M3 x 5.2 serews)) ○ ○ Change in wiri			` ,	` '	0			
Response time OFF→ON 2ms or less O.5ms or less O.		od			0			
time ON - OFF 2ms or less (resistance load) 1.5ms or less (resistance load) 0 External power supply Power supply Parts 1 External connection method					_			
External power supply	· ·							
External power supply Current 17mA (24VDC) 17mA (24VDC) External load current not included Surge suppressor Zener diode Zener diode Zener diode Zener diode 32 points/common (terninal block 1-wire type) Number of occupied stations (1 station			,	10.2 to 26.4VDC				
Surge suppressor Zener diode Zener diode Q	power	Current	17mA (24VDC)	(TYP.24VDC, per common) External load current not	0			
Common terminal arrangement 32 points/common (terminal block 1-wire type) A stations (4 stations × 8 points) Operation indication ON indication (LED) OPeration indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3.5 × 7 screws) Transmission circuit part included Applicable wire size O.75 to 2mm² Applicable solderless terminal Voltage Voltage Ovoltage Output Output A stations (4 stations × 8 points) On indication ON indication (LED) On indication	Surge suppr	essor	Zener diode		0			
Number of occupied stations (number of occupied stations (4 stations × 8 points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3.5 × 7 screws) I/O part: 34-point terminal block (M3 × 5.2 screws) I/O part:	Common ter	minal		32 points/common				
External connection method External connection (M3.5 × 7 screws) Transmission circuit part included External connection (M3 × 5.2 screws) Fransmission circuit part included External connection (M3 × 5.2 screws) Fransmission (M3 × 5.	Number of constations (number)	occupied mber of		1 station	0	assigned per module is not		
External connection method External connection method Transmission circuit part included Transmission circuit part included Transmission circuit part included The number of applicable solderless terminals inserted is within two. Applicable wire size O.75 to 2mm² Applicable solderless terminal R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV2-3SL TGV2-3N I/O module power supply Current 100mA (at 24VDC TYP.) External dimensions Tol. (H) × 64(W) × 80(D) mm 54(H) × 179(W) × 40(D) mm Change in wiring is required. Change in wiring is required. The number of applicable solderless is within two. Change in wiring is required. The number of applicable solderless is within two. Change in wiring is required. The operating voltage range differs. O The operating voltage range differs. Pay attention to the mounting dimensions.	Operation in	dication	ON indication (LED)	ON indication (LED)	0			
Applicable solderless terminal R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV2-3SL TGV2-3N I/O module power supply Current 100mA (at 24VDC TYP.) External dimensions RAV1.25-3 (Conforming to JIS C 2805) V2-MS3 RAP2-3SL TGV2-3N 20.4 to 26.4VDC (ripple ratio within 5%) 60mA or less (24VDC when all points are ON) The operating voltage range differs. O The overall size differs. Pay attention to the mounting dimensions.		nection	(M3.5 × 7 screws) Transmission circuit part included	supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	solderless terminals inserted		
Applicable solderless terminal R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5 RAV2-3.5 RA	Applicable w	rire size	0.75 to 2mm ²		0			
		olderless		(Conforming to JIS C 2805) V2-MS3 RAP2-3SL	×	Change in wiring is required.		
Supply Current 100mA (at 24VDC TYP.) (24VDC when all points are ON) External dimensions 170(H) × 64(W) × 80(D) mm 54(H) × 179(W) × 40(D) mm × Pay attention to the mounting dimensions.		Voltage	15.6 to 31.2VDC		Δ			
External dimensions $170(H) \times 64(W) \times 80(D) \text{ mm}$ $54(H) \times 179(W) \times 40(D) \text{ mm}$ × Pay attention to the mounting dimensions.	-	Current	100mA (at 24VDC TYP.)		0			
Weight 0.7kg 0.26kg C	External dim	ensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	Pay attention to the mounting		
g 0.20kg	Weight		0.7kg	0.26kg	0			

(12) Specifications comparison between AJ35PTF-24S and AJ65SBTB2N-16S

○: Compatible, ∧: Partial change required, x: Not compatible

Specif	fications	AJ35PTF-24S	AJ65SBTB2N-16S	Compatibility	Precautions for
	output points	24 points	16 points	×	replacement When seventeen or more points are used, use two AJ65SBTB2N-16S modules.
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load v	voltage	100-240VAC,40 to 70Hz	100-240VAC, 50/60Hz ± 5%	0	
Maximum lo	ad voltage	264VAC	264VAC	0	
Maximum lo	ad current	0.6A/point, 2.4A/common	0.6A/point, 4.8A/common	0	
Minimum loa	ad voltage/	24VAC 100mA, 100VAC 10mA, 240VAC 10mA	50VAC 100mA, 100VAC 10mA, 240VAC 10mA	0	
Maximum in	rush current	20A 10ms or less, 8A 100ms or less	25A 10ms or less	0	
Leakage cui	rrent at OFF	1.5mA (120VAC, 60Hz) 3.0mA (240VAC, 60Hz)	1.5mA (100VAC, 60Hz) 3.0mA (200VAC, 60Hz)	0	
Maximum vo	oltage drop at	1.5V or less (0.1 to 0.6A) 1.8V or less (50 to 100mA) 2.0V or less (10 to 50mA)	1.5V or less (at 0.6A)	0	
Response	OFF→ON	1ms or less	1ms or less	0	
time	ON→OFF	0.5Hz+1ms or less	1/2 cycle + 1ms or less	0	
Surge suppr	ressor	CR absorber (0.022 μ F+47 Ω)	CR absorber (0.01 μ F+47 Ω)	0	
Fuse rating		High speed type fuse 3.2A (one fuse/common) HP-32	None	×	The fuse is not built in.*1
Fuse blown	indication	Available	None	×	
Common ter arrangemen		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	×	The number of points assigned per module is not changed.
Operation in	ndication	ON indication (LED)	ON indication (LED)	0	
External connection method		Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	200mA	85mA or less (24VDC when all points are ON)	0	
External dim	nensions	254(H) × 132(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.83kg	0.35kg	0	
vveignt		0.5500	0.00119		l .

^{*1:} Install a fuse for each external terminal point to prevent the burnout of the external devices and modules during load shorts. In addition, when a fuse blown indication is necessary, configure an external circuit.

(13) Specifications comparison between AJ35PTF-24T and AJ65SBTB1-32T1

○: Compatible, △: Partial change required, ×: Not compatible

		1	○: Compatib	le, △: Partial char	nge required, x: Not compatible
Specif	ications	AJ35PTF-24T	AJ65SBTB1-32T1	Compatibility	Precautions for replacement
Number of o	utput points	24 points	32 points	0	
Insulation me	ethod	Photocoupler	Photocoupler	0	
Rated load v	roltage	12/24VDC	12/24VDC	0	
Operating lo	ad voltage	10.2 to 21.2\/DC	10.2 to 26.4VDC		Voltages exceeding
range		10.2 to 31.2VDC	(ripple ratio within 5%)	Δ	26.4VDC cannot be applied.
Maximum lo	ad current	0.5A/point, 3.2A/common	0.5A/point, 4.8A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module.
Maximum in	rush current	4A 10ms or less	1.0A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leaking curr	ent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	ltage drop at	0.9VDC or less (TYP.) 0.5A	0.3VDC or less (TYP.) 0.5A	0	
ON		1.5VDC or less (MAX.) 0.5A	0.6VDC or less (MAX.) 0.5A	0	
Output meth	od	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
	Voltage	10.2 to 31.2VDC	10.2 to 26.4VDC	Δ	Voltages exceeding
External	Voltage	10.2 to 01.2 VBO	(ripple ratio within 5%)	Δ	26.4VDC cannot be applied.
power	Current	23mA (24VDC TYP./common)	50mA or less (24VDC)	×	The current consumption increases. The current capacity needs to be reconsidered.
Surge suppr	essor	Varistor (52 to 62V)	Zener diode	0	
Common ter		8 points/common	32 points/common	Δ	As common terminal arrangement changes from 8 points/common to 32 points/common, wiring with a different voltage per common is not possible.
Number of o stations (nur occupied poi	nber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External con method	nection	Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
Power supply	Current	130mA	65mA or less (24VDC when all points are ON)	0	
External dim	ensions	254(H) × 132(W) × 41(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.73kg	0.25kg	0	
VVCigit					

(14) Specifications comparison betweenAJ35TB1A-8R and AJ65SBTB2N-8R

			⊖: Compatib	le, <u>∧</u> : Partial char	nge required, x: Not compatible
Specif	ications	AJ35TB1A-8R	AJ65SBTB2N-8R	Compatibility	Precautions for replacement
Number of o	output points	8 points	8 points	0	
					Although the insulation
Inculation m	athad	Dhatasaunlar	Delevi		methods differ, the
Insulation m	etnoa	Photocoupler	Relay	Δ	performance of the
					insulation is the same.
		20/170 24	24VDC 2A		The maximum load current
Rated load	/oltage/	24VDC 2A	(resistance load)/point		per common differs. Pay
current	, and the second	(resistance load)/point	240VAC 2A (COS ϕ =1)/point	Δ	attention to the operating
		240VAC 2A (COS ϕ =1) point	4A/common		current of the entire module.
Minimum sw	vitching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv		0.20	0.20	Ŭ	
voltage		250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
	l				
Mechanical	ille	20 million times or more	20 million times or more	0	
		Rated switching	Rated switching		
		voltage/current load	voltage/current load		
		100,000 times or more	100,000 times or more		
		200VAC 1.5A, 240VAC 1A	200VAC 1.5A, 240VAC 1A		
		(COS ϕ =0.7) 100,000 times	(COS ϕ =0.7) 100,000 times		
Electrical life	2	or more	or more	0	
Licotricariii	•	200VAC 1A, 240VAC 0.5A	200VAC 1A, 240VAC 0.5A		
		(COS $\phi = 0.35$) 100,000	(COS $\phi = 0.35$) 100,000		
		times or more	times or more		
		24VDC 1A, 100VDC 0.1A	24VDC 1A, 100VDC 0.1A		
		(L/R=7 ms) 100,000 times	(L/R=7 ms) 100,000 times		
		or more	or more		
Maximum sv	witching				
frequency	, i	3,600 times/hr	3,600 times/hr	0	
External		24VDC ± 10%			
power	Voltage	Ripple voltage 4Vp-p or less	None	-	
supply	Current	45mA (24VDC, all points ON)	None	_	
Surge suppi	l	None	None	0	
Common ter		None	None	0	Becomes a shared
		Independent common	8 points/common (2-wire type)	×	
arrangemen	ι				Common.
Number of c	ccupied	4 station	4 -4-4:		The number of I/O points
stations (nu	mber of	1 station	1 station	×	assigned per station is
occupied points)		(1 station × 8 points)	(1 station × 32 points)		changed.
					(8 points → 32 points)
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
			Transmission/module power		
		26-point terminal block	supply parts:		
External connection method		(M3 screw)	7-point terminal block		
		Transmission circuit part	(M3 × 5.2 screws)	×	Change in wiring is required.
metriod		included	I/O part:		
		included	18-point terminal block		
			(M3 × 5.2 screws)		
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
		B. 05	RAV1.25-3	-	In some cases, the
Applicable solderless		R1.25-3, R2-3	(conforming to JIS C 2805)	Δ	solderless terminal must be
terminal		RAV1.25-3, RAV2-3	V2-MS3, RAP2-3SL,TGV2-3N	_	changed.
		15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
I/O	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
module		(pour voilage of 200)	(rippio rado within 570)		The current consumption
			85mA or less		increases. The current
power	Current	70mA (at 24VDC)	(24VDC when all points	Δ	
supply			are ON)		capacity needs to be
					reconsidered.
					The overall size differs.
External din	nensions	55(H) × 135(W) × 50(D) mm	$54(H) \times 118(W) \times 40(D) \text{ mm}$	×	Pay attention to the mounting
					dimensions.
Weight		0.3kg	0.25kg	0	
-		·		-	

(15) Specifications comparison between AJ35TB2-8R and AJ65SBTB2N-8R

		ı	⊖: Compat	ible, △: Partial ch	ange required, × : Not compatible
Specif	ications	AJ35TB2-8R	AJ65SBTB2N-8R	Compatibility	Precautions for replacement
Number of o	utput points	8 points	8 points	0	
Insulation me	ethod	Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load v	oltage/current	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 5A/common	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 4A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module.
Minimum sw	itching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv voltage	vitching	250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→ OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more	20 million times or more	0	
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=7 ms) 100,000 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 1A, 240VAC 0.5A (COS ϕ = 0.35) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	0	
Common ter		3,600 times/hr	3,600 times/hr	0	
External power	Voltage	24VDC± 10% Ripple voltage 4Vp-p or less	None	_	
supply	Current	45mA (24VDC all points ON)	None	-	
Surge suppr	essor	None	None	0	
Common ter		8 points/common (2-wire type)	8 points/common (2-wire type)	0	
Number of o stations (nur occupied po	mber of	1 station (1 station × 8 points)	1 station (1 station × 32 points)	×	The number of I/O points assigned per station is changed. (8 points → 32 points)
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External connection method		26-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL,TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
module power supply	Current	70mA (at 24VDC)	85mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	ensions	55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.3kg	0.25kg	0	
					

(16) Specifications comparison between AJ35TB1-16R and AJ65SBTB2N-16R

			O. Compat	ible, 🛕. Partial Cit	ange required, ×: Not compatible
	fications	AJ35TB1-16R	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of o	utput points	16 points	16 points	0	
Insulation me	ethod	Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load v	roltage/current	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 5A/common	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 8A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module.
Minimum sw	ritching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv	vitching voltage	250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ ON	10ms or less	10ms or less	0	
time	ON→ OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more	20 million times or more	0	
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=7 ms) 100,000 times or more	Rated switching voltage/current load $100,000 \text{ times or more}$ $200\text{VAC } 1.5\text{A, } 240\text{VAC } 1\text{A}$ $(\text{COS } \phi = 0.7) \ 100,000 \ \text{times or more}$ $200\text{VAC } 1\text{A, } 240\text{VAC } 0.5\text{A}$ $(\text{COS } \phi = 0.35) \ 100,000 \ \text{times}$ or more $24\text{VDC } 1\text{A, } 100\text{VDC } 0.1\text{A}$ $(\text{L/R=7 ms)} \ 100,000 \ \text{times}$ or more	Ο	
Maximum sv frequency	vitching	3,600 times/hr	3,600 times/hr	0	
External power	Voltage	$24 \text{VDC} \pm 10\%$ Ripple voltage 4Vp-p or less	None	-	
supply	Current	90mA (24VDC all points ON)	None	-	
Surge suppr	essor	None	None	0	
Common ter		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/ common, wiring with a different voltage per common is not possible.
Number of o stations (nu occupied po	mber of	2 stations (2 stations × 8 points)	1 station (1 station × 32 points)	×	The number of I/O points assigned per station is changed.(8 points → 32 points)
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External connection method		34-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable solderless terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	75mA (at 24VDC)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	ensions	55(H) × 166(W) × 50(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.35kg	0.35kg	0	
Weight		·	·		l .

(17) Specifications comparison between AJ35TB1A-8T and AJ65SBTB1-8T1

			O: Compatib	le, △: Partial chai	nge required, x : Not compatible
Speci	fications	AJ35TB1A-8T	AJ65SBTB1-8T1	Compatibility	Precautions for replacement
Number of	output points	8 points	8 points	0	
Insulation n	nethod	Photocoupler	Photocoupler	0	
Rated load	voltage	24VDC	12/24VDC	0	
Operating le	oad voltage	19.2 to 26.4VDC	10.2 to 26.4VDC	0	
range		(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum lo	oad current	0.3A/point	0.5A/point, 2.4A/common	0	
Maximum ii	nrush current	1.0A 10ms or less	1.0A 10ms or less	0	
Leakage cu	irrent at OFF	0.1mA or less	0.1mA or less	0	
Maximum v	oltage drop at	1.5VDC or less (MAX.) 0.3A	0.3VDC or less (TYP.) 0.5A	0	
ON		1.5VDC of less (MAX.) 0.3A	0.6VDC or less (MAX.) 0.5A	0	
Output met	hod	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms of less	0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
			10.2 to 26.4VDC		Wiring of the power supply
External	Voltage	None		×	for driving the output circuit
			(ripple ratio within 5%)		is required.
power					Wiring of the power supply
supply	Current	None	15mA or less (24VDC)	×	for driving the output circuit
					is required.
Surge supp	ressor	Zener diode	Zener diode	0	
Common te	erminal				Becomes a shared
arrangemei	nt	Independent common	8 points/common	×	common.
					The number of I/O points
Number of occupied		1 station	1 station		assigned per station is
stations (nu		(1 station × 8 points)	(1 station × 32 points)	×	changed.
occupied po	oints)				(8 points → 32 points)
Operation in	ndication	ON indication (LED)	ON indication (LED)	0	(1)
		,	Transmission/module power	Ü	
			supply parts:		
		I 26-point terminal block I	7-point terminal block		
External co	nnection	(M3 screw)	(M3 × 5.2 screws)	×	Change in wiring is required.
method		Transmission circuit part	I/O part:	·	3
		included	10-point terminal block		
			(M3 × 5.2 screws)		
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
			RAV1.25-3		In some cases, the
Applicable solderless terminal		R1.25-3, R2-3	(conforming to JIS C 2805)	Δ	solderless terminal must be
		RAV1.25-3, RAV2-3	V2-MS3, RAP2-3SL,TGV2-3N	Δ	changed.
	1	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
I/O	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
module		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	35mA or less		
power	Current	85mA(at 24VDC)	(24VDC when all points	0	
supply	04.10.11		are ON)		
			are orty		The overall size differs.
External dir	mensions	55(H) × 135(W) × 50(D) mm	54(H) × 87.3(W) × 40(D) mm	×	Pay attention to the mounting
_Atomar all		00(11) \(\text{100(11)} \(\text{100(D)} \)	\$ 1(11) \(\text{O}\) \(\text{O}\) \(\text{O}\) \(\text{O}\)	_ ^	dimensions.
\/\eight		0.3kg	0.14kg		difficitions.
Weight		U.SKY	0.14kg	0	

(18) Specifications comparison between AJ35TB2-8T and AJ65SBTB2-8T1

			O. Compatible	ie, 🛆 . Faitiai chai	nge required, × : Not compatible Precautions for
Specif	ications	AJ35TB2-8T	AJ65SBTB2-8T1	Compatibility	replacement
Number of c	utput points	8 points	8 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load v	oltage	5/12/24VDC	12/24VDC	Δ	5VDC cannot be used.
Operating lo	ad voltage	4.5 to 26.4VDC	10.2 to 26.4VDC		5VDC cannot be used.
range		(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	3VDC carriot be used.
Maximum lo	ad current	0.5A/point	0.5A/point, 2.4A/common	0	
Maximum in	rush current	2.0A 10ms or less	1.0A 10ms or less	×	The inrush current value differs. Pay attention to the selection of the load used.
Leakage cui	rent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	oltage drop at	0.2VDC or less (MAX.) 0.5A	0.3VDC or less (TYP.) 0.5A	0	
ON		0.2 V DO OF 1633 (WAX.) 0.3A	0.6VDC or less (MAX.) 0.5A)	
Output meth	od	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms of less	0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
External	Voltage	4.5 to 26.4VDC	10.2 to 26.4VDC	Δ	5VDC cannot be used.
power		(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	0.20 000.20 0000.
supply	Current	20mA or less (24VDC)	17.8mA or less (24VDC)	0	
Surge suppr		Zener diode	Zener diode	0	
Common ter arrangemen		8 points/common (2-wire type)	8 points/common (2-wire type)	0	
Number of costations (number occupied po	mber of	1 station (1 station × 8 points)	1 station (1 station × 32 points)	×	The number of I/O points assigned per station is changed. (8 points → 32 points)
Operation in	dication	ON indication (LED)	ON indication (LED)	0	
External cor method	nection	26-point terminal block (M3 screw) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable w	rire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable s terminal	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC	۸	The operating voltage range
module	rollage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
power supply	Current	70mA (at 24VDC)	45mA or less (24VDC when all points are ON)	0	
External dim	ensions	55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.3kg	0.18kg	0	

(19) Specifications comparison between AJ35TB1-16T and AJ65SBTB1-16T1

Surge suppressor Zener diode Zener diode Common terminal arrangement 16 points/common 16 points/common 16 points/common The number of I/O point assigned per station is changed. (8 points → 32 points)	Number of output points 16 points 19.2 to 28.4VDC 12/24VDC 12/24VDC 19.2 to 28.4VDC				○: Compatible	le, 🛆 : Partial char	$ge required, \times : Not compatible$
Insulation method	Insulation method	Specif	ications	AJ35TB1-16T	AJ65SBTB1-16T1	Compatibility	
Rated load voltage	Rated load woltage	Number of c	output points	16 points	16 points	0	
19.2 to 26.4VDC	19.2 to 26.4VDC	Insulation m	ethod	Photocoupler	Photocoupler	0	
(ripple ratio within 5%) (ripple ratio within 5%) O	Cipple ratio within 5% Cipple ratio within	Rated load v	voltage		12/24VDC	0	
(inppie ratio within 5%)	(inppie ratio within 5%)	Operating lo	ad voltage			0	
Maximum inrush current D.4A 10ms or less D.1mA or less	Maximum inrush current			` ' ' '	` ' ' '		
Leakage current at OFF Maximum voltage drop at ON 1.5VDC or less (MAX.) 0.1A ON 1.5VDC or less (MAX.) 0.1A ON Response OFF→ON 2ms or less 0.5ms or l	Leakage current at OFF						
Maximum voltage drop at ON 1.5VDC or less (MAX.) 0.1A 0.6VDC or less (MAX.) 0.5A 0.6VDC or lesi	Maximum voltage drop at ON					_	
0.6 0.6	1.5VDC or less (MAX.) 0.1A			0.1mA or less		0	
Response time	Response time		oltage drop at	1.5VDC or less (MAX.) 0.1A	` '	0	
time ON→OFF 2ms or less (resistance load) 1.5ms or less (resistance load) 0 Voltage	time ON→OFF 2ms or less (resistance load) 1.5ms or less (resistance load) ○ Wiring of the power sup for driving the output cin is required. Voltage None 30mA or less (24VDC) × for driving the output cin is required. Surge suppressor Zener diode Zener diode ○ Wiring of the power sup for driving the output cin is required. Surge suppressor Zener diode Zener diode ○ The number of occupied stations (number of occupied points) 2 stations (2 stations × 8 points) (3 station × 32 points) (4 station × 32 points) (8 points → 32 points) (9 port terminal block (M3 x 5.2 screws) (Conforming to JIS C 2805) (Conforming to JIS C	Output meth	nod	sink type	sink type	0	
External power supply Current None 30mA or less (24VDC) Current None 30mA or less (24VDC) Current None 30mA or less (24VDC) X wiring of the power supply for driving the output circle is required. Surge suppressor Zener diode Zener diode O Common terminal arrangement 16 points/common 16 points/common 16 points/common 16 points/common O The number of l/O point assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7 point terminal block (M3 x 5.2 screws) (M3 x 5.2 screws) Transmission circuit part included Applicable wire size O.75 to 2mm² Applicable solderless terminal RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 Veltoco	External power supply Current None 10.2 to 26.4VDC (ripple ratio within 5%) Current None 30mA or less (24VDC) X Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. X Surge suppressor Zener diode Zener diode Zener diode Zener diode O Common terminal arrangement Number of occupied stations (number of occupied points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission inducted (M3 x 5.2 screws) Transmission circuit part included (M3 x 5.2 screws) Applicable wire size O.75 to 2mm² Applicable solderless terminal Voltage R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N The overall size differs. External dimensions 55(H) x 135(W) x 50(D) mm 54(H) x 118(W) x 40(D) mm x Wiring of the power supply radio within 5%) Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply and the output cine is required. Wiring of the power supply for driving the output cine is required. Wiring of the power supply parts. The number of occupied of inclined on the power supply parts. The number of occu	Response	OFF→ ON	2ms or less	0.5ms or less	0	
Voltage None 10.2 to 26.4 VIC (ripple ratio within 5%) X for driving the output circ is required.	External power supply Current None 30mA or less (24VDC) Current None 30mA or less (24VDC) X bring of the power supply for driving the output circles required. Wiring of the power supply for driving the output circles required. Wiring of the power supply for driving the output circles required. X bring suppressor Zener diode Zener diode Zener diode Zener diode Zener diode O Number of occupied stations (number of occupied stations (number of occupied points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) Applicable wire size O.75 to 2mm² Applicable solderless terminal RAV1.25-3, RAV2-3 Current 130mA or less (at 24VDC) The operating voltage range on the module power supply The operating voltage range of differs. The operating voltage range range on the module power supply The operating voltage range range on the module power supply The operating voltage range range on the module power supply The operating voltage range range on the module power supply The operating voltage range range on the module power supply The operating voltage range range on the power supply The operating voltage range on the module power supply The operating voltage range on the power supply The operating voltage range of the power supply The operating voltage range of the power supply The oper	time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
Surge suppressor Zener diode	Surge suppressor Common terminal arrangement Number of occupied points) Operation indication External connection method Applicable wire size Applicable solderless terminal To Voltage RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 For arrangement Numer of occupied points ON indication (LED) Applicable solderless terminal To point service in the power sup for driving the output cin is required. External connection method Applicable solderless terminal Current Applicable solderless To point terminal block (M3 screw) To point terminal block		Voltage	None		×	for driving the output circuit is required.
Common terminal arrangement 16 points/common 16 points/common O Number of occupied stations (number of occupied points) 2 stations 1 station x Operation indication ON indication (LED) ON indication (LED) O Operation indication ON indication (LED) ON indication (LED) O External connection method (M3 screw) (M3 screw) Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) x Change in wiring is required. Applicable wire size 0.75 to 2mm² 0.3 to 2mm² O Applicable solderless terminal R1.25-3, R2-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N ARV1.25-3 (Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Amount of the poperating voltage rate of I/O points assigned per station is changed. In some cases, the solderless terminal must changed. The operating voltage rate of I/O points assigned per station is changed.	Common terminal arrangement Number of occupied stations (number of occupied points) Operation indication ON indication (LED) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) I/O part: 18-point terminal block (M3 x 5.2 screws) Applicable wire size O.75 to 2mm² O.75 to 2mm² Applicable solderless terminal I/O voltage I/O part: 18-point terminal block (M3 x 5.2 screws) RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N I/O module power supply Current I/O module power supply parts: 18-point terminal block (M3 x 5.2 screws) Applicable solderless terminal must changed. The number of I/O point assigned per station is changed. Change in wiring is required. Change in wiring i	•	Current	None	30mA or less (24VDC)	×	Wiring of the power supply for driving the output circuit is required.
Number of occupied stations (number of occupied points) Quantification Applicable wire size Applicable solderless terminal Points/common 16 points/common 18 tation (1 station × 32 points) A points → 32 points) A points → 32 points Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) 1/O part: 18-point terminal block (M3 × 5.2 screws) Applicable solderless R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 The number of I/O point assigned per station is changed. Changed. Change in wiring is requested to the solderless solderless terminal must changed. In some cases, the solderless terminal must changed. The operating voltage rate of I/O points assigned per station is changed.	The number of I/O points stations (number of occupied stations (number of occupied points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) I/O part: 18-point terminal block (M3 x 5.2 screws) I/O part: 18-point terminal block (M3 x 5.2 screws) Applicable wire size O.75 to 2mm² Applicable solderless terminal I/O Voltage Voltage Voltage Voltage Current 130mA or less (at 24VDC) External dimensions 1 station 2 stations (number of I/O point assigned per station is changed. (8 points → 32 points) Changed. Change in wiring is requested (M3 x 5.2 screws) Applicable solderless RAV1.25-3, R2-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Solderless terminal must changed. The operating voltage radiffers. The overall size differs. Pay attention to the mount of I/O point assigned per station is changed. The overall size differs. Pay attention to the mount of I/O point assigned per station is changed. The overall size differs. Pay attention to the mount of I/O point assigned per station is changed. The overall size differs. Pay attention to the mount of I/O point assigned per station is changed. The overall size differs.	Surge suppr	ressor	Zener diode	Zener diode	0	
Stations (number of occupied stations (number of occupied points) 2 stations (2 stations × 8 points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3 screw) Transmission circuit part included Transmission terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws) Applicable wire size O.75 to 2mm² O.75 to 2mm² Applicable solderless terminal RAV1.25-3, R2-3 RAV1.25-3, RAV2-3 The operating voltage ration is changed. ** Change in wiring is requested to solderless terminal must changed. In some cases, the solderless terminal must changed. The operating voltage ration is changed.	Number of occupied stations (number of occupied points) 2 stations (stations (number of occupied points) 2 stations (stations × 8 points) 1 station (station × 32 points) × assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) O External connection method 26-point terminal block (M3 screw) Transmission circuit part included 7-point terminal block (M3 x 5.2 screws) × Change in wiring is required in wiring is requ			16 points/common	16 points/common	0	
External connection method Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) Transmission circuit part included Applicable wire size O.75 to 2mm² Applicable solderless terminal RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) L/O part: 18-point terminal block (M3 x 5.2 screws) O.3 to 2mm² O RAV1.25-3 RAV1.25-3, R2-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N The operating voltage ra	External connection method Transmission/module power supply parts: 7-point terminal block (M3 screw) Transmission circuit part included Applicable wire size O.75 to 2mm² Applicable solderless terminal Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) I/O part: 18-point terminal block (M3 x 5.2 screws) Applicable solderless Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) X Change in wiring is required. Change in wiring is required. Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) X Change in wiring is required. X Change in wiring is required. Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) X Change in wiring is required. In some cases, the solderless terminal must changed. Y2-MS3, RAP2-3SL, TGV2-3N The operating voltage radiffers. Soma or less (24VDC when all points are ON) The overall size differs. Pay attention to the mount of	stations (nur	mber of			×	changed.
External connection method Transmission circuit part included Applicable wire size Applicable solderless terminal RAV1.25-3, RAV2-3 To point terminal block (M3 × 5.2 screws) RAV1.25-3, RAV2-3 To point terminal block (M3 × 5.2 screws) A policable wire size O.75 to 2mm² O.3 to 2mm² RAV1.25-3 Change in wiring is required. A policable wire size O.75 to 2mm² O.3 to 2mm² O.3 to 2mm² O.4 to 2805) V2-MS3, RAP2-3SL, TGV2-3N The operating voltage rail.	External connection method Transmission circuit part included Applicable wire size O.75 to 2mm² Applicable solderless terminal I/O Applicable solderless terminal Voltage Module power supply External dimensions Diagran (Current) Transmission circuit part included Misserw (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 scre	Operation in	dication	ON indication (LED)	ON indication (LED)	0	
Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage ra	Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 RAV1.25-3, RAV2-3 V2-MS3, RAP2-3SL, TGV2-3N Voltage Module power supply Current Voltage Current Voltage Current S10mA or less (at 24VDC) External dimensions R1.25-3, R2-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Current S0mA or less (24VDC when all points are ON) The overall size differs. Pay attention to the mounts Pay attention to the mounts The overall size differs.			(M3 screw) Transmission circuit part	supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block	×	Change in wiring is required.
Applicable solderless terminal R1.25-3, R2-3 (conforming to JIS C 2805) ∆ solderless terminal must changed. IO Voltage 15.6 to 31.2VDC 20.4 to 26.4VDC	Applicable solderless terminal R1.25-3, R2-3 RAV1.25-3, RAV2-3 V2-MS3, RAP2-3SL, TGV2-3N Voltage Module power supply Current Solderless terminal must changed. Current 130mA or less (at 24VDC) External dimensions R1.25-3, R2-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Current Sold Fig. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Current Sold Fig. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Current Sold Fig. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Changed. The operating voltage radiffers. Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N Conforming to JIS C 2805 Co	Applicable w	vire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
1/O \/oltage	Voltage	• •		· ·	(conforming to JIS C 2805)	Δ	solderless terminal must be
	power supply Current 130mA or less (at 24VDC) 130mA or less (24VDC when all points are ON) External dimensions 50mA or less (24VDC when all points are ON) The overall size differs. Pay attention to the mou		Voltage			Δ	The operating voltage range differs.
power Supply Current 130mA or less (at 24VDC) (24VDC when all points O	External dimensions $55(H) \times 135(W) \times 50(D) \text{ mm}$ $54(H) \times 118(W) \times 40(D) \text{ mm}$ × Pay attention to the mountain to the mo	power	Current		50mA or less (24VDC when all points	0	
External dimensions $55(H) \times 135(W) \times 50(D) \text{ mm}$ $54(H) \times 118(W) \times 40(D) \text{ mm}$ × Pay attention to the mountain to the mo		External dimensions		55(H) × 135(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	Pay attention to the mounting
	Weight 0.3kg 0.18kg O	Weight					

(20) Specifications comparison between AJ35TB1-16T and AJ65BTB1-16T

		I	O: Compatib	ie, ∆∶ Partiai char I	nge required, × : Not compatible
Specif	ications	AJ35TB1-16T	AJ65BTB1-16T	Compatibility	Precautions for replacement
Number of o	output points	16 points	16 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load	voltage	24VDC	12/24VDC	0	
Operating lo	ad voltage	19.2 to 26.4VDC	10.2 to 28.8VDC		
range		(ripple ratio within 5%)	(ripple ratio within 5%)	0	
			0.5A/point		
Maximum lo	ad current	0.1A/point, 1.6A/common	4A/1 common (Ta = 45°C)	0	
			2.8A/1 common (Ta = 55° _C)		
Maximum in	rush current	0.4A 10ms or less	4.0A 10ms or less	0	
Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	oltage drop at	4.5\/DQ == l=== (MAX) 0.4A	0.9VDC or less (TYP.) 0.5A	_	
ON		1.5VDC or less (MAX.) 0.1A	1.5VDC or less (MAX.) 0.5A	0	
Output meth	nod	sink type	sink type	0	
Response	OFF→ON	2ms or less	2ms or less	0	
time	ON→OFF	2ms or less (resistance load)	2ms or less (resistance load)	0	
			10.01.00.00/00		Wiring of the power supply
	Voltage	None	10.2 to 28.8VDC	×	for driving the output circuit
External			(ripple ratio within 5%)		is required.
power			100mA or less		
supply			(TYP.24VDC per common)		Wiring of the power supply
	Current	None	External load current not	×	for driving the output circuit
			included		is required.
Surge suppi	essor	Zener diode	Zener diode	0	
Common te		Zonor diodo	8 points/common		
arrangemen		16 points/common	(terminal block 1-wire type)	Δ	
arrangemen			(terrimar block 1 wire type)		The number of I/O points
Number of c	occupied	2 stations	1 station		assigned per station is
stations (nu	mber of	(2 stations × 8 points)	(1 station × 32 points)	×	changed.
occupied po	ints)	(2 stations x 8 points)	(1 station × 32 points)		_
Operation in	diantian	ON indication (LED)	ON indication (LED)		(8 points → 32 points)
Operation in	Idication	ON indication (LED)	ON indication (LED)	0	The evicting terminal block
		00	27-point terminal block		The existing terminal block
		26-point terminal block	(M3.5 screw)		of the AJ35TB1-16T can be
External cor	nnection	(M3 screw)	Transmission circuit and	Δ	used by using wiring
method		Transmission circuit part	module power supply terminal	<u> </u>	conversion adapter *1. Note
		included	included		that wiring to the CTR+
					terminal is required.
Applicable v	vire size	0.75 to 2mm ²	0.75 to 2mm ²	0	
					The existing terminal block
			RAV1.25-3.5		of the AJ35TB1-16T can be
Applicable solderless		R1.25-3, R2-3	(conforming to JIS C 2805)	Δ	used by using wiring
terminal		RAV1.25-3, RAV2-3	RAV2-3.5	Δ	conversion adapter *1. Note
			10.02 0.0		that wiring to the CTR+
					terminal is required.
I/O	Voltage	15.6 to 31.2VDC	15.6 to 28.8VDC		The operating voltage range
module	voilage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
power	Current	130mA or less (at 24VDC)	80mA or less		
supply	Guirent	TOUTIA ULIESS (at 24VDC)	(at 24VDC TYP.)	0	
					The overall size differs.
External din	nensions	55(H) × 135(W) × 50(D) mm	65(H) × 151.9(W) × 46(D) mm *2	×	Pay attention to the mounting
					dimensions.
Weight		0.3kg	0.34kg	×	

^{*1:} The A6ADP-1MC16T, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter can be used. For the mounting image, refer to *1 of Section 1.1.

^{*2:} When using the A6ADP-1MC16T, MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter, the external dimensions are increased by 5.1mm (0.20inch) (height) and 28.5mm (1.12inch) (depth).

(21) Specifications comparison between AJ35TB2-16T and AJ65SBTB2-16T1

			○: Compatib	le, △: Partial cha	nge required, × : Not compatible
Speci	fications	AJ35TB2-16T	AJ65SBTB2-16T1	Compatibility	Precautions for replacement
Number of	output points	16 points	16 points	0	
Insulation n	nethod	Photocoupler	Photocoupler	0	
Rated load	voltage	24VDC	12/24VDC	0	
Operating le	oad voltage	19.2 to 26.4VDC	10.2 to 26.4VDC	0	
range		(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum lo	oad current	0.1A/point, 1.6A/common	0.5A/point, 3.6A/common	0	
Maximum ii	nrush current	0.4A 10ms or less	1.0A 10ms or less	0	
Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0	
Maximum v	oltage drop at	1.5VDC or less (MAX.) 0.1A	0.3VDC or less (TYP.) 0.5A	0	
ON		1.5VDC or less (WAX.) 0.1A	0.6VDC or less (MAX.) 0.5A	O	
Output met	hod	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
			10.2 to 26.4VDC		Wiring of the power supply
External	Voltage	None	(ripple ratio within 5%)	×	for driving the output circuit
			(Tipple ratio within 5%)		is required.
power					Wiring of the power supply
supply	Current	None	24.2mA or less (24VDC)	×	for driving the output circuit
					is required.
Surge supp	ressor	Zener diode	Zener diode	0	
Common terminal		16 points/common	16 points/common	_	
arrangement		(2-wire type)	(2-wire type)	0	
Number of	a a a unio d				The number of I/O points
Number of	•	2 stations	1 station		assigned per station is
stations (number of occupied points)		(2 stations × 8 points)	(1 station × 32 points)	×	changed.
occupied po	oirits)				(8 points → 32 points)
Operation is	ndication	ON indication (LED)	ON indication (LED)	0	
			Transmission/module power		
		24 - sint toin all block	supply parts:		
External connection		34-point terminal block	7-point terminal block		
	nnection	(M3 screw)	(M3 × 5.2 screws)	×	Change in wiring is required.
method		Transmission circuit part	I/O part:		
		included	34-point terminal block		
			(M3 × 5.2 screws)		
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Amalianda		D4 05 0 D0 0	RAV1.25-3		In some cases, the
Applicable solderless terminal		R1.25-3, R2-3	(conforming to JIS C 2805)	Δ	solderless terminal must be
		RAV1.25-3, RAV2-3	V2-MS3, RAP2-3SL,TGV2-3N	_	changed.
1/0	\ /=lt====	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
I/O	Voltage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
module			55mA or less		
power	Current	130mA (at 24VDC)	(24VDC when all points	0	
supply			are ON)		
					The overall size differs.
External dir	nensions	55(H) × 166(W) × 50(D) mm	54(H) × 179(W) × 40(D) mm	×	Pay attention to the mounting
					dimensions.
Weight		0.35kg	0.25kg	0	
vveigni		-	<u> </u>	•	•

(22) Specifications comparison between AJ35TC1-32T and AJ65SBTCF1-32T

 Compatible 	∧: Partial change required	I x · Not compatible

		I	U. Compatib	ile, 🛕. Partiai Chai	nge required, × : Not compatible
Specifications		AJ35TC1-32T	AJ65SBTCF1-32T	Compatibility	Precautions for replacement
Number of output points		32 points	32 points	0	
Insulation m	nethod	Photocoupler	Photocoupler	0	
Rated load	voltage	24VDC	12/24VDC	0	
Operating lo	oad voltage	19.2 to 26.4VDC	10.2 to 26.4VDC	0	
range		(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum lo	ad current	0.1A/point, 2A/common	0.1A/point, 3.2A/common	0	
Maximum in	rush current	0.4A 10ms or less	1.0A 10ms or less	0	
Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0	
Maximum v	oltage drop at		0.085VDC or less (TYP.) 0.1A		
ON	3	1.5VDC or less (MAX.) 0.1A	0.2VDC or less (MAX.) 0.1A	0	
Output meth	nod	sink type	sink type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time	ON→ OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
unie	ON OIT	Zilis di less (resistance load)	1.5ms of less (resistance load)	U	Wiring of the power supply
External	Voltage	None	10.2 to 26.4VDC (ripple ratio within 5%)	×	for driving the output circuit is required.
power	Current	None	50mA or less (24VDC)	×	Wiring of the power supply for driving the output circuit is required.
Surge supp	ressor	Zener diode	Zener diode	0	•
Common te	rminal	32 points/common	32 points/common	0	
Number of o stations (nu occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation in	ndication	ON indication (LED)	ON indication (LED)	0	
			Transmission/module power		
External cor	nnection	Transmission circuit: 8-point terminal block (M3 screws)	supply parts: 7-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
		I/O part: 40-pin connector	I/O part: 40-pin connector	0	The existing connector can be attached without change.
Applicable wire size		Terminal block: 0.75 to 2mm ² 40-pin connector:0.3mm ²	Terminal block: 0.3 to 2mm ² 40 pin connector: 0.3mm ² or less(A6CON1, A6CON4) 0.2 to 0.08mm ² (for A6CON2) From 0.08mm ² twisted line, \$\phi\$ 0.25mm (for A6CON3)	0	
Accessory		1 external wiring connector	None	×	40-pin connectors for external wiring are sold separately.
Applicable s	solderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
module power supply	Current	55mA(at 24V)	60mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External din	nensions	55(H) × 166(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.25kg	0.15kg	0	

5.2.3 I/O Module Specifications Comparison

(1) Specifications comparison between AX10Y10C and AJ65SBTB2N-16A+ AJ65SBTB2N-16R

○: Compatible, ∧: Partial change required, x: Not compatible

Conne	iostione	AV40V40C input analifications			nge required, × : Not compatible Precautions for
Speci	fications	AX10Y10C input specifications	AJ65SBTB2N-16A	Compatibility	replacement
Number of i	nput points	16 points	16 points	×	Use AJ65SBTB2N-16A in combination with
					AJ65SBTB2N-16R.
Insulation m		Photocoupler	Photocoupler	0	
Rated input		100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input	current	Approx. 6mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	0	
Operating v	oltage range	85 to 132VAC (50/60Hz±5%)	85 to 132VAC (50/60Hz \pm 3%, distortion rate 5% within)	0	
Maximum n simultaneou	umber of is input points	100% simultaneously ON (at 110VAC)	100% simultaneously ON (at 110VAC) 60% simultaneously ON (at 132VAC)	0	
Inrush curre	ent	Max. 200mA, within 1ms (at 132VAC)	(at 132VAC) Max. 200mA, within 1ms (at 132VAC)	0	
ON voltage/	ON current	80V or more/5mA or more	80V or more/5mA or more	0	
	e/OFF current	30V or less/1mA or less	30V or less/1.7mA or less	0	
Input imped	ance	Approx. 18k Ω (60Hz), Approx. 21k Ω (50Hz)	Approx. 15k Ω (60Hz), Approx. 18k Ω (50Hz)	0	
Response	OFF→ON	15ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
time	ON→OFF	30ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
Common te	rminal	40 = = into /= = = = =	16 points/common	_	
arrangemer	nt	16 points/common	(2-wire type)	0	
Specifications		AX10Y10C output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of output points		16 points	16 points	×	Use AJ65SBTB2N-16A in combination with AJ65SBTB2N-16R.
Insulation method		Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load voltage/ current		24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 4A/common	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 8A/common	0	
Minimum sv	vitching load	5VDC 1mA	5VDC 1mA	0	
Maximum si voltage	witching	250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 100,000 times	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 $\phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	or more 200VAC 1A, 240VAC 0.5A (COS $\phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	0	
Maximum s	witching	3,600 times/hr	3,600 times/hr	0	

External power supply			AX10Y10C output specifica-	AX10Y10C output specifica-				
Power supply Voltage Ripple voltage 4Vp-p or less supply Current S2mA (24VDC, all points ON) None O As common terminal arrangement 8 points/common 16 points/common (2-wire type) ∆ As common terminal arrangement of a points/common 16 points/common As common terminal arrangement of a points/common, wining with a points/common, wining with a points/common, wining with a points/common As common terminal arrangement of a points/common, wining with a points/common, wining with a points/common, wining with a points/common As common terminal arrangement of a points/common As common terminal arrangement of a points/common, wining with a points/common, wining with a points/common, wining with a points/common As common terminal arrangement of a points/common, wining with a points/common, wining with a points/common As common terminal arrangement of a points/common, wining with a points/common As common terminal arrangement of a points/common, wining with a points/common As common terminal arrangement of the points/common, wining with a points/common As common terminal arrangement of the points/common, wining with a points/common As common terminal arrangement of the points/common, wining with a points/common As common terminal arrangement of the points/	Speci	fications		AJ65SB1	TB2N-16A	Compatibility	Precautions for replacement	
Surge suppressor None None O As common terminal arrangement S points/common 16 points/common A As common terminal arrangement S points/common 16 points/common A S points/common S points		I Voltage I None I		-				
Common terminal arrangement 8 points/common (2-wire type) A points/common (2-wire type) A points/common (2-wire type) A points/common (2-wire type) A points/common to 16 points/common to 16 points/common, wiring with a different voltage per common is not possible. Preautions for replacement The number of I/O points assigned per station is changed. (8 points → 32 points) The number of I/O points assigned per station is changed. (8 points → 32 points) The number of Cocupied stations are two (one station × two modules). Operation indication ON indication (LED) Operation indication ON indication Operation Indication Operation Indica	supply	Current	92mA (24VDC, all points ON)	No	one	-		
Common terminal arrangement 8 points/common (2-wire type) A points/common to 16 points/common (2-wire type) A points/common to 16 points/common to 16 points/common, wiring with a different voltage per common is not possible. Precautions for replacement The number of I/O points assigned per station is changed. (4 stations × 8 points) Operation indication ON indication (LED)	Surge supp	ressor	None	No	one	0		
Number of occupied stations (number of occupied points) A stations (A stations × 8 points) Operation indication ON indication (LED) ON indication (LED) Transmission (ricuit part included Applicable wire size Applicable solderless terminal Voltage To Applicable solderless terminal To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable solderless terminal block (M3 x 5.2 screws) To Applicable sol			8 points/common	1		Δ	arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per	
Number of occupied stations (number of occupied stations (number of occupied points) A stations (4 stations x 8 points) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3.5 x 7 screws) Transmission circuit part included Applicable wire size O.75 to 2mm² Applicable solderless terminal Voltage Voltage Voltage Voltage Tama (at 24VDC TYP.) Tama (at 24VDC TYP.) External dimensions 1 station (1 station x 32 points x 2 modules) N indication (LED) O Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) I/O part: 34-point terminal block (M3 x 5.2 screws)	Speci	fications	AX10Y10C			Compatibility		
External connection method So-point terminal block (M3.5 × 7 screws) Transmission circuit part included So-point terminal block (M3 × 5.2 screws) Fransmission circuit part included So-point terminal block (M3 × 5.2 screws) Fransmission circuit part included So-point terminal block (M3 × 5.2 screws) Fransmission circuit part included So-point terminal block (M3 × 5.2 screws) Fransmission circuit part included So-point terminal block (M3 × 5.2 screws) Fransmission circuit part included Fransmission ci	stations (number of			(1 station ×	1 station (1 station × 32 points × 2		assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two	
External connection method Supply parts: 7-point terminal block (M3.5 × 7 screws) Transmission circuit part included Supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	Operation in	ndication	ON indication (LED)	ON indication (LED)		0		
Applicable solderless terminal R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N 20.4 to 26.4VDC (ripple ratio within 5%) 40mA or less (24VDC When all Points are ON) A The operating voltage range differs. The current consumption increases. The current capacity needs to be reconsidered. The overall size differs. The overall size differs. The overall size differs. Pay attention to the mounting dimensions.	External connection		(M3.5 × 7 screws) Transmission circuit part	supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block		×	Change in wiring is required.	
Applicable solderless terminal R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5 RAV1.25-3.5, RAV1.2	Applicable v	wire size	0.75 to 2mm ²	0.3 to 2mm ²		0		
Voltage		solderless	·	(conforming t	o JIS C 2805)	×	Change in wiring is required.	
module power supply Current	1/0	Voltage	15.6 to 31.2VDC			Δ		
External dimensions $170(H) \times 64(W) \times 80(D) \text{ mm}$ $54(H) \times 179(W) \times 40(D) \text{ mm}$ × Pay attention to the mounting dimensions.	module power	Current	74mA (at 24VDC TYP.)	(24VDC when all points are	less (24VDC when all points are	Δ	increases. The current capacity needs to be	
Weight 0.66kg 0.25kg 0.35kg O	External dir	nensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(V	V) × 40(D) mm	×	Pay attention to the mounting	
	Weight		0.66kg	0.25kg	0.35kg	0		

(2) Specifications comparison between AX10Y22C and AJ65SBTB2N-16A+ AJ65SBTB2N-16S

○: Compatible, △: Partial change required, ×: Not comp					
Specif	ications	AX10Y22C input specifications	AJ65SBTB2N-16A	Compatibility	Precautions for replacement
Number of in	nput points	16 points	16 points	×	Use AJ65SBTB2N-16A in combination with AJ65SBTB2N-16S.
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input	current	Approx. 6mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	0	
Operating vo	oltage range	85 to 132VAC (50/60Hz±5%)	$85 \text{ to } 132\text{VAC}$ (50/60Hz \pm 3%, distortion rate 5% within)	0	
Maximum no simultaneou	umber of s input points	60% simultaneously ON (at 110VAC)	100% simultaneously ON (at 110VAC) 60% simultaneously ON (at 132VAC)	0	
Inrush curre		Max. 200mA, within 1ms (at 132VAC)	Max. 200mA, within 1ms (at132VAC)	0	
ON voltage/	ON current	80V or more/5mA or more	80V or more/5mA or more	0	
OFF voltage	e/OFF current	30V or less/1mA or less	30V or less/1.7mA or less	0	
Input imped	ance	Approx. 18k Ω (60Hz), Approx. 21k Ω (50Hz)	Approx. 15k Ω (60Hz), Approx. 18k Ω (50Hz)	0	
Response	OFF→ ON	15ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
time	ON→OFF	30ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
Common ter arrangemen		16 points/common	16 points/common (2-wire type)	0	
Specif	ications	AX10Y22C output specifications	AJ65SBTB2N-16S	Compatibility	Precautions for replacement
Number of o	output points	16 points	16 points	×	Use AJ65SBTB2N-16A in combination with AJ65SBTB2N-16S.
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load v	/oltage	100-240VAC, 40 to 70Hz	100-240VAC,50/60Hz ± 5%	0	
Maximum lo	ad voltage	264VAC	264VAC	0	
Maximum lo	ad current	0.3A/point 75% simultaneously ON	0.6A/point 4.8A/common	0	
Minimum loa		18VAC 10mA, 100VAC 10mA, 240VAC 10mA	50VAC 100mA, 100VAC 10mA, 240VAC 10mA	0	
Maximum in	rush current	20A 10ms or less	25A, 10ms or less	0	
Leakage cur	rent at OFF	Approx.1.5mA(120VAC,60Hz) Approx.3.0mA(240VAC,60Hz)	1.5mA (100VAC, 60Hz) 3.0mA (200VAC, 60Hz)	0	
Maximum voltage drop at ON		1.5V or less (100 to 300mA) 1.8V or less (50 to 100mA) 2.5V or less (10 to 50mA)	1.5V or less (at 0.6A)	0	
Response	OFF→ON	1ms or less	1ms or less	0	
time	ON→OFF	0.5Hz+1ms or less	1/2 cycle + 1ms or less	0	
time ON→OFF Surge suppressor Common terminal arrangement		CR absorber (0.01 μ F+68 Ω)	CR absorber (0.01 μ F+47 Ω) 16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.

O: Compatible, △: Parti						ge required, x: Not compatible
Speci	fications	AX10Y22C	AJ65SBTB 2N-16A	AJ65SBTB 2N-16S	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	(1 station × mod	ation 32 points × 2 ules)	×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).
Operation i	ndication	ON indication (LED)	ON indica	tion (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	supply 7-point teri (M3 × 5. I/O 34-point ter	/module power / parts: minal block .2 screws) part: rminal block .2 screws)	×	Change in wiring is required.
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable terminal	solderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		×	Change in wiring is required.
1/0	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
I/O module power supply	Current	116mA (at 24V TYP.)	40mA or less (24VDC when all points are ON)	85mA or less (24VDC with all points ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dimensions		170(H) × 64(W) × 80(D) mm	54(H) × 179(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.68kg	0.25kg	0.35kg	0	

(3) Specifications comparison between AX40Y10C and AJ65SBTB1-16D+ AJ65SBTB2N-16R

		,	○: Compatib	le, △: Partial char	nge required, ×: Not compatible
Specif	ications	AX40Y10C input specifications	AJ65SBTB1-16D	Compatibility	Precautions for replacement
					Use AJ65SBTB1-16D in
Number of in	nput points	16 points	16 points	×	combination with
					AJ65SBTB2N-16R.
Insulation m		Photocoupler	Photocoupler	0	
Rated input		12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA 10.2 to 31.2VDC	Approx. 7mA 19.2 to 26.4VDC	Δ	12VDC cannot be used.
Operating vo	oltage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum ni	umber of	100% simultaneously ON	100% simultaneously ON	0	
simultaneou	s input points	(at 26.4VDC)	100% simultaneously ON	0	
ON voltage/		8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
	e/OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resista	ince	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
		Positive common	Positive/negative common	_	
Input metho	d	(sink type)	shared type	0	
D	OFF ON	10 (-+ 04)/(D0)	(sink/source shared type)		
Response	OFF→ON ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC) 1.5ms or less (at 24VDC)	Δ	The response times differ.
time Common ter		10ms or less (at 24VDC)	1.5ITIS OF IESS (at 24VDC)	Δ	
arrangemen		16 points/common	16 points/common	0	
Specif	fications	AX40Y10C output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
					Use AJ65SBTB1-16D in
Number of o	output points	16 points	16 points	×	combination with
					AJ65SBTB2N-16R.
					Although the insulation
Insulation m	ethod	Photocoupler	Relay	Δ	methods differ, the
modiation	letilod		rtelay		performance of the
					insulation is the same.
		24VDC 2A	24VDC 2A		
Rated load		(resistance load)/point	(resistance load)/point	0	
voltage/curr	ent	240VAC 2A(COS $\phi = 1$)/point	240VAC 2A (COS $\phi=1$)/point		
Minimum	uitahina laad	4A/common	8A/common 5VDC 1mA		
	vitching load	5VDC 1mA	5VDC 1MA	0	
Maximum so voltage	witching	250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical		20 million times or more	20 million times or more	0	
		Rated switching	Rated switching	Ü	
		voltage/current load	voltage/current load		
		100,000 times or more	100,000 times or more		
		200VAC 1.5A, 240VAC 1 A	200VAC 1.5A, 240VAC 1 A		
		(COS $\phi = 0.7$) 100000 times	$(\cos \phi = 0.7) 100,000 \text{times}$		
Electrical life		or more 200VAC 1A, 240VAC	or more	_	
		0.5A	200VAC 1A, 240VAC 0.5A	0	
		(COS $\phi = 0.35$) 100,000	$(\cos \phi = 0.35) 100,000$		
		times or more	times or more		
		24VDC 1A, 100VDC 0.1A	24VDC 1A, 100VDC 0.1A		
		(L/R=7 ms) 100,000 times	(L/R=7 ms) 100,000 times		
		or more	or more		
Maximum s	witching	3,600 times/hr	3,600 times/hr	0	
frequency		247/20 + 400/		_	
External power	Voltage	24VDC± 10% Ripple voltage 4Vp-p or less	None	_	
supply	Current	92mA (24VDC all points ON)	None	_	
Surge suppressor		None	None	0	

O: Compatible, △: Partial change					ige required, ×: Not compatible	
Specif	ications	AX40Y10C output specifications	AJ65SB1	B2N-16R	Compatibility	Precautions for replacement
Common terminal arrangement		8 points/common	1	c/common e type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Specif	ications	AX40Y10C	AJ65SBTB1- 16D	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	(1 station ×	ation 32 points × 2 ules)	×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).
Operation indication		ON indication (LED)	ON indica	tion (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable v	vire size	0.75 to 2mm ²	0.3 to	2mm ²	0	
Applicable s	solderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	(conforming t	1.25-3 o JIS C 2805) -3SL, TGV2-3N	×	Change in wiring is required.
I/O	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
module power supply	Current	72mA (at 24V TYP.)	35mA or less (24VDC) when all points are ON)	120mA or less (24VDC) when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	nensions	170(H) × 64(W) × 80(D) mm	54(H) × 118(W) × 40(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.18kg	0.35kg	0	

(4) Specifications comparison between AX40Y10C and AJ65DBTB1-32DR

○: Compatible, △: Partial change required, ×: Not compatible AJ65DBTB1-32DR input Precautions for AX40Y10C input specifications **Specifications** Compatibility specifications replacement Number of input points 16 points 16 points 0 Insulation method Photocoupler Photocoupler 0 Rated input voltage 12VDC/24VDC 24VDC 12VDC cannot be used. Δ Rated input current Approx. 3mA/Approx. 7mA Approx. 5mA 12VDC cannot be used. Δ 10.2 to 31.2VDC 20.4 to 31.2VDC Operating voltage range 12VDC cannot be used. Δ (ripple ratio within 5%) (ripple ratio within 5%) Maximum number of 100% simultaneously ON 100% (at 26.4VDC) 0 (at 26.4VDC) simultaneous input points ON voltage/ON current 8V or more/2mA or more 15V or more/3mA or more 12VDC cannot be used. 5V or less/1.5mA or less OFF voltage/OFF current 4V or less/1mA or less 12VDC cannot be used. Input resistance becomes Input resistance Approx. $3.3k \Omega$ Approx. 4.7k Ω Δ higher. *1 Positive/negative common Positive common Input method shared type 0 (sink type) (sink/source shared type) OFF→ ON 10ms or less (at 24VDC) 10ms or less (at 24VDC) Response 0 ON→ OFF 10ms or less (at 24VDC) 10ms or less (at 24VDC) 0 Common terminal 16 points/common (2 points) 16 points/common 0 arrangement (terminal block 1-wire type) AX40Y10C output AJ65DBTB1-32DR output Precautions for Compatibility **Specifications** specifications specifications replacement Number of output points 16 points 16 points 0 Insulation method Photocoupler Photocoupler 0 24VDC 2A 24VDC 2A Rated load (resistance load)/point (resistance load)/point \circ voltage/current 240VAC 2A(COS $\phi = 1$)/point 240VAC 2A (COS $\phi=1$)/point 4A/common (2A/terminal) 4A/common (2A/terminal) Minimum switching load 5VDC 1mA 5VDC 1mA 0 Maximum switching 250VAC, 110VDC 264VAC, 125VDC 0 voltage OFF→ ON Response 10ms or less 10ms or less 0 ON→ OFF time 12ms or less 12ms or less 0 Mechanical life 20 million times or more 20 million times or more 0 Rated switching Rated switching voltage/current load voltage/current load 100,000 times or more 100,000 times or more 200VAC 1.5A, 240VAC 1 A 200VAC 1.5A, 240VAC 1 A (COS $\phi = 0.7$) 100,000 times (COS $\phi = 0.7$) 100,000 times or more or more Electrical life 0 200VAC 1A, 240VAC 0.5A 200VAC 1A, 240VAC 0.5A (COS $\phi = 0.35$) 100,000 $(\cos \phi = 0.35) \, 100,000$ times or more times or more 24VDC 1A, 100VDC 0.1A 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times (L/R=7 ms) 100,000 times or more or more Maximum switching 3,600 times/hr 3.600 times/hr 0 frequency External 24VDC ± 10% 24VDC ± 10% Voltage 0 power Ripple voltage 4Vp-p or less Ripple voltage 4Vp-p or less supply Current 92mA (24VDC all points ON) 90mA (24VDC all points ON) 0 Surge suppressor None None 0 8 points/common Common terminal

0

(terminal block 1-wire type)

8 points/common

arrangement

Speci	fications	AX40Y10C	AJ65DBTB1-32DR	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation in	ndication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	0	The number of applicable solderless terminals inserted is within two.
Applicable v	wire size	0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable s	solderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) RAV2-3.5	0	
I/O module	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	72mA (at 24V TYP.)	60mA or less (24VDC, when all points are ON)	0	
External dir	nensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.65kg	0.65kg	0	

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32D.

(5) Specifications comparison between AX40Y10C and AJ65SBTB32-16DR

Number of input points 16 points 8 points × Insulation method Photocoupler Photocoupler O Rated input voltage 12VDC/24VDC 24VDC Δ	Precautions for replacement When nine or more points are used, use two AJ65SBTB32-16DR modules. 12VDC cannot be used. 12VDC cannot be used.
Number of input points 16 points 8 points × Insulation method Photocoupler Photocoupler ○ Rated input voltage 12VDC/24VDC 24VDC △ Rated input current Approx. 3mA/Approx. 7mA Approx. 7mA △	are used, use two AJ65SBTB32-16DR modules. 12VDC cannot be used.
Rated input voltage 12VDC/24VDC 24VDC △ Rated input current Approx. 3mA/Approx. 7mA Approx. 7mA △	
Rated input current Approx. 3mA/Approx. 7mA Approx. 7mA \triangle	
	12VDC cannot be used.
10 2 to 31 2VDC 19 2 to 26 4VDC	
Operating voltage range (ripple ratio within 5%) (ripple ratio within 5%)	12VDC cannot be used.
Maximum number of 100% simultaneously ON	
simultaneous input points (at 26.4VDC)	
	12VDC cannot be used.
	12VDC cannot be used.
Input resistance Approx. $3.3k \Omega$ Approx. $3.3k \Omega$	
Positive common Positive/negative common shared type	
(sink type) (sink/source shared type)	
Response OFF→ON 10ms or less (at 24VDC) 10ms or less (at 24VDC) O	
time ON→OFF 10ms or less (at 24VDC) 10ms or less (at 24VDC) ○	
Common terminal arrangement 8 points/common (terminal block 3-wire type)	
Specifications AX40Y10C output Specifications AJ65SBTB32-16DR output Specifications Compatibility	Precautions for replacement
Number of output points 16 points 8 points ×	When nine or more points are used, use two AJ65SBTB32-16DR modules.
Insulation method Photocoupler Relay \triangle	Although the insulation method differs, the insulation performance is the same.
Rated load (resistance load)/point (resistance load)/point (resistance load)/point $240VAC\ 2A(COS\ \phi = 1)/point $ $240VAC\ 2A\ (COS\ \phi = 1)/point $ $4A/common\ (2A/terminal)$ $4A/common$	
Minimum switching load 5VDC 1mA 5VDC 1mA	
Maximum switching 250VAC, 110VDC 264VAC, 125VDC O	
Response OFF→ON 10ms or less 10ms or less O	
time ON→OFF 12ms or less 12ms or less ○	
Mechanical life 20 million times or more 20 million times or more	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	
Electrical life or more 200VAC 1A, 240VAC 0.5A (COS $\phi = 0.35$) 100,000 (COS $\phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more or more or more or more	
Maximum switching frequency 3,600 times/hr 3,600 times/hr	
External Voltage Voltage Ripple voltage 4Vp-p or less None -	
supply Current 92mA (24VDC all points ON) None -	
Surge suppressor None None O	
Common terminal 8 points/common 4 points/common	
8 points/common (terminal block 2-wire type)	

Spec	ifications	AX40Y10C	AJ65SBTB32-16DR	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)	×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).
Operation	indication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required. The number of applicable solderless terminals inserted is within two.
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable terminal	solderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
module power supply	Current	72mA (at 24V TYP.)	85mA or less (24VDC, when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dimensions		170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.28kg	0	

(6) Specifications comparison between AX40Y50C and AJ65SBTB1-32DT2

		○: Compatible, △: Partial change required, ×: Not compatible					
Speci	fications	AX40Y50C input specifications	AJ65SBTB1-32DT2 input specifications	Compatibility	Precautions for replacement		
Number of i	nput points	16 points	16 points	0			
Insulation m	nethod	Photocoupler	Photocoupler	0			
Rated input	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.		
Rated input	current	Approx.3mA/Approx.7mA	Approx. 7mA	Δ	12VDC cannot be used.		
Operating v	oltage range	10.2 to 31.2VDC	19.2 to 26.4VDC		12VDC cannot be used.		
Operating v	ollage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12 VDC cannot be used.		
Maximum n	umber of	60% simultaneously ON	100% simultaneously ON	0			
simultaneou	is input points	(at 26.4VDC)	10070 Simulaticously Civ	U			
ON voltage/		8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.		
OFF voltage	e/OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.		
Input resista	ance	Approx. 3.3k Ω	Approx. 3.3k Ω	0			
Input metho	od	Positive common	Positive common	0			
		(sink type)	(sink type)	Ŭ			
Response	OFF→ ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0			
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0			
					As input common and		
Common te	rminal		32 points/common		output common are shared,		
arrangemer	nt	16 points/common	(Common shared by I/O)	Δ	wiring a different voltage for		
Ŭ			,		each common is not		
					possible.		
Speci	fications	AX40Y50C output specifications	AJ65SBTB1-32DT2 output specifications	Compatibility	Precautions for replacement		
Number of	output points	16 points	16 points	0			
Insulation m		Photocoupler	Photocoupler	0			
Rated load		12VDC/24VDC	24VDC		12VDC cannot be used.		
Operating lo		12480/24480	19.2 to 26.4VDC	Δ	12 V DO Carriet be used.		
range	da voltage	10.2 to 31.2VDC	(ripple ratio within 5%)	Δ	12VDC cannot be used.		
rango		0.3A/point 75%	(hppio ratio within 670)				
Maximum Id	ad current	simultaneously ON	0.5A/point, 3.6A/common	0			
Maximum ir	rush current	1.2A 10ms or less	1.0A, 10ms or less	0			
	rrent at OFF	0.1mA or less	0.1mA or less	0			
	oltage drop at	0.9VDC or less (TYP.) 0.3A	0.3VDC or less (TYP.) 0.5A	Ŭ			
ON	onago arop ar	1.5VDC or less (MAX.) 0.3A	0.6VDC or less (MAX.) 0.5A	0			
Output meth	nod	sink type	sink type	0			
Response	OFF→ON	2ms or less	0.5ms or less	0			
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0			
External		,	19.2 to 26.4VDC				
power	Voltage	10.2 to 31.2VDC	(ripple ratio within 5%)	Δ	12VDC cannot be used.		
supply	Current	64mA (24VDC)	30mA or less (24VDC)	0			
Surge supp	ressor	Zener diode	Zener diode	0			
					As input common and		
0			00		output common are shared,		
Common te		16 points/common	32 points/common	Δ	wiring a different voltage for		
arrangemer	nt		(I/O shared)		each common is not		
					possible.		
Speci	fications	AX40Y50C	AJ65SBTB1-32DT2	Compatibility	Precautions for		
					replacement		
Number of o		4 stations	1 station		The number of points		
stations (nu		(4 stations × 8 points)	(1 station × 32 points)	0	assigned per module is not		
occupied po		ON indication (LED)	ON indication (LED)		changed.		
Operation in	iulcation	ON indication (LED)	ON indication (LED)	0			
			Transmission/module power supply parts:				
		50-point terminal block	* * * *				
External cor	nnection	(M3.5 × 7 screws)	7-point terminal block	,	Change in wiring is required		
method		Transmission circuit part	(M3 × 5.2 screws)	×	Change in wiring is required.		
		included	I/O part: 34-point terminal block				
			·				
Applicable	viro cizo	0.75 to 2mm ²	(M3 × 5.2 screws) 0.3 to 2mm ²	0			
Applicable v	VII C SIZE	U.13 IU ZIIIII	U.S IU ZIIIIII	0			

○: Compatible, △: Partial change required, ×: Not compatible

Specifications		AX40Y50C	AJ65SBTB1-32DT2	Compatibility	Precautions for replacement
Applicable s terminal	solderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Λ	
module power supply	Current	74mA (at 24V TYP.)	60mA or less (24VDC when all points are ON)	0	
External dim	nensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.25kg	0	

(7) Specifications comparison between AX40Y50C and AJ65DBTB1-32DT1

		○: Compatible, △: Partial change required, ×: Not cor					
Speci	fications	AX40Y50C input specifications	AJ65DBTB1-32DT1 input specifications	Compatibility	Precautions for replacement		
Number of i	nput points	16 points	16 points	0			
Insulation m	nethod	Photocoupler	Photocoupler	0			
Rated input	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.		
Rated input	current	Approx.3mA/Approx.7mA	Approx. 5mA	Δ	12VDC cannot be used.		
Onerating v	oltage range	10.2 to 31.2VDC	20.4 to 31.2VDC	Δ	12VDC cannot be used.		
operating v		(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12 V B G Garmet Be deed.		
Maximum n	umber of	60% simultaneously ON	100%	0			
simultaneou	us input points	(at 26.4VDC)	(at 26.4VDC)	U			
ON voltage/	ON current	8V or more/2mA or more	15V or more/3mA or more	Δ	12VDC cannot be used.		
OFF voltage	e/OFF current	4V or less/1mA or less	5V or less/1.5mA or less	Δ	12VDC cannot be used.		
Input resista	ance	Approx. 3.3k Ω	Approx. 4.7k Ω	0	Input resistance becomes higher. *1		
Input mothe	od.	Positive common	Positive common	0			
Input metho	ou .	(sink type)	(sink type)	0			
Response	OFF→ON	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0			
time	ON→OFF	10ms or less (at 24VDC)	10ms or less (at 24VDC)	0			
Common te	rminal	40	16 points/common (2 points)	_			
arrangemer	nt	16 points/common	(terminal block 1-wire type)	0			
		AX40Y50C output	AJ65DBTB1-32DT1 output	0			
Speci	fications	specifications	specifications	Compatibility	Precautions for replacement		
Number of o	output points	16 points	16 points	0			
Insulation m	nethod	Photocoupler	Photocoupler	0			
Rated load voltage		12VDC/24VDC	12VDC/24VDC O				
Operating load voltage			10.2 to 31.2VDC	-			
range		10.2 to 31.2VDC	(ripple ratio within 5%)	0			
		0.3A/point 75%	0.5A/point, 4A/common				
Maximum lo	oad current	simultaneously ON	(2A/terminal)	0			
Maximum ir	nrush current	1.2A 10ms or less	1.2A, 10ms or less	0			
Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0			
	oltage drop at	0.9VDC or less (TYP.) 0.3A	0.3VDC or less (TYP.) 0.5A				
ON		1.5VDC or less (MAX.) 0.3A	0.6VDC or less (MAX.) 0.5A	0			
Output meth	hod	sink type	sink type	0			
Response	OFF→ON	2ms or less	0.5ms or less	0			
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0			
			10.2 to 31.2VDC	- U			
External	Voltage	10.2 to 31.2VDC	(ripple ratio within 5%)	0			
power			30mA or less (24VDC, when				
supply	Current	64mA (24VDC)	all points are ON) External	0			
oupp.y	04	0 (2 1 1 2 0)	load current not included				
Surge supp	ressor	Zener diode	Zener diode	0			
Common te			16 points/common (2 points)				
arrangemer		16 points/common	(terminal block 1-wire type)	0			
J	fications	AX40Y50C	AJ65DBTB1-32DT1	Compatibility	Precautions for replacement		
Number of occupied					The number of points		
Number of occupied		4 stations	1 station		assigned per module is not		
stations (number of occupied points)		(4 stations × 8 points)	(1 station \times 32 points)	0	• '		
Operation in		ON indication (LED)	ON indication (LED)		changed.		
Operation if	iuication	ON indication (LED)	ON indication (LED)	0			
Cytomal	nnaation	50-point terminal block	50-point terminal block		The number of applicable		
External co	nnection	(M3.5 × 7 screws)	(M3.5 × 7 screws)	0	solderless terminals		
method		Transmission circuit part	Transmission circuit part		inserted is within two.		
Applicable v	vira alas	included 0.75 to 2mm ²	included 0.75 to 2mm ²	0			
ADDIICADIA /	MILE SIZE	■ U /5 IU /MM=	U / D IU / MM=	. ()			

Specifications		AX40Y50C	AJ65DBTB1-32DT1	Compatibility	Precautions for replacement
Applicable solderless terminal		R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	R1.25-3.5 (conforming to JIS C 2805) RAV2-3.5	0	
I/O modulo	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
module power supply Current		74mA (at 24V TYP.)	55mA or less (24VDC when all points are ON)	0	
External dim	nensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.65kg	0.65kg	0	

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32DT1.

(8) Specifications comparison between AX80Y10C and AJ65SBTB1-16D+ AJ65SBTB2N-16R

			⊖ : Compatib	ie, ∆: Partiai char	nge required, × : Not compatibe Precautions for
Specifications		AX80Y10C input specifications	AJ65SBTB1-16D	Compatibility	replacement
Number of input points		16 points	16 points	×	Use AJ65SBTB1-16D in combination with AJ65SBTB2N-16R.
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
Operating vo	oltage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum nu	umber of	100% simultaneously ON			
simultaneou	is input points	(at 26.4VDC)	100% simultaneously ON	0	
ON voltage/	ON current	8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage	e/OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resista		Approx. 3.3k Ω	Approx. 3.3k Ω	0	
Input method		Positive/negative common shared type	Positive/negative common shared type	0	
_		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common ter arrangemen		16 points/common	16 points/common	0	
Specif	ications	AX80Y10C output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of output points		16 points	16 points	×	Use AJ65SBTB1-16D in combination with AJ65SBTB2N-16R.
Insulation method		Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load voltage/current		24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 4A/common	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 8A/common	0	
Minimum sw	vitching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv		250VAC, 110VDC	264VAC, 125VDC	0	
voltage Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical I		20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A ($\cos \phi = 0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A ($\cos \phi = 0.7$) 100,000 times or more 200VAC 1A, 240VAC 0.5A ($\cos \phi = 0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A	0	
			· ·		
Maximum sv	witching	(L/R= 7ms) 100,000 times or more	(L/R = 7ms) 100,000 times or more 3,600 times/hr	0	
frequency	witching	or more 3,600 times/hr		0	
frequency External	witching Voltage	or more 3,600 times/hr 24VDC± 10%	or more	0 -	
frequency	_	or more 3,600 times/hr	or more 3,600 times/hr	0 -	

			e, △: Partial char	nge required, x: Not compatible		
Specif	ications	AX80Y10C output specifications	AJ65SBT	B2N-16R	Compatibility	Precautions for replacement
Common terminal arrangement		8 points/common	(2-wire	16 points/common (2-wire type)		As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Specif	ications	AX80Y10C	AJ65SBTB1- 16D	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of c stations (nur occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).
Operation in	ndication	ON indication (LED)	ON indica	tion (LED)	0	
External connection method		50-point terminal block (M3.5 × 7screws) Transmission circuit part included	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	Transmission/ module power supply parts 7 points terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable s	colderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2- 3N		×	Change in wiring is required.
I/O	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
module power supply	Current	72mA (at 24V TYP.)	35mA or less (24VDC when all points are ON)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	nensions	170(H) × 64(W) × 80(D) mm	54(H) × 118(W) × 40(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.18kg	0.35kg	0	

(9) Specifications comparison between AX80Y10C and AJ65DBTB1-32DR

○: Compatible, △: Partial change required, x: Not compatible AJ65DBTB1-32DR input AX80Y10C input specifications **Specifications** Compatibility Precautions for replacement specifications Number of input points 16 points 16 points 0 Insulation method Photocoupler Photocoupler 0 Rated input voltage 12VDC/24VDC 24VDC 12VDC cannot be used. Δ Rated input current Approx.3mA/Approx.7mA Approx. 5mA 12VDC cannot be used. Δ 10.2 to 31.2VDC 20.4 to 31.2VDC Operating voltage range 12VDC cannot be used. Δ (ripple ratio within 5%) (ripple ratio within 5%) Maximum number of 100% simultaneously ON 100% 0 (at 26.4VDC) (at 26.4VDC) simultaneous input points ON voltage/ON current 8V or more/2mA or more 12VDC cannot be used. 15V or more/3mA or more OFF voltage/OFF current 4V or less/1mA or less 5V or less/1.5mA or less 12VDC cannot be used. Input resistance becomes Input resistance Approx. $3.3k \Omega$ Approx. 4.7k Ω Δ higher.*1 Positive/negative common Positive/negative common Input method shared type shared type 0 (sink/source shared type) (sink/source shared type) OFF→ ON 10ms or less (at 24VDC) 10ms or less (at 24VDC) Response 0 ON→ OFF 10ms or less (at 24VDC) 10ms or less (at 24VDC) 0 Common terminal 16 points/common (2 points) 16 points/common 0 arrangement (terminal block 1-wire type) AX80Y10C output AJ65DBTB1-32DR output Compatibility Precautions for replacement **Specifications** specifications specifications Number of output points 16 points 16 points 0 Insulation method Photocoupler Photocoupler 0 24VDC 2A 24VDC 2A Rated load voltage/ (resistance load)/point (resistance load)/point \circ current 240VAC 2A (COS ϕ =1)/point 240VAC 2A (COS ϕ =1)/point 4A/common 4A/common (2A/terminal) Minimum switching load 5VDC 1mA 5VDC 1mA 0 Maximum switching 250VAC, 110VDC 264VAC, 125VDC 0 voltage OFF→ ON Response 10ms or less 10ms or less 0 ON→OFF time 12ms or less 12ms or less 0 Rated switching Rated switching voltage/current load voltage/current load 100,000 times or more 100,000 times or more 200VAC 1.5A, 240VAC 1 A 200VAC 1.5A, 240VAC 1 A (COS $\phi = 0.7$) 100,000 times $(\cos \phi = 0.7) \, 100,000 \, \text{times}$ or more or more Electrical life 0 200VAC 1A, 240VAC 0.5A 200VAC 1A, 240VAC 0.5A (COS $\phi = 0.35$) 100,000 $(\cos \phi = 0.35) \, 100,000$ times or more times or more 24VDC 1A, 100VDC 0.1A 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times (L/R=7 ms) 100,000 times or more or more Maximum switching 3,600 times/hr 3,600 times/hr 0 frequency 24VDC ± 10% 24VDC ± 10% External Voltage 0 Ripple voltage 4Vp-p or less Ripple voltage 4Vp-p or less

90mA or less

(24VDC all points ON)

None

8 points/common

(terminal block 1-wire type)

0

0

0

power

vlagus

Surge suppressor

Common terminal

arrangement

Current

92mA (24VDC all points ON)

None

8 points/common

Specifications		AX80Y10C	AJ65DBTB1-32DR	Compatibility	Precautions for replacement
Number of ostations (nu occupied po	mber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation in	ndication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	0	The number of applicable solderless terminals inserted is within two.
Applicable v	wire size	0.75 to 2mm ²	0.75 to 2mm ²	0	
Applicable sterminal	solderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	R1.25-3.5 (conforming to JIS C 2805) RAV2-3.5	0	
I/O modulo	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
module power supply	Current	72mA (at 24V TYP.)	60mA or less (24VDC when all points are ON)	0	
External dir	nensions	170(H) × 64(W) × 80(D) mm	170(H) × 64(W) × 80(D) mm	0	
Weight		0.65kg	0.65kg	0	

^{*1:} Check the specifications of the sensors or switches to be connected to the AJ65DBTB1-32DR.

(10) Specifications comparison between AX80Y14CEU and AJ65SBTB1-16D +AJ65SBTB2N-16R

		AX80Y14CEU input	(): Compatib	ile, ∆∶Partiai char	nge required, x : Not compatib Precautions for
Speci	fications	specifications	AJ65SBTB1-16D	Compatibility	replacement
Number of input points		16 points	16 points	×	Use AJ65SBTB1-16D in combination with AJ65SBTB2N-16R.
Insulation m	nethod	Photocoupler	Photocoupler	0	A0000B1B2N-10N.
Rated input	voltage	12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
Operating v	oltage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum n	umber of us input points	60% simultaneously ON (at 26.4VDC)	100% simultaneously ON	0	
ON voltage		8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage	e/OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resista		Approx. 3.3k Ω	Approx. 3.3k Ω	0	12120 0011110120 00001
Input metho	od	Positive/negative common shared type (sink/source shared type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common te		16 points/common	16 points/common	0	
Specif	ications	AX80Y14CEU output specifications	AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of output points		12 points	16 points	×	Use AJ65SBTB1-16D in combination with AJ65SBTB2N-16R.
Insulation method		Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load voltage/current		24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 5A/common	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/point 8A/common	0	
Minimum sv	vitching load	5VDC 10mA	5VDC 1mA	0	
Maximum so	witching	264VAC 125VDC	264VAC, 125VDC	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more	20 million times or more	0	
Electrical life		Rated switching voltage/current load 200,000 times or more 200VAC 2A, 240VAC 1.8A (COS $\phi=0.7$)200,000 times or more 200VAC 1.1A, 240VAC 0.9A (COS $\phi=0.35$)200,000 times or more 24VDC 1.1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	Rated switching voltage/current load 100,000 times or more 200VAC 1.5A, 240VAC 1A (COS $\phi=0.7$) 100000 times or more 200VAC 1A, 240VAC 0.5A (COS $\phi=0.35$) 100,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	×	Reduce the exchange intervals of the modules as Mechanical/Electrical Life is cut to about half.
Maximum sy frequency	witching	3,600 times/hr	3,600 times/hr	0	
External	Voltage	$24 \text{VDC} \pm 10\%$ Ripple voltage 4Vp-p or less	None	-	
power supply	Current	118mA (24VDC all points ON)	None	_	
	ressor	None	None	0	

					○: Compatible	e, <u>∧</u> ∶Partial char	nge required, ×: Not compatible
Specif	ications	AX80Y14C specific		AJ65SBT	B2N-16R	Compatibility	Precautions for replacement
Common terminal arrangement		8 points/ 4 points/	common	16 points. (2-wire		Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.
Dielectric wir	thstand	AC external batch-Relay drive power supply- internal 5V circuit	AC2,830Vrms /3 cycle (elevation 2,000m)	Between AC external terminal batch and ground	AC2,830Vrms /3 cycle (elevation 2,000m)	0	
		Relay drive power supply, internal 5V circuit	500VDC/ minute	Between DC external batch and ground	500VDC/ minute	0	
Insulation resistance		10M Ω or m insulation res		Between AC ϵ and ground 50 insulation res 10M Ω Between DC ϵ and ground 500 insulation res	OVDC with the istance tester or more external batch OVDC with the istance tester	0	
Specif	ications	AX80Y14CEU		AJ65SBTB1- 16D	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)		1 sta (1 station × 3 mode	32 points × 2	×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).
Operation in	dication	ON indicat	tion (LED)	ON indication (LED)		0	
External connection method		50-point ter (M3.5 × Transmission inclu	7screws) n circuit part	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	block (M3 × 5.2 screws)	×	Change in wiring is required.
Applicable wire size		0.75 to	2mm ²	0.3 to		0	
Applicable s terminal	olderless	R1.25-3.9 RAV1.25-3.9		RAV1 (conforming to V2-MS3, RAP2	o JIS C 2805) -3SL, TGV2-3N	×	Change in wiring is required.
1/0	Voltage	15.6 to 3	31.2VDC	20.4 to 2 (ripple ratio		Δ	The operating voltage range differs.
I/O module power supply	Current	73mA (at :	24V TYP.)	35mA or less (24VDC when all points are ON)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dim	nensions	170(H) × 64(W	/) × 80(D) mm	54(H) × 118(W) × 40(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.69	ōkg	0.18kg	0.35kg	0	

(11) Specifications comparison between AX80Y80C and AJ65SBTB1-16D+ AJ65SBTB1-16TE

			O . Gompans		nge required, x : Not compat Precautions for
Specif	ications	AX80Y80C input specifications	AJ65SBTB1-16D	Compatibility	replacement
					Use AJ65SBTB1-16D in
Number of in	nout points	16 points	16 points	×	combination with
	pat pato	l re penne	re penne		AJ65SBTB1-16TE.
Insulation m	ethod	Photocoupler	Photocoupler	0	7.00002121 1012.
Rated input		12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input		Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
		10.2 to 31.2VDC	19.2 to 26.4VDC		
Operating vo	oltage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum ni	umber of	60% simultaneously ON			
simultaneou	s input points	(at 26.4VDC)	100% simultaneously ON	0	
ON voltage/		8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
	OFF current	4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resista		Approx. 3.3k Ω	Approx. 3.3k Ω	0	12120 00111101 00 00001
		Positive/negative common	Positive/negative common		
Input metho	d	shared type	shared type	0	
input metrio	u	(sink/source shared type)	(sink/source shared type)		
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	^	
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	Δ	The response times differ.
Common tei		Torris or less (at 24VDC)	1.5ms of less (at 24VDC)	Δ	
		16 points/common	16 points/common	0	
arrangemen	ι	AX80Y80C output			Precautions for
Specif	ications	specifications	AJ65SBTB1-16TE	Compatibility	replacement
		specifications			·
Number of output points		40 mainta	40 a sinta		Use AJ65SBTB1-16D in
		16 points	16 points	×	combination with
		District des	District		AJ65SBTB1-16TE.
Insulation method		Photocoupler	Photocoupler	0	
Rated load v		24VDC	12/24VDC	0	
Operating lo	ad voltage	21.6 to 26.4VDC	10.2 to 26.4VDC	0	
range					
					The maximum load curren
		0.5A/point, 60%	0.1A/point		per point becomes lower.
Maximum lo	ad current	simultaneously ON	1.6A/common	×	Pay attention to the
					selection of the load to be
					used.
					The inrush current value
Maximum in	rush current	2A 10ms or less	1A 10ms or less	×	differs. Pay attention to the
					selection of the load used
Leakage cui	rrent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	oltage drop at	0.9VDC or less (TYP.) 0.5A	0.1VDC or less (TYP.) 0.1A	0	
ON		1.5VDC or less (MAX.) 0.5A	0.2VDC or less (MAX.) 0.1A	0	
Output method		Source type	Source type	0	
Response	OFF→ON	2ms or less	0.5ms or less	0	
time			1.5ms or less (resistance load)	0	
	Voltage	24.6 to 26.4 VDC	10.2 to 26.4VDC		
Cutom -!	Voltage	21.6 to 26.4VDC	(ripple ratio within 5%)	0	
External					The current consumption
power		40 4 (0.1) (7.0)	00.04.0.1(0.0/200)		increases. The current
supply	Current	10mA (24VDC)	30mA or less (24VDC)	Δ	capacity needs to be
					reconsidered.
Surge suppr	essor	Zener diode	Zener diode	0	
Surge suppressor					
Common ter	rminal	16 points/common	16 points/common	0	

Compatib	le, 🛆: Partial	change rec	Juired,	\times : Not	compa	atible
			_		_	

Spec	ifications	AX80Y80C	AJ65SBTB1- 16D	AJ65SBTB1- 16TE	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).
Operation	indication	ON indication (LED)	ON indica	tion (LED)	0	
External comethod	onnection	50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable terminal	solderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		×	Change in wiring is required.
1/0	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)		Δ	The operating voltage range differs.
I/O module power supply	Current	82mA (at 24V TYP.)	35mA or less 50mA or less (24VDC when all points are ON) ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dimensions		170(H) × 64(W) × 80(D) mm	54(H) × 118(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.1	8kg	0	



(12) Specifications comparison between AX80Y80C and AJ65SBTB1-32DTE1

Compatible,	∴ : Partial change required,	x : Not compatible
	· ·	

Specifications		AX80Y80C input specifications	AJ65SBTB1-32DTE1 input specifications	Compatibility	Precautions for replacement
Number of input points		16 points	16 points	0	
Insulation method		Photocoupler	Photocoupler	0	
Rated input voltage		12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input current		Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
Operating voltage range		10.2 to 31.2VDC	19.2 to 26.4VDC	Δ	12VDC cannot be used.
		(ripple ratio within 5%)	(ripple ratio within 5%)		
Maximum number of		60% simultaneously ON	400%		
simultaneous input points		(at 26.4VDC)	100%	0	
ON voltage/ON current		8V or more/2mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage/OFF current		4V or less/1mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resistance		Approx. 3.3k Ω	Approx. 3.3k Ω	0	
Input method		Positive/negative common	Negative common (Source type)	Δ	A positive common input
		shared type			method is not supported.
		(sink/source shared type)			method is not supported.
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common terminal		16 points/common	32 points/common	Δ	Input and output shares
arrangement			(terminal block 1-wire type)		common.
Specifications		AX80Y80C output specifications	AJ65SBTB1-32DTE1 output specifications	Compatibility	Precautions for replacement
Number of output points		16 points	16 points	0	•
Insulation method		Photocoupler	Photocoupler	0	
Rated load voltage		24VDC	24VDC	0	
Operating load voltage range		21.6 to 26.4VDC	19.2 to 26.4VDC	0	
			(ripple ratio within 5%)		
Maximum load current Maximum inrush current			() , , , , , , , , , , , , , , , , , ,		The maximum load current
		0.5A/point, 60% simultaneously ON	0.5A/point 3.6A/common	Δ	per common differs. Pay
					attention to the operating
					current of the entire module.
					The inrush current value
		2A 10ms or less	1A 10ms or less	×	differs. Pay attention to the
					selection of the load used.
Leakage current at OFF		0.1mA or less	0.1mA or less	0	
Maximum voltage drop at		0.9VDC or less (TYP.) 0.5A	0.5VDC or less (TYP.) 0.5A	_	
ON		1.5VDC or less (MAX.) 0.5A	0.8VDC or less (MAX.) 0.5A	0	
Output method		Source type	Source type	0	
Response	OFF→ ON	2ms or less	0.5ms or less	0	
time	ON→OFF	2ms or less (resistance load)	1.5ms or less (resistance load)	0	
External	Voltage	21.6 to 26.4VDC	19.2 to 26.4VDC	0	
			(ripple ratio within 5%)		
power	Current	10mA (24VDC)	10mA or less (TYP.24VDC,		
supply			per common) External load	0	
,,,			current not included		
Surge suppressor		Zener diode	Zener diode	0	
Common terminal		16 points/common	32 points/common	Δ	Input and output shares
arrangement			(terminal block 1-wire type)		common.
arrangement			(-5	ı	

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Spec	ifications	AX80Y80C	AJ65SBTB1-32DTE1	Compatibility	Precautions for replacement
Number of stations (n occupied p	umber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points)	0	The number of points assigned per module is not changed.
Operation	indication	ON indication (LED)	ON indication (LED)	0	
External connection method		50-point terminal block (M3.5 × 7 screws) Transmission circuit part included	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required. The number of applicable solderless terminals inserted is within two.
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²	0	
Applicable terminal	solderless	R1.25-3.5, R2-3.5 RAV1.25-3.5, RAV2-3.5	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	×	Change in wiring is required.
I/O module	Voltage 15.6 to 31.2VDC		20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply	Current	82mA (at 24V TYP.)	50mA or less (24VDC when all points are ON)	0	
External di	mensions	170(H) × 64(W) × 80(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.65kg	0.26kg	0	

(13) Specifications comparison between AJ35PTF-56AR and AJ65SBTB2N-16A+ AJ65SBTB2N-16R

			ole, △: Partial char	nge required, ×: Not compatib
Specifications	AJ35PTF-56AR input specifications	AJ65SBTB2N-16A	Compatibility	Precautions for replacement
Number of input poin	ts 32 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16A modules.
Insulation method	Photocoupler	Photocoupler	0	
Rated input voltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input current	10mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	Δ	Rated input current has been reduced.*1
Operating voltage ra	85 to 132VAC (50/60Hz±5%)	85 to 132VAC (50/60Hz±3%, distortion rate 5% within)	0	
Maximum number o simultaneous input p	oints 100% simultaneously O	N (at 110VAC) 60% simultaneously ON (at 132VAC)	Δ	Use within specification range.
Inrush current	Max. 300mA, within 0.3n (132VAC)	ns Max. 200mA, within 1ms (132VAC)	0	
ON voltage/ON curr	nt 80V or more/6mA or mo	re 80V or more/5mA or more	0	
OFF voltage/OFF cu	rent 40V or less/4mA or less	s 30V or less/1.7mA or less	Δ	OFF current has been reduced. *1
Input impedance	Approx. $10k \Omega$ (60Hz), Approx. $12k \Omega$ (50Hz)	(Δ	Input impedance has increased. *1
Response OFF-	ON 15ms or less (6ms TYP	.) 20ms or less (100VAC, 60Hz)	0	
time ON→	OFF 25ms or less (16ms TYF	P.) 20ms or less (100VAC, 60Hz)	0	
Common terminal	16 points/common	16 points/common	0	
arrangement		(2-wire type)	O	
Specifications	AJ35PTF-56AR outpu specifications	t AJ65SBTB2N-16R	Compatibility	Precautions for replacement
Number of output po	nts 24 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16R modules.
Insulation method	Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
Rated load voltage/current	24VDC 2A (resistance load)/point 240VAC 2A (COS ϕ =1)/po 5A/common		Δ	Use caution on the commor current.
Minimum switching	oad 5VDC 1mA	5VDC 1mA	0	
Maximum switching voltage	264VAC, 125VDC	264VAC, 125VDC	0	
Response OFF-	ON 10ms or less	10ms or less	0	
time ON→	DFF 12ms or less	12ms or less	0	
Mechanical life	20 million times or more	e 20 million times or more	0	
Electrical life	Rated switching voltage/current load 200,000 times or more 200VAC 1.5A, 240VAC 1 (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5 (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1	$\begin{array}{llllllllllllllllllllllllllllllllllll$	Δ	Reduce the exchange intervals of the modules as Mechanical/Electrical Life is cut to about half.
	(L/R=7ms) 200,000 time or more	or more		

Weight

○: Compatible, △: Partial change required, x: Not compatible AJ35PTF-56AR output Precautions for Specifications AJ65SBTB2N-16R Compatibility specifications replacement 24VDC ± 10% External Voltage None Ripple voltage 4Vp-p or less power Current 220mA (24VDC, all points ON) None supply Surge suppressor None None 0 As common terminal arrangement changes from Common terminal 16 points/common 8 points/common to 16 8 points/common Δ arrangement (2-wire type) points/common, wiring with a different voltage per common is not possible. AJ65SBTB2N- AJ65SBTB2N-Precautions for AJ35PTF-56AR **Specifications** Compatibility 16A 16R replacement The number of I/O points assigned per station is Number of occupied 1 station changed. 8 stations (8 points → 32 points) stations (number of (1 station \times 32 points \times 2 × (8 stations × 8 points) occupied points) modules) The number of occupied stations are two (one station \times two modules). Operation indication ON indication (LED) ON indication (LED) 0 Transmission/module power Transmission/module power supply parts: supply parts: 7-point terminal block External connection 8-point terminal block (M3 × 5.2 screws) Change in wiring is required. method I/O part: I/O part: 36-point terminal block 34-point terminal block (M3 × 6 screws) 2 pieces (M3 × 5.2 screws) 0.3 to 2mm² Applicable wire size 0.75 to 2mm² 0 RAV1 25-3 In some cases, the Applicable solderless R1.25-3, R2-3 (conforming to JIS C 2805) solderless terminal must be Δ terminal RAV1.25-3, RAV2-3 V2-MS3, RAP2-3SL, TGV2-3N changed. 20.4 to 26.4VDC The operating voltage range Voltage 15.6 to 31.2VDC Δ (ripple ratio within 5%) differs. I/O 40mA or less module 120mA or The current consumption (24VDC less (24VDC increases. The current power Current 150mA when all Λ when all points capacity needs to be supply points are are ON) reconsidered. ON) The overall size differs. External dimensions $254(H) \times 190(W) \times 41(D) \text{ mm}$ $54(H) \times 179(W) \times 40(D) \, mm$ × Pay attention to the mounting dimensions.

1.2kg

0.25kg

0.35kg

0

^{*1:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB2N-16A.

common is not possible.

(14) Specifications comparison between AJ35PTF-56AS and AJ65SBTB2N-16A+ AJ65SBTB2N-16S

		AJ35PTF-56AS input	O . Companio		ge required, x : Not compa Precautions for	
Specif	fications	specifications	AJ65SBTB2N-16A	Compatibility	replacement	
					When seventeen or more	
					points are used, use two	
Number of i	nput points	32 points	16 points	×	AJ65SBTB2N-16A	
					modules.	
Insulation method		Photocoupler	Photocoupler	0	modules.	
Rated input		100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0		
Data di la acid		40 4 (400) (40,000)	A 7 A (400) (A C COLL-)		Rated input current has	
Rated input	current	10mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	Δ	been reduced.*1	
		85 to 132VAC	85 to 132VAC			
Operating vo	oltage range	(50/60Hz±5%)	(50/60Hz ± 3%, distortion rate	0		
		(50/00H2±5%)	5% within)			
			100% simultaneously ON			
Maximum ni	umber of	000/ signalitara a cualita ONI	(at 110VAC)		Use within specification	
simultaneou	is input points	60% simultaneously ON	60% simultaneously ON	Δ	range.	
			(at 132VAC)		-	
		Max. 300mA, within 0.3ms	Max. 200mA, within 1ms			
nrush curre	ent	(132VAC)	(132VAC)	0		
ON voltage/	ON current	80V or more/6mA or more	80V or more/5mA or more	0		
					OFF current has been	
OFF voltage	e/OFF current	40V or less/4mA or less	30V or less/1.7mA or less	Δ	reduced. *1	
		Approx. 10k Ω (60Hz),	Approx. 15k Ω (60Hz),		Input impedance has	
nput imped	ance	Approx. 12k Ω (50Hz)	Approx. 18k Ω (50Hz)	Δ	increased. *1	
Response	OFF→ ON	15ms or less (6ms TYP.)	20ms or less (100VAC, 60Hz)	0		
ime	ON→OFF	35ms or less (16ms TYP.)	20ms or less (100VAC, 60Hz)	0		
Common tei			16 points/common	Ŭ		
arrangemen		16 points/common	(2-wire type)	0		
		AJ35PTF-56AS output			Precautions for	
Specifications		specifications	AJ65SBTB2N-16S	Compatibility	replacement	
					When seventeen or more	
Number of	output points	24 points	16 points	v.	points are used, use two	
Nulliber of C	output points	24 points	16 points	×	AJ65SBTB2N-16S	
					modules.	
nsulation m	nethod	Photocoupler	Photocoupler	0		
Datad land	voltago	100 to 240VAC, 40 to 70Hz	100-240VAC,	0		
Rated load	voitage	100 to 240VAC, 40 to 70H2	$50/60$ Hz $\pm 5\%$	0		
Maximum Id	oad voltage	264VAC	264VAC	0		
Maximum lo	ad current	0.6A/point, 2.4A/common	0.6A/point, 4.8A/common	0		
Minim	1	24VAC 100mA,	50VAC 100mA			
Minimum loa		100VAC 10mA,	100VAC 10mA,	0		
voltage/curr	ent	240VAC 10mA	240VAC 10mA			
		20A 10ms or less				
Maximum in	rush current	8A 100ms or less	25A 10ms or less	0		
		1.5mA (132VAC, 60Hz)	1.5mA (100VAC, 60Hz)			
Leakage cu	rrent at OFF	3.0mA (264VAC, 60Hz)	3.0mA (200VAC, 60Hz)	0		
		1.5V or less (0.1 to 0.6A)	(,,,			
Maximum v	oltage drop at	1.8V or less (50 to 100mA)	1.5V or less (at 0.6A)	0		
ON		2.0V or less (10 to 50mA)	1.01 of 1000 (at 0.0A)			
Response	OFF→ ON	1ms or less	1ms or less			
time	ON→OFF	0.5Hz+1ms or less	1/2 cycle + 1ms or less	0		
			•	_		
Surge suppi	169901	CR absorber (0.022 μ F+47 Ω) High speed type fuse 3.2A	CR absorber (0.01 μ F+47 Ω)	0		
Euco rotina		= ' -:	None			
Fuse rating		(one fuse /common)	None	×	The fuse is not built in.*2	
		HP-32	Na			
Fuse blown	indication	Available	None	×	A	
					As common terminal	
					arrangement changes from	
Common te		8 points/common	16 points/common	Δ	8 points/common to 16	
arrangemen	nt		(2-wire type)		points/common, wiring wit	
				i	1 1100 1 11	
					a different voltage per	

○: Compatible, △: Partial change required, ×: Not compatible

		<u> </u>				ge required, ×: Not compatible	
Speci	fications	AJ35PTF-56AS	AJ65SBTB2N- 16A	AJ65SBTB2N- 16S	Compatibility	Precautions for replacement	
Number of occupied stations (number of occupied points)		8 stations (8 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).	
Operation in	ndication	ON indication (LED)	ON indica	ition (LED)	0		
External connection method		Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws) 2 pieces	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.	
Applicable v	wire size	0.75 to 2mm ²	0.3 to 2mm ²		0		
Applicable sterminal	solderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.	
I/O	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.	
module power supply	Current	230mA	40mA or less (24VDC when all points are ON) 85mA or less (24VDC when all points are ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.	
External dimensions		254(H) × 190(W) × 41(D) mm	54(H) × 179(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.	
Weight		1.1kg	0.25kg	0.35kg	0		

^{*1:} Confirm the specifications of the sensors or switches to be connected to the AJ65SBTB2N-16A.

^{*2:} Install a fuse for each external terminal point to prevent the burnout of the external devices and modules during load shorts. In addition, when a fuse blown indication is necessary, configure an external circuit.

(15) Specifications comparison between AJ35PTF-28DS and AJ65SBTB1-16D+ AJ65SBTB2N-16S

Specif	ications	AJ35PTF-28DS input	AJ65SBTB1-16D	Compatibility	Precautions for
		specifications		Companionity	replacement
Number of it	· · · · · · · · · · · · · · · · · · ·	16 points	16 points	0	
Insulation m		Photocoupler	Photocoupler	0	
Rated input		12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
Operating vo	oltage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum ni simultaneou	umber of s input points	100% simultaneously ON	100% simultaneously ON	0	
ON voltage/	ON current	9.5V or more/2.6mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage	e/OFF current	6V or less/1.0mA or less	6V or less/1.7mA or less		12VDC cannot be used.
				Δ	12VDC carinot be used.
Input resista	ince	Approx. 3.4k Ω	Approx. 3.3k Ω	0	
lanut matha	ما	Positive common	Positive/negative common		
Input metho	a	(sink type)	shared type	0	
Deers	OFF ON	10ma or less (0m : T\/D\)	(sink/source shared type)		
Response	OFF→ON	10ms or less (6ms TYP.)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
Common ter arrangemen		16 points/common	16 points/common	0	
Specif	ications	AJ35PTF-28DS output specifications	AJ65SBTB2N-16S	Compatibility	Precautions for replacement
Number of c	output points	12 points	16 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load v	voltage	100-240VAC, 40 to 70Hz	100-240VAC, 50/60Hz±5%	0	
Maximum lo	ad voltago	264VAC	264VAC	0	
Maximum lo		0.6A/point, 2.4A/common	0.6A/point, 4.8A/common	0	
IVIAXIIIIUIII IO	au current	24VAC 100mA.	50VAC 100mA,	0	
Minimum loa		100VAC 10mA,	100VAC 10mA,	0	
voltage/curr	ent	240VAC 10mA	240VAC 10mA		
Maximum in	rush current	20A 10ms or less 8A 100ms or less	25A 10ms or less	0	
		1.5mA (132VAC, 60Hz)	1.5mA (100VAC, 60Hz)		
Leakage cui	rrent at OFF	3.0mA (264VAC, 60Hz)	3.0mA (200VAC, 60Hz)	0	
Maximum vo	oltage drop at	1.5V or less (0.1 to 0.6A) 1.8V or less (50 to 100mA) 2.0V or less (10 to 50mA)	1.5V or less (at 0.6A)	0	
Resnonse	OFF→ON		1ms or loss		
Response time	OFF → ON ON → OFF	1ms or less 0.5Hz+1ms or less	1/2 cycle + 1ms or less	0	
		CR absorber $(0.022 \mu\text{F+47}\Omega)$	1/2 cycle + 1ms or less CR absorber (0.01 μ F+47 Ω)	0	
Surge suppr	C33UI	High speed type fuse 3.2A	OIX ausolinei (U.U I HET41 (2))	0	
Fuse rating		(one fuse /common) HP-32	None	×	The fuse is not built in.*1
Fuse blown indication		Available	None	×	1
Common terminal arrangement		8 points/common 4 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes fron 8 points/common to 16 points/common, wiring with a different voltage per

○: Compatible, △: Partial change required, ×: Not compatible

				○: Compatible	e, <u>\(\(\) : Partial change required, \(\times : Not compatible \)</u>		
Speci	fications	AJ35PTF-28DS	AJ65SBTB1- 16D	AJ65SBTB2N- 16S	Compatibility	Precautions for replacement	
Number of o stations (nu occupied po	imber of	4 stations (4 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).	
Operation in	ndication	ON indication (LED)	ON indica	tion (LED)	0		
External connection method		Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws)	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)	Transmission/ module power supply parts 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)	×	Change in wiring is required.	
Applicable v	wire size	0.75 to 2mm ²	0.3 to	2mm ²	0		
Applicable s	solderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.	
I/O	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.	
module power supply]	Current	150mA	35mA or less (24VDC when all points are ON)	85mA or less (24VDC when all points are ON)	0		
External dimensions		254(H) × 132(W) × 41(D) mm	54(H) × 118(W) × 40(D) mm	54(H) × 179(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.	
Weight		0.76kg	0.18kg	0.35kg	0		

^{*1} Install a fuse for each external terminal point to prevent the burnout of the external devices and modules during load shorts. In addition, when a fuse blown indication is necessary, configure an external circuit.

common is not possible.

(16) Specifications comparison between AJ35PTF-56DS and AJ65SBTB1-32D+ AJ65SBTB2N-16S

		AJ35PTF-56DS input	O. Compatib		nge required, x : Not compare Precautions for
Specif	fications	specifications	AJ65SBTB1-32D	Compatibility	replacement
Number of i	nput points	32 points 32 points		0	
nsulation m	ethod	Photocoupler	Photocoupler	0	
Rated input voltage		12VDC/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
Operation	altaga ranga	10.2 to 31.2VDC	19.2 to 26.4VDC		12)/DC connet be used
Operating v	oltage range	(ripple ratio within 5%)	(ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum n simultaneou	umber of is input points	60% simultaneously ON	100% simultaneously ON	0	
ON voltage/	ON current	9.5V or more/2.6mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage	e/OFF current	6V or less/1.0mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
nput resista	ance	Approx. 3.4k Ω	Approx. 3.3k Ω	0	
Input metho	d	Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	1.5ms or less (at 24VDC)	0	
ime	ON→OFF	10ms or less (7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
Common te		·	,		
arrangemer	nt	16 points/common	32 points/common	0	
Specif	fications	AJ35PTF-56DS output specifications	AJ65SBTB2N-16S	Compatibility	Precautions for replacement
Number of output points		24 points	16 points	×	When seventeen or more points are used, use two AJ65SBTB2N-16S modules.
Insulation method		Photocoupler	Photocoupler	0	
Rated load	voltage	100-240VAC, 40 to 70Hz	100-240VAC,	0	
rated load	voitage	100-240 VAC, 40 to 70112	$50/60$ Hz $\pm 5\%$	U	
Maximum lo	oad voltage	264VAC	264VAC	0	
Maximum lo	oad current	0.6A/point, 2.4A/common	0.6A/point, 4.8A/common		
Minimum lo voltage/curr		24VAC 100mA, 100VAC 10mA, 240VAC 10mA	50VAC 100mA, 100VAC 10mA, 240VAC 10mA	0	
Maximum ir	nrush current	20A 10ms or less, 8A 100ms or less	25A 10ms or less		
Leakage cu	rrent at OFF	1.5mA (132VAC, 60Hz) 3.0mA (264VAC, 60Hz)	1.5mA (100VAC, 60Hz) 3.0mA (200VAC, 60Hz)	0	
Maximum v ON	oltage drop at	1.5V or less (0.1 to 0.6A) 1.8V or less (50 to 100mA) 2.0V or less (10 to 50mA)	1.5V or less (at 0.6A)	0	
Response	OFF→ON	1ms or less	1ms or less	0	
time	ON→OFF	0.5Hz+1ms or less	1/2 cycle + 1ms or less	0	
Surge supp	ressor	CR absorber (0.022 μ F+47 Ω)	CR absorber (0.01 μ F+47 Ω)	0	
Fuse rating		High speed type fuse 3.2A (one fuse /common) HP-32	None	×	The fuse is not built in.*1
Fuse blown indication		Available	None	×	
Common terminal arrangement		8 points/common	16 points/common (2-wire type)	Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per

○: Compatible, △: Partial change required, ×: Not compatible

					e, \triangle : Partial change required, $ imes$: Not compatit	
Speci	fications	AJ35PTF-56DS	AJ65SBTB1- 32D	AJ65SBTB2N- 16S	Compatibility	Precautions for replacement
Number of occupied stations (number of occupied points)		8 stations (8 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).
Operation i	ndication	ON indication (LED)	ON indica	ition (LED)	0	
External co method	nnection	Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws) 2 pieces	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable terminal	solderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		Δ	In some cases, the solderless terminal must be changed.
I/O	Voltage	15.6 to 31.2VDC		26.4VDC within 5%)	Δ	The operating voltage range differs.
module power supply	Current	230mA	45mA or less (24VDC (24VDC when all points are ON) ON)		Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dimensions		254(H) × 190(W) × 41(D) mm	54(H) × 179(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		1.16kg	0.25kg	0.35kg	0	

^{*1} Install a fuse for each external terminal point to prevent the burnout of the external devices and modules during load shorts. In addition, when a fuse blown indication is necessary, configure an external circuit.

(17) Specifications comparison between AJ35PTF-56DR and AJ65SBTB1-32D+ AJ65SBTB2N-16R

		AJ35PTF-56DR input	(): Compatib		nge required, × : Not compatible Precautions for
Specif	ications	specifications	AJ65SBTB1-32D	Compatibility	replacement
Number of in	nput points	32 points	32 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input voltage		12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
Operating vo	oltage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC	Δ	12VDC cannot be used.
Maximum nu	umber of	,	(ripple ratio within 5%)	_	
simultaneou	s input points	60% simultaneously ON	100% simultaneously ON	0	
ON voltage/	ON current	9.5V or more/2.6mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage	OFF current	6V or less/1.0mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resista	ince	Approx. 3.4k Ω	Approx. 3.3k Ω	0	
		Decition commen	Positive/negative common		
Input metho	d	Positive common	shared type	0	
		(sink type)	(sink/source shared type)		
Response	OFF→ON	10ms or less (6ms TYP.)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
					As common terminal
					arrangement changes from
Common ter	rminal	40	00		16 points/common to 32
arrangemen	t	16 points/common	32 points/common	Δ	points/common, wiring with
					a different voltage per
					common is not possible.
Specif	ications	AJ35PTF-56DR output	AJ65SBTB2N-16R	Compatibility	Precautions for
		specifications			replacement
					When seventeen or more
Number of o	output points	24 points	16 points	×	points are used, use two
		·	•		AJ65SBTB2N-16R
					modules.
				Δ	Although the insulation
Insulation m	ethod	Photocoupler Relay	Relay		methods differ, the
				performance of the	
					insulation is the same.
		24VDC 2A	24VDC 2A		The maximum load current
Rated load		(resistance load)/point	(resistance load)/point	Δ	per common differs. Pay
voltage/curre	ent	240VAC 2A (COS ϕ =1)/point	240VAC 2A (COS ϕ =1)/point		attention to the operating
		5A/common	8A/common		current of the entire module.
Minimum sw	itching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv	witching	264VAC, 125VDC	264VAC, 125VDC	0	
voltage		2047/10, 1207/20	2047770, 120780	Ü	
Response	OFF→ ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more	20 million times or more	0	
		Rated switching	Rated switching		
		voltage/current load	voltage/current load		
		200,000 times or more	100,000 times or more		
		200VAC 1.5A, 240VAC 1A	200VAC 1.5A, 240VAC 1A		
Electrical life		(COS ϕ =0.7) 200,000 times	(COS ϕ =0.7) 100,000 times		Reduce the exchange
		or more	or more		intervals of the modules as
		200VAC 1A, 240VAC 0.5A	200VAC 1A, 240VAC 0.5A	Δ	Mechanical/Electrical Life is
		(COS ϕ =0.35) 200,000 times	(COS $\phi = 0.35$) 100,000		cut to about half.
		or more	times or more		
		24VDC 1A, 100VDC 0.1A	24VDC 1A, 100VDC 0.1A	1	
		(L/R=7ms) 200,000 times or	(L/R=7 ms) 100,000 times or		
		more	more		
Maximum sv	witching	3,600 times/hr	3,600 times/hr	0	
frequency		04)/D0 : 400/		1	
External	Voltage	24VDC± 10%	None	-	
		Ripple voltage 4Vp-p or less	İ	1	İ
power supply	Current	220mA (24VDC, all points ON)	None		

			○: Compatible, △: Partial change required				
Specif	ications	AJ35PTF-56DR output specifications	AJ65SBT	B2N-16R	Compatibility	Precautions for replacement	
Surge suppl	essor	None	No	ne	0		
Common tel		8 points/common	16 points/common (2-wire type)		Δ	As common terminal arrangement changes from 8 points/common to 16 points/common, wiring with a different voltage per common is not possible.	
Specif	ications	AJ35PTF-56DR	AJ65SBTB1- 32D	AJ65SBTB2N- 16R	Compatibility	Precautions for replacement	
Number of c stations (nur occupied po	mber of	8 stations (8 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).	
Operation indication		ON indication (LED)	ON indication (LED)		0		
External connection method		Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws) 2 pieces	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.	
Applicable v	vire size	0.75 to 2mm ²	0.3 to 2mm ²		0		
Applicable s	olderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	, ,	1.25-3 o JIS C 2805) -3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.	
1/0	Voltage	15.6 to 31.2VDC	20.4 to 2 (ripple ratio	26.4VDC within 5%)	Δ	The operating voltage range differs.	
I/O module power supply	Current	150mA	45mA or less (24VDC when all points are ON)	120mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.	
External dim	nensions	254(H) × 190(W) × 41(D) mm	54(H) × 179(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.	
Weight		1.16kg	0.25kg	0.35kg	0		

(18) Specifications comparison between AJ35PTF-56DT and AJ65SBTB1-32D+ AJ65SBTB1-32T1

Specif	ications	AJ35PTF-56DT input specifications	AJ65SBTB1-32D	Compatibility	Precautions for replacement
Number of i	nput points	32 points	32 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	12/24VDC	24VDC	Δ	12VDC cannot be used.
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 7mA	Δ	12VDC cannot be used.
Operating v	oltage range	10.2 to 31.2VDC (ripple ratio within 5%)	19.2 to 26.4VDC (ripple ratio within 5%)	Δ	12VDC cannot be used.
Maximum n	umber of is input points	60% simultaneously ON	100% simultaneously ON	0	
ON voltage/	ON current	9.5V or more/2.6mA or more	14V or more/3.5mA or more	Δ	12VDC cannot be used.
OFF voltage	e/OFF current	6V or less/1.0mA or less	6V or less/1.7mA or less	Δ	12VDC cannot be used.
Input resista	ince	Approx. 3.4k Ω	Approx. 3.3k Ω	0	
Input metho	d	Positive common (sink type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ ON	10ms or less (6ms TYP.)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (7.5ms TYP.)	1.5ms or less (at 24VDC)	0	
Common te arrangemen		16 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/common, wiring with a different voltage per common is not possible.
Specifications		AJ35PTF-56DT output specifications	AJ65SBTB1-32T1	Compatibility	Precautions for replacement
Number of o	output points	24 points	32 points	0	•
Insulation m		Photocoupler	Photocoupler	0	
Rated load		12VDC/24VDC	12VDC/24VDC	0	
Operating Id			10.2 to 26.4VDC		Voltages exceeding
range	J	10.2 to 31.2VDC (ripple ratio within 5%)	Δ	26.4VDC cannot be applied	
Maximum lo	ead current	0.5A/point, 3.2A/common	0.5A/point, 4.8A/common	Δ	The maximum load current per common differs. Pay attention to the operating current of the entire module
Maximum in	rush current	4.0A 10ms or less	1.0A 10ms or less	Δ	The inrush current value differs. Pay attention to the selection of the load used.
Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	oltage drop at	0.9VDC or less (TYP.) 0.5A	0.3VDC or less (TYP.) 0.5A	0	
ON		1.5VDC or less (MAX.) 0.5A	0.6VDC or less (MAX.) 0.5A	J	
Output meth		sink type	sink type	0	
Response	OFF→ON	2.0ms or less	0.5ms or less	0	
time	ON→OFF	2.0ms or less (resistance load)	1.5ms or less (resistance load)	0	
	Voltage	10.2 to 31.2VDC	10.2 to 26.4VDC	Δ	Voltages exceeding
External power supply Current		(ripple ratio within 5%)	(ripple ratio within 5%)		26.4VDC cannot be applied
		23mA (24VDC TYP./common)	50mA or less (24VDC)	×	The current consumption increases. The current capacity needs to be reconsidered.
Surge suppi	ressor	Varistor (52 to 62V)	Zener diode	0	
Common terminal arrangement		8 points/common	32 points/common	Δ	As common terminal arrangement changes from 16 points/common to 32 points/common, wiring with a different voltage per common is not possible.

O: Comp	atible, 🛆 : F	Partial chang	e required,	X : Not com	patible

Spec	cifications	AJ35PTF-56DT	AJ65SBTB1- 32D	AJ65SBTB1- 32T1	Compatibility	Precautions for replacement
stations (r	Number of occupied stations (number of occupied points) 8 stations (8 stations × 8 points) 1 station (1 station × 32 points × 2 modules)		0	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).		
Operation	indication	ON indication (LED)	ON indica	tion (LED)	0	
External connection method		Transmission/module power supply parts: 8-point terminal block I/O part: 36-point terminal block (M3 × 6 screws) 2 pieces	Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 34-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable terminal	poplicable solderless R1.25-3, R2-3 RAV1.25-3 rminal RAV1.25-3, RAV2-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N		to JIS C 2805)	Δ	In some cases, the solderless terminal must be changed.	
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC (ripple ratio within 5%)		Δ	The operating voltage range differs.
module power supply	Current	160mA	45mA or less (24VDC when all points are ON)	65mA or less (24VDC when all points are ON)	0	
External dimensions		254(H) × 190(W) × 41(D) mm	,	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		1.09kg	0.25kg	0.25kg	0	

(19) Specifications comparison between AJ35TB1-16AR and AJ65SBTB2N-8A+ AJ65SBTB2N-8R

			○: Compatible	le, 🛕: Partial char	nge required, ×: Not compatible
Specif	ications	AJ35TB1-16AR input specifications	AJ65SBTB2N-8A	Compatibility	Precautions for replacement
Number of input points		8 points	8 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	100-120VAC, 50/60Hz	100-120VAC, 50/60Hz	0	
Rated input	current	Approx. 6mA (100VAC, 60Hz)	Approx. 7mA (100VAC, 60Hz)	0	
		85 to 132VAC	85 to 132VAC		
Operating vo	oltage range	(50/60Hz ± 5%)	(50/60Hz ± 3%, distortion rate	0	
		(*****	5% within)		
Maximum nu	umber of		100% simultaneously ON (at		Use within specification
	s input points	100% simultaneously ON	110VAC), 60% simultaneously	Δ	range.
			ON (at 132VAC)		
Inrush curre	nt	_	Max. 200mA, within 1ms	0	
			(132VAC)	_	
ON voltage/		80V or more/5mA or more	80V or more/5mA or more	0	
OFF voltage	e/OFF current	30V or less/1mA or less	30V or less/1.7mA or less	0	
Input impeda	ance	Approx. 18k Ω (60Hz),	Approx. 15k Ω (60Hz),	0	
	ı	Approx. 21k Ω (50Hz)	Approx. 18k Ω (50Hz)		
Response	OFF→ON	15ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
time	ON→OFF	30ms or less (100VAC, 60Hz)	20ms or less (100VAC, 60Hz)	0	
Common ter		8 points/common	8 points/common (2-wire type)	0	
arrangemen	t				
Specif	ications	AJ35TB1-16AR output specifications	AJ65SBTB2N-8R	Compatibility	Precautions for replacement
Number of o	output points	8 points	8 points	0	
					Although the insulation
Insulation m	ethod	Photocoupler	Relay isolation	٨	methods differ, the
ili Sulation III	etilou	1 Hotocoupiei	ixelay isolation	Δ	performance of the
					insulation is the same.
		24VDC 2A	24VDC 2A		The maximum load current
Rated load		(resistance load)/point		^	per common differs. Pay
voltage/curre	ent	240VAC 2A (COS ϕ =1)/point	240VAC 2A (COS ϕ =1)/point	Δ	attention to the operating
		5A/common	4A/common		current of the entire module.
Minimum sw	vitching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv	witching	250VAC, 110VDC	264VAC, 125VDC	0	
voltage		2007/10/110720	2047/10, 1237/20	0	
Response	OFF→ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more	20 million times or more	0	
		Rated switching	Rated switching		
		voltage/current load	voltage/current load		
		100,000 times or more	100,000 times or more		
		200VAC 1.5A, 240VAC 1A	200VAC 1.5A, 240VAC 1A		
		(COS ϕ =0.7) 100,000 times	(COS ϕ =0.7) 100,000 times		
Electrical life	_	or more	or more	0	
Licotricarine	-	200VAC 1A, 240VAC 0.5A	200VAC 1A, 240VAC 0.5A	0	
		$(COS \phi = 0.35) 100,000$	$(COS \phi = 0.35) 100,000$		
		times or more	times or more		
		24VDC 1A, 100VDC 0.1A	24VDC 1A, 100VDC 0.1A		
		(L/R=7 ms) 100,000 times or	(L/R=7 ms) 100,000 times		
		more	or more		
Maximum sv	witching	3,600 times/hr	3,600 times/hr	0	
frequency		24VDC± 10%			
	Voltage	Ripple voltage 4Vp-p or less	None	-	
External		RIDDIE VOITAGE 4 V D-D OF IESS			
power			Nama		
power supply	Current	45mA (24VDC, all points ON)	None	-	
power supply Surge suppr	Current		None None	0	
power supply	Current	45mA (24VDC, all points ON)		- 0 0	

Compatible,	∴ : Partial change re	equired, ×:	Not compatible
	1		

Spec	ifications	AJ35TB1-16AR	AJ65SBTB2N- 8A	AJ65SBTB2N- 8R	Compatibility	Precautions for replacement
Number of stations (n occupied p	umber of	2 stations (2 stations × 8 points)	1 station (1 station × 32 points × 2 modules)		×	The number of I/O points assigned per station is changed. (8 points → 32 points) The number of occupied stations are two (one station × two modules).
Operation	indication	ON indication (LED)	ON indica	tion (LED)	0	
External co	34-point terminal block (M3 screw) Transmission circuit part included Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws)		×	Change in wiring is required.		
Applicable	wire size	0.75 to 2mm ²	0.3 to 2mm ²		0	
Applicable terminal	solderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	(conforming to JIS C 2805)		Δ	In some cases, the solderless terminal must be changed.
I/O	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)		Δ	The operating voltage range differs.
module power supply	Current	62mA (at 24V)	35mA or less (24VDC when all points are ON)	85mA or less (24VDC when all points are ON)	Δ	The current consumption increases. The current capacity needs to be reconsidered.
External dimensions		55(H) × 166(W) × 50(D) mm	54(H) × 118(V	V) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.35kg	0.20kg	0.25kg	0	

(20) Specifications comparison between AJ35TB1-16DR and AJ65SBTB1-8D+ AJ65SBTB2N-8R

			○: Compatib	le, △: Partial char	nge required, x: Not compatible
Specif	ications	AJ35TB1-16DR input specifications	AJ65SBTB1-8D	Compatibility	Precautions for replacement
Number of it	nput points	8 points	8 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	24VDC	24VDC	0	
Rated input	current	Approx. 7mA	Approx. 7mA	0	
Operating v	oltage range	19.2 to 26.4VDC	19.2 to 26.4VDC	0	
Operating vi	ollage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum no simultaneou	umber of is input points	100% simultaneously ON	100% simultaneously ON	0	
ON voltage/	ON current	14V or more/3.5mA or more	14V or more/3.5mA or more	0	
OFF voltage	e/OFF current	6V or less/1.7mA or less	6V or less/1.7mA or less	0	
Input resista	ince	Approx. 3.3k Ω	Approx. 3.3k Ω	0	
Input metho	d	Positive/negative common shared type (sink/source shared type)	Positive/negative common shared type (sink/source shared type)	0	
Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common ter		8 points/common	8 points/common	0	
-	ications	AJ35TB1-16DR output specifications	AJ65SBTB2N-8R	Compatibility	Precautions for replacement
Number of c	output points	8 points	8 points	0	·
Insulation m	ethod	Photocoupler	Relay	Δ	Although the insulation methods differ, the performance of the insulation is the same.
D. C. d.L d		24VDC 2A			The maximum load current
Rated load		(resistance load)/point	(resistance load)/point	Δ	per common differs. Pay
voltage/curr	ent	240VAC 2A (COS ϕ =1)/point	240VAC 2A (COS ϕ =1)/point		attention to the operating
		5A/common	4A/common	_	current of the entire module.
	vitching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv voltage		250VAC, 110VDC	264VAC, 125VDC	0	
Response	OFF→ ON	10ms or less	10ms or less	0	
time	ON→OFF	12ms or less	12ms or less	0	
Mechanical	life	20 million times or more	20 million times or more	0	
Electrical life Maximum switching		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	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	0	
		24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more	24VDC 1A, 100VDC 0.1A (L/R=7 ms) 100,000 times or more		
frequency	witching	3,600 times/hr	3,600 times/hr	0	
External power	Voltage	24VDC± 10% Ripple voltage 4Vp-p or less	None	-	
supply	Current	45mA (24VDC, all points ON)	None	-	
Surge suppr		None	None	0	
Common ter arrangemen		8 points/common	8 points/common (2-wire type)	0	

○: Compatible, △: Partial change required, ×: Not compatible AJ65SBTB Precautions for Specifications AJ35TB1-16DR AJ65SBTB1-8D Compatibility 2N-8R replacement The number of I/O points assigned per station is changed. Number of occupied 1 station 2 stations (8 points → 32 points) stations (number of (1 station \times 32 points \times 2 (2 stations \times 8 points) The number of occupied occupied points) modules) stations are two (one station × two modules). Operation indication ON indication (LED) ON indication (LED) 0 Transmission/ Transmission/ module power module power supply parts supply parts 7-point terminal 7-point terminal 34-point terminal block block block External connection (M3 screw) $(M3 \times 5.2)$ $(M3 \times 5.2)$ Change in wiring is required. method Transmission circuit part screws) screws) included I/O part: I/O part: 10-point terminal 18-point terminal block block $(M3 \times 5.2)$ $(M3 \times 5.2)$ screws) screws) 0.3 to 2mm² Applicable wire size 0.75 to 2mm² 0 RAV1.25-3 In some cases, the Applicable solderless R1.25-3, R2-3 (conforming to JIS C 2805) solderless terminal must be Δ terminal RAV1.25-3, RAV2-3 V2-MS3, RAP2-3SL, TGV2-3N changed. 15.6 to 31.2VDC 20.4 to 26.4VDC The operating voltage range Voltage Δ (peak voltage 31.2VDC) (ripple ratio within 5%) I/O 30mA or less 85mA or less module The current consumption (24VDC (24VDC power increases. The current Current 62mA (at 24VDC) when all when all Δ supply capacity needs to be points are points are reconsidered. ON) ON) 54(H) × The overall size differs. 54(H) × External dimensions $55(H) \times 166(W) \times 50(D) \text{ mm}$ Pay attention to the mounting 87.3(W) × 118(W) × × 40(D) mm 40(D) mm dimensions. Weight 0.35kg 0.14kg 0.25kg 0

(21) Specifications comparison between AJ35TB1-16DT and AJ65SBTB1-16DT2

Specifications specifications specifications protection of the pro	-		\bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible					
Photocoupler Phot	Specif	ications		AJ65SBTB1-16DT2 input specifications	Compatibility			
Rated input voltage Rated input current Operating voltage range 19.2 to 26.4VDC (ripple ratio within 5%) 10.8 septiments ON voltage range 19.2 to 26.4VDC (ripple ratio within 5%) 10.9 simultaneously ON 10.9	Number of i	nput points	8 points	8 points	0			
Related injust current Approx. 7mA Approx. 7mA O	Insulation m	ethod	Photocoupler	Photocoupler	0			
Depretating voltage range 19.2 to 28.4/VDC (rippele ratio within 5%) Cippel ratio within	Rated input	voltage	24VDC	24VDC	0			
Cipple ratio within 5% Cipple ratio within	Rated input	current	' '	''	0			
Maximum number of simultaneously ON 100% simultaneously ON 0	Operating v	oltage range			0			
No Voltage/ON current 14V or more/3.5mA 14V or more/3.5mA 0 or more or more or more 0 or more			100% simultaneously ON		0			
OFF voltage/OFF current Aprox. 3 & Q					0			
Input resistance Approx. 3.3k Ω	OFF voltage	e/OFF current			0			
Positive rogative common Shared type Cannot be used. Positive common Cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot be used. A negative common cannot cannot be used. A negative common cannot cannot be used. A negative common cannot								
Response								
(sink/source shared type) (sink/spence shared t	Input metho	d	, and the second		Δ	=		
time			(sink/source shared type)	(sink type)	_	cannot be used.		
Application Specifications Specifications AJ35TB1-16DT output Specifications Sp	Response	OFF→ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0			
Spoints/common Spoints/common Spoints/common Spoints/common Spoints/common Spoints/common Spoints/common Spoints/common Spoints/common Spoints S	time	ON→OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0			
Number of output points 8 points 8 points 8 points 9 poin			8 points/common	8 points/common	0			
Number of output points Insulation method Insulation method Photocoupler Photocoupler Photocoupler Photocoupler Photocoupler Photocoupler Photocoupler Photocoupler O Rated load voltage (rapge 24VDC Operating load voltage (rapge (rapge (rapge device)) (ripple ratio within 5%) (ripple ratio within 5%) Maximum load current 3.0A 10ms or less 1.0A 10ms or less X differs. Pay attention to the selection of the load used. Leakage current at OFF O.1mA or less O.3VDC or less (TYP). 0.5A ON Oxidage sink type Sink type Sink type Sink type Sink type O.5ms or less O.5ms or less O.5ms or less Oxidage power Voltage power Voltage power Voltage power Current Sommon Specifications AJ85TB1-16DT AJ65SBTB1-16D12 Compatibility Precautions for replacement The inrush current value differs. Pay attention to the selection of the load used. 1.5 VDC or less (MAX.) 0.3A 0.3VDC or less (TYP). 0.5A 0.6 VDC or less (MAX.) 0.5A 0.0 VDC or	Specif	ications		· ·	Compatibility			
Rated load voltage	Number of o	output points	•	•	0			
Departing load voltage range	Insulation m	nethod	Photocoupler	Photocoupler	0			
Maximum load current O.3A/point, 2.4A/common O.5A/point, 2.4A/point, 2.4	Rated load	voltage	24VDC	24VDC	0			
Maximum load current 0.3A/point, 2.4A/common 0.5A/point, 2.4A/common ○ Maximum load current 0.3A/point, 2.4A/common 0.5A/point, 2.4A/common ○ Maximum inrush current 3.0A 10ms or less 1.0A 10ms or less × differs. Pay attention to the selection of the load used. Leakage current at OFF 0.1mA or less ○ O O O Maximum voltage drop at ON 1.5VDC or less (MAX.) 0.3A 0.3VDC or less (TYP.) 0.5A ○ O Output method sink type ○ 0.6VDC or less (MAX.) 0.5A ○ O Response OFF → ON 2.0ms or less 0.5ms or less ○ O External power supply 19.2 to 26.4VDC 19.2 to 26.4VDC O O (ripple ratio within 5%) (ripple ratio within 5%) O O Surge suppressor Zener diode Zener diode ○ Common terminal arrangement 8 points/common 8 points/common O Number of occupied stations (number of occupied points) (2 stations × 8 points) (1 station × 32 points) X Change in wiring is req	Operating lo	oad voltage	19.2 to 26.4VDC	19.2 to 26.4VDC	0			
Maximum inrush current 3.0A 10ms or less 1.0A 10ms or less X The inrush current value differs. Pay attention to the selection of the load used. Leakage current at OFF 0.1mA or less 0.1mA or less ○ Maximum voltage drop at ON 1.5VDC or less (MAX.) 0.3A 0.3VDC or less (TYP.) 0.5A ○ Output method sink type ○ Response 0FF→ ON 2.0ms or less 0.5ms or less ○ Output method sink type ○ 0.6VDC or less (MAX.) 0.5A ○ Response 0FF→ ON 2.0ms or less 0.5ms or less ○ Itime 0N→ OFF 2.0ms or less (resistance load) 0.1.5ms or less (resistance load) ○ External power 40 (ripple ratio within 5%) (ripple ratio within 5%) ○ ○ Surge suppressor Zener diode Zener diode ○ ○ Common terminal arrangement 8 points/common 8 points/common ○ Precautions for replacement Number of occupied stations (number of occupied points) 2 stations 1 station X Change fine time in lock (8 points → 32 points) Operation indication ON indication (LED) ON i	range		(ripple ratio within 5%)	(ripple ratio within 5%)	O			
Maximum inrush current 3.0A 10ms or less	Maximum lo	ad current	0.3A/point, 2.4A/common	0.5A/point, 2.4A/common	0			
Maximum voltage drop at ON 1.5VDC or less (MAX.) 0.3A 0.3VDC or less (TYP.) 0.5A 0.6VDC or less (MAX.) 0.5A O Output method Response Itime Sink type O O Response Itime OFF → ON 0N → OFF 2.0ms or less (resistance load) 1.5ms or less (resistance load) O External power supply Voltage (ripple ratio within 5%) 19.2 to 26.4VDC (ripple ratio within 5%) O Surge suppressor Surge suppressor Zener diode Zener diode O Common terminal arrangement 8 points/common 8 points/common O Spocifications AJ35TB1-16DT AJ65SBTB1-16DT2 Compatibility Precautions for replacement Number of occupied stations (number of occupied points) 2 stations (2 stations × 8 points) 1 station (1 station × 32 points) × The number of I/O points assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) ON indication (LED) O Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) X Change in wiring is required. (M3 × 5.2 screws) Applicable wire size 0.75 to 2mm² 0.3 to 2mm² O Applicable solderless </td <td>Maximum ir</td> <td>nrush current</td> <td>3.0A 10ms or less</td> <td>1.0A 10ms or less</td> <td>×</td> <td>differs. Pay attention to the</td>	Maximum ir	nrush current	3.0A 10ms or less	1.0A 10ms or less	×	differs. Pay attention to the		
ON	Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0			
Output method sink type sink type S	Maximum v	oltage drop at	1.5VDC or less (MAX.) 0.3A	0.3VDC or less (TYP.) 0.5A	0			
Response time OFF→ON ON→OFF 2.0ms or less (resistance load) 0.5ms or less (resistance load) O External power supply 19.2 to 26.4VDC (ripple ratio within 5%) 19.2 to 26.4VDC (ripple ratio within 5%) O Surge suppressor Current 60mA or less (24VDC) 17.8mA or less (24VDC) O Surge suppressor Zener diode Zener diode O Common terminal arrangement 8 points/common 8 points/common O Number of occupied stations (number of occupied points) 2 stations 1 station X Operation indication ON indication (LED) ON indication (LED) O Operation indication ON indication (LED) ON indication (LED) O External connection method (M3 screw) Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) X Change in wiring is required. Applicable wire size 0.75 to 2mm² 0.3 to 2mm² O In some cases, the coldedess terminal must be coldedess.	ON		1.5VDC of less (WAX.) 0.5A	0.6VDC or less (MAX.) 0.5A	U			
time ON→OFF 2.0ms or less (resistance load) 1.5ms or less (resistance load) ○ External power supply	Output meth		sink type	sink type O				
External power supply	Response							
Voltage Current Current 60mA or less (24VDC) 17.8mA or less (24VDC) ○		ON→OFF	` '	` '	0			
supply Current 60mA or less (24VDC) 17.8mA or less (24VDC) ○ Surge suppressor Zener diode Zener diode ○ Common terminal arrangement 8 points/common 8 points/common ○ Specifications AJ35TB1-16DT AJ65SBTB1-16DT2 Compatibility Precautions for replacement The number of l/O points assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) ON indication (LED) ○ External connection method Transmission circuit part included (M3 x 5.2 screws) Applicable wire size 0.75 to 2mm² On the property of the prope		Voltage		=	0			
Surge suppressor Zener diode Zener diode O Common terminal arrangement 8 points/common 8 points/common O Specifications AJ35TB1-16DT AJ65SBTB1-16DT2 Compatibility Precautions for replacement Number of occupied stations (number of occupied points) 2 stations 1 station X Operation indication ON indication (LED) ON indication (LED) Operation indication ON indication (LED) ON indication (LED) ON indication (LED) Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) Y Change in wiring is required. Applicable wire size 0.75 to 2mm² O.3 to 2mm² O Applicable solderless R1.25-3, R2-3 In some cases, the polderless terminal must be		0						
Common terminal arrangement 8 points/common 8 points/common O Specifications AJ35TB1-16DT AJ65SBTB1-16DT2 Compatibility Precautions for replacement Number of occupied stations (number of occupied points) 2 stations 1 station × The number of I/O points assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) ON indication (LED) O Transmission/module power supply parts: 7-point terminal block (M3 x 5.2 screws) X Change in wiring is required. (M3 x 5.2 screws) I/O part: 18-point terminal block (M3 x 5.2 screws) 18-point terminal block (M3 x 5.2 screws) X Change in wiring is required. (Day 10 points assigned per station is changed. (Repoints in the points) External connection method Transmission circuit part included 7-point terminal block (M3 x 5.2 screws) X Change in wiring is required. (Change in wiring is required. (Change in wiring) The number of I/O points assigned per station is changed. (Repoints) Applicable wire size 0.75 to 2mm² 0.3 to 2mm² O Applicable solderless R1.25-3, R2-3 (conforming to IIS C 2805) In some cases, the colleges to provide the points assigned per station is changed. (Repoints)			· ·					
AJ35TB1-16DT AJ65SBTB1-16DT2 Compatibility Precautions for replacement The number of I/O points assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) On indication (LED) External connection method Transmission circuit part included Applicable wire size Applicable solderless AJ35TB1-16DT AJ65SBTB1-16DT2 Compatibility Precautions for replacement The number of I/O points assigned per station is changed. (8 points → 32 points) Compatibility Precautions for replacement The number of I/O points assigned per station is changed. (8 points → 32 points) Compatibility Precautions for replacement The number of I/O points assigned per station is changed. (8 points → 32 points) Change in wiring is required. (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws) I/O part: 18-p			Zerier diode	Zerier diode	0			
AJ35TB1-16DT AJ65SBTB1-16DT2 Compatibility Number of occupied stations (number of occupied points) 2 stations 1 station × The number of I/O points assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) ON indication (LED) O Transmission/module power supply parts: 7-point terminal block (M3 screw) (M3 × 5.2 screws) × Change in wiring is required. I/O part: 18-point terminal block (M3 × 5.2 screws) (M3 × 5.2 screws) × Change in wiring is required. Applicable wire size 0.75 to 2mm² 0.3 to 2mm² O Applicable solderless R1.25-3, R2-3 RAV1.25-3 In some cases, the colderless torminal must be colded as a terminal must be colded as a te			8 points/common	8 points/common	0			
Number of occupied stations (number of occupied points) 2 stations 1 station × assigned per station is changed. (8 points → 32 points) Operation indication ON indication (LED) ON indication (LED) O Transmission/module power supply parts: 7-point terminal block (M3 screw) 7-point terminal block (M3 x 5.2 screws) × Change in wiring is required. Applicable wire size 0.75 to 2mm² 0.3 to 2mm² O Applicable solderless R1.25-3, R2-3 RAV1.25-3 In some cases, the colderless to minal must be colderless.	Specif	ications	AJ35TB1-16DT	AJ65SBTB1-16DT2	Compatibility			
External connection method Transmission/module power supply parts: 7-point terminal block (M3 screw) Transmission circuit part included Transmission circuit part included Transmission/module power supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block (M3 × 5.2 screws) Applicable wire size 0.75 to 2mm² 0.3 to 2mm² 0 RAV1.25-3 Applicable solderless R1.25-3, R2-3 R1.25-3, R2-3 In some cases, the solderless to minal must be	stations (number of				×	assigned per station is changed.		
External connection method Transmission circuit part included Applicable wire size Applicable solderless Applicable solderless 34-point terminal block (M3 x 5.2 screws) Transmission circuit part included (M3 x 5.2 screws) I/O part: 18-point terminal block (M3 x 5.2 screws) O 3 to 2mm² RAV1.25-3 RAV1.25-3 In some cases, the solderless to mind must be conforming to US C 2805)	Operation in	ndication	ON indication (LED)	ON indication (LED)	0			
Applicable wire size 0.75 to 2mm ² 0.3 to 2mm ² O Applicable solderless R1.25-3, R2-3 In some cases, the conforming to US C 2805)			(M3 screw) Transmission circuit part	supply parts: 7-point terminal block (M3 × 5.2 screws) I/O part: 18-point terminal block	×	Change in wiring is required.		
Applicable solderless R1.25-3, R2-3 RAV1.25-3 In some cases, the	Applicable v	vire size	0,75 to 2mm ²		0			
Applicable solderless R1.25-3, R2-3 (conforming to IIS C 2805)						In some cases, the		
V2-MS3, RAP2-3SL, TGV2-3N changed.	Applicable s terminal	solderless	R1.25-3, R2-3 RAV1.25-3, RAV2-3	(conforming to JIS C 2805)	Δ	solderless terminal must be		

○: Compatible, △: Partial change required, ×: Not compatible

Specifications		AJ35TB1-16DT	AJ65SBTB1-16DT2	Compatibility	Precautions for replacement
I/O	Voltage	15.6 to 31.2VDC	20.4 to 26.4VDC		The operating voltage range
module	voitage	(peak voltage 31.2VDC)	(ripple ratio within 5%)	Δ	differs.
			50mA or less		
power	Current	nt 61mA (at 24VDC)	(24VDC when all points		
supply			are ON)		
					The overall size differs.
External din	nensions	$55(H) \times 166(W) \times 50(D) \text{ mm}$	$54(H) \times 118(W) \times 40(D) \text{ mm}$	×	Pay attention to the mounting
					dimensions.
Weight		0.35kg	0.18kg	0	

(22) Specifications comparison between AJ35TC1-32DT and AJ65SBTCF1-32DT

			○ : Compatib	le, 🛆 : Partial char	nge required, x: Not compatible
Specif	ications	AJ35TC1-32DT input specifications	AJ65SBTCF1-32DT input specifications	Compatibility	Precautions for replacement
Number of input points		16 points	16 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	24VDC	24VDC	0	
Rated input		Approx. 5mA	Approx. 5mA	0	
		19.2 to 26.4VDC	19.2 to 26.4VDC		
Operating v	oltage range	(ripple ratio within 5%)	(ripple ratio within 5%)	0	
Maximum n	umber of	(hppie rado widini 670)	(hppie rate within 670)		
	s input points	100% simultaneously ON	100% simultaneously ON	0	
ON voltage/		17.5V or more/3.5mA or more	14V or more/3.5mA or more	0	
			6V or less/1.7mA or less	0	
<u> </u>	e/OFF current	6V or less/1.7mA or less		0	
Input resista	ince	Approx. 4.7k Ω	Approx. 4.7k Ω	0	
		Positive/negative common	Positive/negative common		
Input metho	d	shared type	shared type	0	
		(sink/source shared type)	(sink/source shared type)		
Response	OFF→ ON	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
time	ON→ OFF	10ms or less (at 24VDC)	1.5ms or less (at 24VDC)	0	
Common te	rminal	10	40	_	
arrangemen	ıt	16 points/common	16 points/common	0	
Specif	ications	AJ35TC1-32DT output	AJ65SBTCF1-32DT output	Compatibility	Precautions for
N	to to describe	specifications	specifications		replacement
	output points	16 points	16 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load	voltage	24VDC	12VDC/24VDC	0	
Operating Io	ad voltage	19.2 to 26.4VDC	10.2 to 26.4VDC	0	
range		(ripple ratio within 5%)	(ripple ratio within 5%))	
Maximum lo	ad current	0.1A/point, 1.6A/common	0.1A/point, 1.6A/common	0	
Maximum in	rush current	0.4A 10ms or less	1.0A 10ms or less	0	
Leakage cu	rrent at OFF	0.1mA or less	0.1mA or less	0	
Maximum vo	oltage drop at		0.085VDC or less (TYP.) 0.1A		
ON		1.5VDC or less (MAX.) 0.1A	0.2VDC or less (MAX.) 0.1A	0	
Output meth	nod	sink type	sink type	0	
Response	OFF→ ON	2.0ms or less	0.5ms or less	0	
time	ON→OFF	2.0ms or less (resistance load)	1.5ms or less (resistance load)	0	
une	014 - 011	2.0113 01 less (resistance load)	1.5ms of less (resistance load)	0	Wiring of the power supply
	\/alta aa	Nana	10.2 to 26.4VDC		
External	Voltage	None	(ripple ratio within 5%)	×	for driving the output circuit
power					is required.
supply					Wiring of the power supply
Current		None	30mA or less (24VDC)	×	for driving the output circuit
					is required.
Surge suppressor		Zener diode	Zener diode	0	
Common terminal		16 points/sommon	16 points/sommon	0	
arrangement		16 points/common	16 points/common	0	
Specifications		AJ35TC1-32DT	AJ65SBTCF1-32DT	Compatibility	Precautions for replacement
Number of o	occunied				The number of points
stations (number of		4 stations	1 station		•
occupied points)		(4 stations × 8 points)	(1 station × 32 points)	0	assigned per module is not
					changed.
Operation indication		ON indication (LED)	ON indication (LED)	0	
		Transmission circuit:	Transmission/module power		
		8-point terminal block	supply parts:	×	Change in wiring is required.
External cor	nnection	· ·	7-point terminal block	^	Griange in wining is required.
method		(M3 screw)	(M3 × 5.2 screws)		
		I/O part: 40-pin connector	I/O part: 40-pin connector	0	The existing connector can
		1		İ	be attached without change.

 Compatible 	∧ · Partial	change required	d, x: Not compatible	
O. Compatible,	<u></u>	oriarigo roquiro	a, A . Hot compatible	
		_		

Spec	ifications	AJ35TC1-32DT	AJ65SBTCF1-32DT	Compatibility	Precautions for replacement
Applicable wire size		Terminal block: 0.75 to 2mm ² FCN connector:0.3mm ²	Terminal block: 0.3 to 2mm ² FCN connector: 0.3mm ² or less (for A6CON1, A6CON4) 0.2 to 0.08mm ² (for A6CON2) Twisted wire of 0.08mm ² , ϕ 0.25mm (for A6CON3)	0	
Accessory		1 external wiring connector	None	×	40-pin connectors for external wiring are sold separately.
Applicable solderless terminal		R1.25-3, R2-3 RAV1.25-3, RAV2-3	RAV1.25-3 (conforming to JIS C 2805) V2-MS3, RAP2-3SL, TGV2-3N	Δ	In some cases, the solderless terminal must be changed.
I/O module	Voltage	15.6 to 31.2VDC (peak voltage 31.2VDC)	20.4 to 26.4VDC (ripple ratio within 5%)	Δ	The operating voltage range differs.
power supply Current		137mA (at 24VDC)	50mA or less (24VDC when all points are ON)	0	
External dimensions		55(H) × 166(W) × 50(D) mm	54(H) × 118(W) × 40(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.
Weight		0.23kg	0.13kg		

5.3 Precautions for Replacement of I/O Module

(1) Wiring

(a) Wire gauge and size of solderless terminals

As CC-Link supports compact modules and terminal blocks, the wire gauge and size of the solderless terminals applicable to terminal blocks differ from those that can be used on the MELSECNET/MINI-S3, A2C(I/O).

For this reason, when replacing the existing system with CC-Link, use wires and solderless terminals that meet the CC-Link specifications.

(b) Input method

Contents of the "Input method" item in the "Specifications" column for input modules and I/O modules in Section 5.2 are described below.

Positive common (Sink type) : means that DC power + is connected to the common terminal.

Negative common (Source type): means that DC power - is connected to the common terminal.

Positive/negative common shared type (Sink/source shared type):

means that either DC power + or DC power - is connected to the common terminal.

(c) Using wiring conversion adapter

When installing a MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter to the CC-Link remote I/O module (AJ65BTB1-16D, AJ65BTB2-16D or AJ65BTB1-16T), the external dimensions are increased by 5.1mm (0.20inch) (height) and 28.5mm (1.12inch) (depth).

If the connected cable is not long enough, wiring to the CC-Link remote I/O module cannot be made.

(2) External wiring connector

(a) Purchasing external wiring connectors

At the CC-Link 32-point connector type I/O module, the external wiring connector is not included in the package. The external wiring connector (A6CON) must be purchased separately.

(3) Tightening module mounting screws and terminal block screws

Tighten module mounting screws and terminal block screws within the range described below. Tightening screws too much may cause damage to the module case. For details, refer to each product manual.

(a) CC-Link system compact type remote I/O module

For terminal block type, one-touch connector type, and FCN connector type remote I/O module

Screw	Tightening torque range
Module mounting screw (M4 screw with plain washer finished round)	78 to 108N•cm
Terminal block screw (M3 screw)	59 to 88N•cm
Terminal block mounting screw (M3.5 screw)	68 to 98N•cm

(b) CC-Link system remote I/O module (A2C shape)

Screw	Tightening torque range
Module mounting screw (M4 screw with plain washer finished round)	78 to 108N•cm
Terminal block screw (M3.5 screw)	68 to 92N•cm
Terminal block mounting screw (M4 screw)	102 to 138N•cm

(c) CC-Link system remote I/O module

Screw	Tightening torque range
Module mounting screw (M4 screw)	78 to 118N•cm
Terminal block screw (M3.5 screw)	59 to 88N•cm
Terminal block mounting screw (M4 screw)	78 to 118N•cm

(d) Wiring conversion adapter

Screw	Tightening torque range
Adapter, Terminal block mounting screw (M4 screw)	78 to 118N•cm
CTL + terminal screw (M3 screw)	49 to 78.4N•cm

(4) Precautions for input module (specifications change)

(a) The rated input current

Some CC-Link modules support a smaller rated input current than MELSECNET/MINI-S3,A2C(I/O) modules do. Confirm the specifications of the sensors or switches to be connected before use.

(b) The rated voltage value

CC-Link's DC input module is dedicated for use at 24VDC.

Confirm the specifications of the sensors or switches to be connected before use.

(c) The common terminal arrangement

Use caution when using voltages that differ depending on each common as the common terminal arrangement may differ between the CC-Link and the MELSECNET/MINI-S3, A2C(I/O).

(5) Precautions for output module (specifications change)

(a) The output current values

Some CC-Link modules support a smaller output current than MELSECNET/MINI-S3,A2C(I/O) modules do. Before using an output module having a smaller output current on CC-Link, confirm the specifications on the load side.

(b) The common terminal arrangement

Use caution when using voltages that differ depending on each common as the common terminal arrangement may differ between the CC-Link and the MELSECNET/MINI-S3, A2C(I/O).

(c) The common maximum load current

Sometimes the maximum load current per common differs between CC-Link and MELSECNET/ MINI-S3,A2C(I/O). Check the maximum load current per common before use.

6

REPLACING ANALOG I/O MODULE

6.1 List of Alternative Analog I/O Module Models

	IINI-S3, A2C models	Replacement to CC-Link			
Product name	Model name	Model name	Remarks (restrictions)		
		AJ65BT-64AD	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Required (2 modules necessary) 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: 4CH/module 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required		
Analog input module	A68ADC	AJ65SBT-64AD	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Required (2 modules necessary) 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: 4CH/module, negative current conversion not possible 5) Change in functional specifications: An averaging processing function can handle only a moving averaging processing. 6) Change in dimensions for mounting the panel: Required		
		AJ65VBTCU- 68ADVN	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Voltage input only 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required		

MELSECNET/MINI-S3, A2C models to be discontinued			Replacement to CC-Link			
Product name	Model name	Model name	Remarks (restrictions)			
Analog input module	A68ADC	AJ65VBTCU-68ADIN	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Current input only 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required			
		AJ65BT-64DAV	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in resolution 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required			
Analog output module	A64DAVC	AJ65SBT-62DA	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Required (2 modules necessary) 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in resolution 5) Change in functional specifications: 2CH/module 6) Change in dimensions for mounting the panel: Required			
		AJ65VBTCU- 68DAVN	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: 8CH/module 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required			

	MINI-S3, A2C models liscontinued	Replacement to CC-Link				
Product name	Model name	Model name	Remarks (restrictions)			
		AJ65BT-64DAI	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Upward compatible 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required			
Analog output module	A64DAIC	AJ65SBT-62DA	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Required (2 modules necessary) 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in resolution 5) Change in functional specifications: 2CH/module 6) Change in dimensions for mounting the panel: Required			
Temperature	A64RD3C	AJ65BT-64RD3	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in temperature detecting output current, change in resistive values of allowable conductor 5) Change in functional specifications: Not required 6) Change in dimensions for mounting the panel: Required			
Temperature input module	A64RD4C	AJ65BT-64RD4	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in temperature detecting output current, change in resistive values of allowable conductor 5) Changes in functional specifications: Change in the specifications of the line breakage detection function 6) Change in dimensions for mounting the panel: Required			

6.2 List of Alternative Master Module Models

6.2.1 Comparisons of analog input module

(1) Comparisons between A68ADC and AJ65BT-64AD

(a) Performance specifications comparisons

(4)	nance specifications compa): Compatible, △:	Partial chan	ge required, ×: Not compatible
Item	A68ADC	AJ65BT-6	·	Compati-	Precautions for replacement
Analog input	Voltage: -10 to 0 to +10VDC (input resistance 30K Ω) Current: +4 to +20mA DC (input resistance 250 Ω) Select via input terminal * Current input can also be used as -20 to 0 to +20mA.	Voltage: -10 to 0 (input resistand Current: -20 to 0 to (input resistand (select via input	ce 1M Ω) to +20mA DC ce 250 Ω)	bility O	
Digital output	16bits signed binary (data part 11bits) -2048 to 2047	16bits signed (data part 1	•	0	
I/O characteristics	Analog input Digital output +10V +2000 +5V or +20mA +1000 0V or +4mA ± 0 -5V or -12mA -10V -2000	Analog input value -10 to 10V or -20 to 20mA 0 to 10V or 0 to 20mA 0 to 5V or 0 to 20mA 1 to 5V or 4 to 20mA	Digital output value 0 to 4000 or -2000 to 2000 0 to 4000 or -2000 to 2000 0 to 4000 or -2000 to 2000 0 to 4000 or -2000 to 2000	Δ	Precautions are needed as gain values are different.
Maximum resolution	Voltage 5mV (1/2000) Current 20 μA (1/1000)	0 to 20mA 0 to 5V or	Resolution 5mV or 20 μ A 2.5mV or 10 μ A 1.25mV or 5 μ A 1mV or 4 μ A	0	
Overall accuracy	Within \pm 1% (\pm 20) (accuracy relative to maximum value)	± 1%(±	40)	0	
Maximum conversion speed	Max. 2.5ms/channel	1ms/channel		0	
Absolute maximum input	Voltage ± 15V,	current ± 30mA		0	
Analog input	8 channels/module	4 channels/module		×	Please consider replacing by using two or more AJ65BT-64AD modules.
Insulation method	Photocoupler isolation between input terminal and programmable controller power supply (non-isolated between channels)	Photocoupler isolation supply/communication analog in (non-isolated between	on system and	0	

	O: Compatible, △: Partial change required, ×: Not comp							
Item	A68ADC	AJ65BT-64AD	Compati- bility	Precautions for replacement				
Number of occupied I/O stations (number of points)	4 stations (32 points)	2 stations (RX/RY 32 points each, RWr/RWw 8 points each)	×	The number of occupied stations has been changed.				
Connected terminal	47-point terminal block	27-point terminal block	×					
Applicable wire size	0.75 to 2mm ² (applicable t	0	Change in wiring is					
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3.5, RAV2-3.5	×	required.				
24VDC internal current consumption	0.3A	0.12A	0					
Weight	1.01kg	0.35kg	0					
External dimensions	170(H) × 100(W) × 80(D)mm	65(H) × 151.9(W) × 63(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.				

(b) Functional comparisons

O: Compatible, △: Partial change required, ×: Not compatible

Item	A68ADC	AJ65BT-64AD	Compati- bility	
Averaging processing A/D conversion system	A/D conversion is performed according to set times or set processing time on a channel, which is specified for the averaging processing to be performed on by the programmable controller CPU. After the conversion, the maximum and minimum values are removed, and the remaining total is averaged and the results are stored in the buffer memory.	A/D conversion is performed according to the preset number of times or preset time on each channel, the A/D conversion data obtained during that time is averaged, and the average value is stored to the remote register as a digital output value.	0	
Specification of channel to use	The A68ADC has an 8 channels of the A/D conversion circuit. Execution/non-execution of the A/D conversion can be specified on each of those channels. With the programmable controller CPU, the channel to execute A/D conversion on is specified to address 0 (specification of channel to use) of the buffer memory.	Enable (execute)/disable (do not execute) A/D conversion is specified on each channel. (default: execution on all channels disabled) By making unused channels conversion prohibited, sampling time can be shortened.	0	
Offset/gain setting	Changes the I/O conversion characteristics.	Changes the I/O conversion characteristics. For that, offset/gain settings can be configured for each channel without a aid of a various register.	0	



(c) Programmable controller CPU I/O signal comparisons

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

A68ADC			AJ65BT-64AD				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description
X(n+0) to X(n+3)	Use prohibited	Y(n+0) to Y(n+3)	Use prohibited	RXn0	CH1 A/D Conversion completed flag	RYn0	Offset/gain value selection
X(n+4)	Communication error detection flag indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal *1	RXn1	CH2 A/D Conversion completed flag	RYn1	Voltage/current selection
X(n+5)	A68ADC reset switch ON detection flag	Y(n+5)	Reset signal for reset switch ON detection flag	RXn2	CH3 A/D Conversion completed flag		Use prohibited
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RXn3	CH4 A/D Conversion completed flag	RYn2 to RY(n+1)7	
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal *1	RXn4 to RX(n+1)7	Use prohibited	131(11-1)	
X(n+8) to	Use prohibited			RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data processing complete flag
X(n+17)		Y(n+8)		RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag
X(n+18)	A/D conversion READY	to Y(n+1F)	Use prohibited	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag
X(n+19) to X(n+1F)	Use prohibited			RX(n+1)B RX(n+1)C to RX(n+1)F	Remote READY Use prohibited	RY(n+1)B to RY(n+1)F	Use prohibited

^{*1:} The signal contents differ when a version B A68ADC is combined with a version B A2CCPU.

(d) Buffer memory addresses comparisons

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memories and sequence programs, refer to the User's Manual.

	A68ADC		AJ65BT-64AD			
Address	Name	Read/write	Address	Name	Read/write	
0	Specification of channel to use		RWwm	Averaging processing specification		
1	Averaging processing specification		RWwm+1	CH1 Averaging time, count		
2	CH1 Averaging time, count		RWwm+2	CH2 Averaging time, count]	
3	CH2 Averaging time, count		RWwm+3	CH3 Averaging time, count	w	
4	CH3 Averaging time, count		RWwm+4	CH4 Averaging time, count	\ \v	
5	CH4 Averaging time, count	R/W	RWwm+5	Data format	1	
6	CLIE Averaging time count		RWwm+6	A/D conversion enable/disable	1	
6	CH5 Averaging time, count		Rvvwiii+6	specification		
7	CH6 Averaging time, count		RWwm+7	Use prohibited	-	
8	CH7 Averaging time, count		RWrn	CH1 Digital output value		
9	CH8 Averaging time, count		RWrn+1	CH2 Digital output value]	
10	CH1 Digital output value		RWrn+2	CH3 Digital output value	R	
11	CH2 Digital output value		RWrn+3	CH4 Digital output value		
12	CH3 Digital output value		RWrn+4	Error code]	
13	CH4 Digital output value	R	RWrn+5			
14	CH5 Digital output value	K	RWrn+6	Use prohibited	_	
15	CH6 Digital output value		RWrn+7			
16	CH7 Digital output value					
17	CH8 Digital output value					
18	Write data error code	R/W	1			
19	A/D conversion completed flag	R				



(2) Comparisons between A68ADC and AJ65SBT-64AD

(a) Performance specifications comparisons

	\bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible									
Item	A68ADC				AJ6	5SBT-64A	.D		Compati- bility	Precautions for replacement
Analog input	Voltage: -10 to 0 to +10VDC (input resistance 30K Ω) Current: +4 to +20mA DC (input resistance 250 Ω) Select via input terminal * Current input can also be used as -20 to 0 to +20mA.	;		Voltage: -10 to 0 to +10VDC (input resistance 1M Ω) Current: 0 to +20mA DC (input resistance 250 Ω)				Δ	Negative current cannot be converted.	
Digital output	16bits signed binary (data part 11bit -2048 to 2047	s)				signed bir 96 to +409			0	
I/O characteristics	Analog input Digital output +10V +2000 +5V or +20mA +1000 0V or +4mA ± 0 -5V or -12mA -1000 -2000	t	lotetoo	Analog input range -10 to +10V User range setting 1 (-10 to +10V) 0 to 5V	Digital output	Acc Ambient Temperature 0 to 55 °C	Ambient Temperature 25 ± 5 °C	Maximum resolution 2.5mV	Δ	Precautions are needed as gain values are different.
Maximum resolution	Voltage 5mV (1/2000) Current 20 μA (1/1000)		- 5	User range	0 to 4000	± 0.4% (+ 16 digits*	± 0.2% (± 8 digits*)	1.0mV	0	
Overall accuracy	Within \pm 1% (\pm 20) (accuracy relative to maximum valu	e)	F	setting 2 (0 to 5V) 0 to 20mA 4 to 20mA 4 to 20mA User range setting 3 (0 to 20mA) actory-set: -	0 to 4000	*: Digi	t is the digi	5μA 4μA tal value.	0	
Max. conversion	Maximum 2.5ms/channel			1ms/channel					0	
Absolute maximum input	Voltaș	je ± 1	15V,	5V, current ± 30mA					0	
Number of analog input points	8 channels/module			4 channels/module				×	Consider replacing by using two or more AJ65SBT-64AD modules.	
Insulation method	Photocoupler isolation between inpoterminal and programmable controller purply (non-isolated between channels)	ower		Between communication line and all analog inputs: Photocoupler isolation between power line and all analog inputs: Photocoupler isolation (non-isolated between channels)			0			
Number of occupied I/O stations (number of points)	4 stations (32 points)			1 station (RX/RY 32 points each, RWr/RWw 4 points each)				×	The number of occupied stations has been changed.	
Connected terminal	47-point terminal block			25-point terminal block				×		
Applicable wire size	0.75 to 2mm ² (applicable tightening torque 7kg • c	m)		0.3 to 0.75mm ²				×	Change in wiring is	
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A			 RAV1.25-3 (conforming to JIS C 2805) [Applicable wire size: 0.3 to 1.25mm²] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm²] 				×	required.	
24VDC internal current consumption	0.3A		0.09A				0			
Weight External dimensions	1.01kg 170(H) × 100(W) × 80(D)mm			50	(H) × 1	0.20kg 18(W) × 4	D(D)mm		O ×	The overall size differs. Pay attention to the mounting dimensions.

(b) Functional comparisons

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

		ilpatible, A.i a		equired, ×: Not compatible	
Item	A68ADC	AJ65SBT-64 <i>A</i>	AD	Compati- bility	Precautions for replacement
Averaging processing A/D conversion system	A/D conversion is performed according to set times or set processing time on a channel, which is specified for the averaging processing to be performed on by the programmable controller CPU. After the conversion, the maximum and minimum values are removed, and the remaining total is averaged and the results are stored in the buffer memory.	Digital output values for the number of times, which hav obtained by measuring at e period, are averaged.	ve been	Δ	Averaging processing performed on the AJ65SBT-64AD is movement averaging processing.
Specification of channel to use	The A68ADC has 8 channels of an A/D conversion circuit. Execution/non-execution of the A/D conversion can be specified on each of those channels. With the programmable controller CPU, the channel to execute A/D conversion on is specified to address 0 (specification of channel to use) of the buffer memory.	Enable (execute)/disable (dexecute) A/D conversion is each channel. By making unused channel prohibited, sampling period shortened.	s specified on	0	
Switching function of input range	_	Sets the analog input range on each channel and changes the I/O conversion characteristics. The following eight input ranges can be selected: Input range		_	
Offset/gain setting	Changes the I/O conversion characteristics.	Changes the I/O conversion characteristics. For that, of settings can be configured channel without a aid of a vergister.	fset/gain for each	0	

(c) Programmable controller CPU I/O signal comparisons

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	Α	68ADC			AJ65	SBT-64AD	
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description
X(n+0)		Y(n+0)			CH1 A/D		CH1 Specified flag of
to	Use prohibited	to	Use prohibited	RXn0	Conversion	RYn0	movement
X(n+3)		Y(n+3)			complete flag		averaging processing
X(n+4)	Communication error detection flag indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal *1	RXn1	CH2 A/D Conversion complete flag	RYn1	CH2 Specified flag of movement averaging processing
	A68ADC reset	Y(n+5)	Reset signal of reset	RXn2	CH3 A/D	RYn2	CH3 Specified flag of
X(n+5)	switch ON		switch ON detection flag		Conversion		movement averaging
	detection flag				complete flag		processing
				RXn3	CH4 A/D		CH4 Specified flag of
			Use prohibited		Conversion	RYn3	movement averaging
	Use prohibited	Y(n+6)			completed flag		processing
				RXn4	CH1 Range		
					error flag		Use prohibited
X(n+6)				RXn5	CH2 Range		
				10010	error flag		
				RXn6	CH3 Range		
				10010	error flag		
				RXn7	CH4 Range		
					error flag		
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal *1	RXn8 to RXnB	Use prohibited	RYn4 to RY(n+1)7	
X(n+8)				RXnC	E ² PROM write		
to	Use prohibited		Use prohibited		error flag		
X(n+17)				RXnD			
X(n+18)	A/D conversion READY			RxnE	Use prohibited		
	Use prohibited			RXnF	Test mode flag		
X(n+19) to X(n+1F)		Y(n+8) to Y(n+1F)		RX(n+1)0 to RX(n+1)7	Use prohibited		
				RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data setting complete flag
				RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag
				RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag
				RX(n+1)B	Remote READY	RY(n+1)B	Use prohibited
				RX(n+1)C		to RY(n+1)F	
				to	Use prohibited		
				RX(n+1)F			

^{*1:} The signal contents differ when a version B A68ADC is combined with a version B A2CCPU.

(d) Buffer memory addresses comparisons

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A68ADC		AJ65SBT-64AD			
Address	Name	Read/write	Address	Name	Read/write	
0	Specification of channel to use		RWwm	A/D conversion enable/disable		
O	Specification of charmer to use			specification		
1	Averaging processing specification		RWwm+1	Input range setting	W	
2	CH1 Averaging time, count		RWwm+2	Number of movement averaging		
2	Citi Averaging time, count			processing setting		
3	CH2 Averaging time, count	R/W	RWwm+3	Use prohibited	_	
4	CH3 Averaging time, count	IV/VV	RWrn	CH1 Digital output value	- R	
5	CH4 Averaging time, count		RWrn+1	CH2 Digital output value		
6	CH5 Averaging time, count		RWrn+2	CH3 Digital output value		
7	CH6 Averaging time, count		RWrn+3	CH4 Digital output value		
8	CH7 Averaging time, count					
9	CH8 Averaging time, count					
10	CH1 Digital output value					
11	CH2 Digital output value	1				
12	CH3 Digital output value					
13	CH4 Digital output value	R				
14	CH5 Digital output value	K				
15	CH6 Digital output value					
16	CH7 Digital output value					
17	CH8 Digital output value					
18	Write data error code	R/W				
19	A/D conversion completed flag	R				



(3) Comparisons between A68ADC and AJ65VBTCU-68ADVN/AJ65VBTCU-68ADIN

(a) Performance specifications comparisons

	○: Compatible, △: Partial change required, ×: Not compatible							
Item	A68ADC	AJ65VBTCU-68ADVN AJ65VBTCU-68ADIN	Compati- bility	Precautions for replacement				
Analog input	Voltage: -10 to 0 to +10VDC (input resistance $30K\Omega$) Current: +4 to +20mA DC (input resistance 250Ω) Select via input terminal * Current input can also be used as -20 to 0 to +20mA.	$\begin{array}{ccc} \mbox{Voltage:} & \mbox{Current:} \\ -10 \mbox{ to +10VDC} & \mbox{0 to +20mA DC} \\ \mbox{(input resistance} & \mbox{(input resistance} \\ \mbox{1M } \Omega \mbox{)} & \mbox{250 } \Omega \mbox{)} \\ \end{array}$	Δ	Voltage and current cannot be mixed, and negative current cannot be converted.				
Digital output	16bits signed binary (data part 11bits) -2048 to 2047	16bits signed binary (-4096 to +4095) 16bits signed binary (-96 to +4095)	0					
I/O characteristics	Analog input Digital output +10V +2000 +5V or +20mA +1000 0V or +4mA ± 0 -5V or -12mA -1000 -10V -2000	Analog input range Digital output Digital output Ambient temperature 10 to 55 °C 25 ± 5 °C	Δ	Precautions are needed as gain values are different.				
Maximum resolution	Voltage 5mV (1/2000) Current 20 μ A (1/1000)	8 0 to 20mA 5 μ A 4 to 20mA 0 to 4000	0					
Overall accuracy	Within ± 1% (± 20) (accuracy relative to maximum value)	89 70 150 150 150 150 150 150 150 150 150 15	0					
Maximum conversion speed	Maximum 2.5ms/channel	1ms/channel	0					
Absolute maximum input	Voltage ± 15V	0						
Number of analog input points	8 chann	0						
Insulation method	Photocoupler isolation between input terminal and programmable controller power supply (non-isolated between channels)	Isolated locations Isolation method Dielectric withstand voltage	0					
Number of occupied I/O stations (number of points)	4 stations (32 points)	When set to Ver.1 remote device station (Ver.1 compatible slave station): 3 stations (RX/RY 32 points each, RWr/RWw 12 points each) When set to Ver.2 remote device station (Ver.2 compatible slave station): 1 station (Expanded cyclic setting: 4X) (RX/RY 32 points each, RWr/RWw 16 points each)	×	The number of occupied stations has been changed.				

		O: Compatible, ∆: Pa	artiai change	required, x : Not compatible
Item	A68ADC	AJ65VBTCU-68ADVN AJ65VBTCU-68ADIN	Compati- bility	Precautions for replacement
Connected terminal	47-point terminal block	One-touch Communication line: Ver.1.10 compatible connector for CC-Link dedicated cable 0.5mm²		
Applicable	0.75 to 2mm ²	communicati (AWG#20)		
wire size	(applicable tightening torque 7kg - cm)	on [ϕ 2.2 to 3.0] Shield wire 0.5mm ² (AWG#20)		
Applicable solderless terminal		One-touch connector for power supply/FG	×	Change in wiring is required.
	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A			
24VDC internal current consumption	0.3A	0.1A	0	
Weight	1.01kg	0.17kg	0	
External dimensions	170(H) × 100(W) × 80(D)mm	115(H) × 41(W) × 67(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.

 $\bigcirc : Compatible, \ \underline{\wedge} : Partial \ change \ required, \ \times : Not \ compatible$

Item	A68ADC	AJ65VBTCU-68ADVN/ AJ65VBTCU-68ADIN	Compati- bility	Precautions for replacement
Averaging processing A/D conversion system	A/D conversion is performed according to set times or set processing time on a channel, which is specified for the averaging processing to be performed on by the programmable controller CPU. After the conversion, the maximum and minimum values are removed, and the remaining total is averaged and the results are stored in the buffer memory.	A/D conversion is performed according to set times or set processing time on a channel, which is specified for the averaging processing to be performed on. After the conversion, the results are stored in the remote register.	0	
Specification of channel to use	The A68ADC has 8 channels of an A/D conversion circuit. Execution/non-execution of A/D conversion can be specified on each of those channels. With the programmable controller CPU, the channel to execute A/D conversion on is specified to address 0 (specification of channel to use) of the buffer memory.	Enable (execute)/disable (do not execute) A/D conversion is specified on each channel. By making unused channels conversion prohibited, sampling period can be shortened.	0	
Offset/gain setting	-	version characteristics.	0	

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	A68	ADC			AJ65VBTCU-68ADVN	/AJ65VBTCU	-68ADIN
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description
X(n+0)		Y(n+0)		RXn0	CH1 A/D Conversion complete flag		
to X(n+3)	Use prohibited	to Y(n+3)	Use prohibited	RXn1	CH2 A/D Conversion completed flag		
	Communication error detection flag indicating that			RXn2	CH3 A/D Conversion completed flag		
X(n+4)	execution of the FROM and TO instructions	Y(n+4)	Error detection reset signal *1	RXn3	CH4 A/D Conversion completed flag		
	resulted in a communication error			RXn4	CH5 A/D Conversion completed flag		
X(n+5)	A68ADC reset switch ON	Reset switch ON Y(n+5) detection flag reset	RXn5	CH6 A/D Conversion completed flag	RYn0 to RY(n+1)7	Use prohibited	
. (. 2)	detection flag	,	signal	RXn6	CH7 A/D Conversion completed flag		
X(n+6)	X(n+6) Use prohibited Y(n+6	Y(n+6)	Use prohibited	RXn7	CH8 A/D Conversion completed flag		
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal *1	RXn8 to RXnB	Use prohibited		
X(n+8)				RXnC	E ² PROM write error flag		
to X(n+17)	Use prohibited			RXnD to RX(n+1)7	Use prohibited		
X(n+18)	A/D conversion READY	Y(n+8)	Use prohibited	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data processing complete flag
	NLAD1	Y(n+1F)	Ose prombited	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag
X(n+19)				RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag
to X(n+1F)	Use prohibited	ibited	RX(n+1)B RX(n+1)C to RX(n+5)F	Remote READY Use prohibited	RY(n+1)B to RY(n+5)F	Use prohibited	

^{*1:} The signal contents differ when a version B A68ADC is combined with a version B A2CCPU.

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A68ADC		AJ65VBTCU-68ADVN/AJ65VBTCU-68ADIN			
Address	Name	Read/write	Address	Read/write		
0	Specification of channel to use		RWwm+0	A/D conversion enable/disable specification		
1	Averaging processing specification		RWwm+1	CH1 to 4 input range setting		
2	CH1 Averaging time, count		RWwm+2	CH5 to 8 input range setting		
3	CH2 Averaging time, count		RWwm+3	Averaging processing specification		
4	CH3 Averaging time, count	R/W	RWwm+4	CH1 Averaging time, count		
5	CH4 Averaging time, count		RWwm+5	CH2 Averaging time, count	W	
6	CH5 Averaging time, count		RWwm+6	CH3 Averaging time, count		
7	CH6 Averaging time, count		RWwm+7	CH4 Averaging time, count		
8	CH7 Averaging time, count		RWwm+8	CH5 Averaging time, count		
9	CH8 Averaging time, count		RWwm+9	CH6 Averaging time, count		
10	CH1 Digital output value		RWwm+A	CH7 Averaging time, count		
11	CH2 Digital output value		RWwm+B	CH8 Averaging time, count		
12	CH3 Digital output value		RWrn+0	CH1 Digital output value		
13	CH4 Digital output value	R	RWrn+1	CH2 Digital output value		
14	CH5 Digital output value	K	RWrn+2	CH3 Digital output value		
15	CH6 Digital output value		RWrn+3	CH4 Digital output value		
16	CH7 Digital output value		RWrn+4	CH5 Digital output value	R	
17	CH8 Digital output value		RWrn+5	CH6 Digital output value		
18	Write data error code	R/W	RWrn+6	CH7 Digital output value		
19	A/D conversion completed flag	R	RWrn+7	CH8 Digital output value		
			RWrn+8	Error code		
			RWrn+9 to	Llac prohibited		
			RWrn+B	Use prohibited	_	

6.2.2 Analog output module comparison

(1) Comparisons between A64DAVC and AJ65BT-64DAV

(a) Performance specifications comparisons

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

		○: Compatible, △: Pa		required, x: Not compatible
Item	A64DAVC	AJ65BT-64DAV	Compati- bility	Precautions for replacement
Digital output	(1) 16-bit signed binary value (2) Setting range: Set resolution Setting range 1/4000 -4000 to 4000 1/8000 -8000 to 8000 1/12000 -12000 to 12000	16bits signed binary (valid bits: 12 bits) -2048 to +2047	×	The setting range has been changed.
Analog output	-10 to 0 to 10VDC (external load resistance: $2k \Omega$ to $1M \Omega$)	Voltage: -10 to +10VDC (external load resistance: $2k \Omega$ to $1M \Omega$)	0	
I/O characteristics	Digital value resolution	Digital input value	Δ	The digital input range is different.
Maximum resolution of digital value	0.83mV (1/12000)	5mV (1/2000)	×	The maximum resolution is different.
Overall accuracy (accuracy of maximum value)	± 1.0% (:	± 100mV)	0	
Maximum conversion speed	Within 25ms/4 channels (1 channel is same period of time)	Max. 1ms/channel (4ms/4 channels)	0	
Number of analog output points	4 channe	ls/module	0	
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolated between channels)	Between output channels: Non-isolated Between external power supply and analog output: Transformer insulation	0	
Number of occupied I/O stations (number of points)	4 stations (32 points)	2 stations (RX/RY 32 points each, RWr/RWw 8 points each)	×	The number of occupied stations has been changed.
Connected terminal	47-point terminal block	27-point terminal block	×	
Applicable wire size	0.75 to 2mm ² (applicable tight	tening torque 39 to 59N • cm)	0	Change in wiring is required.
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3.5 (comforting to JIS C 2805), RAV2-3.5	×	- 1
24VDC internal current consumption	0.12A	0.18A	×	The current consumption has increased.
Weight	1.01kg	0.4kg	0	
External dimensions	170(H) × 100(W) × 80(D) mm	65(H) × 151.9(W) × 63(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.



○: Compatible, △: Partial change required, ×: Not compatible

		O: Compatible, ∆: Pa		e required, × : Not compatible
Item	A64DAVC	AJ65BT-64DAV	Compati- bility	Precautions for replacement
		By turning the analog output enable		·
		signal ON or OFF with the sequence		
	Man the control of th	program, it is possible to select the type		
	With the analog output enable signals	of output values at each channel from D/		
Analog output	(Yn+18 to Yn+1B), it is possible to select	A converted analog values and output		
enable signal	the type of output values at each	offset values.	0	
	channel from D/A converted analog	Note, however, that the D/A conversion		
	values and output offset values.	time (conversion speed) is fixed		
		regardless of the setting of the analog		
		output enable signal.		
		By writing "0" or "1" to the address of the		
Analog output	Stores the channel to disable analog	remote register using the sequence		
enable/disable	output from (0V/0mA) in the buffer	program, it is possible to select on each	0	
setting	memory of the A64DAVC.	channel whether to enable or disable		
		outputs of analog values.		
		In preparation for the event that the		
		programmable controller CPU enters a		
		stop status or the AJ65BT-64DAV stops		
	In preparation for the event that the	D/A conversion due to an error, the		
	programmable controller CPU enters a	HLD/CLR terminal can be used to select		
	stop status or an error status, select	whether to hold or clear analog values		
HOLD/CLEAR	HOLD or CLEAR (offset values or 0V/	(output offset values) that are being		
setting	0mA) analog values that are stored	output from each channel right before	0	
	before a stop or an error occurrence	those stops. The HLD/CLR terminal is		
	using the HOLD/CLEAR terminal.	provided on the front of the module and		
	daing the HOLD/CLLAR terminal.	this selection can be made on all		
		channels at once.		
		(Including the case of the		
		disconnections of link communication)		
		I/O conversion characteristics can be		
		changed as desired when the detailed		
		ones are required. To do this, short the		
		test mode terminal to enter a test mode,		
Offset/gain	Changes the I/O conversion	and configure the offset/gain settings for		
setting	characteristics.	each channel without a aid of a various	0	
Setting	onaracteristics.	register. Also, if detailed I/O conversion		
		characteristics are not required, the		
		default offset/gain values can be used		
		by turning on the I/O signal RYn4 (offset/		
		gain selection) to the master station.		

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	A64	DAVC		AJ65BT-64DAV				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
						RYn0	CH1 Enable signal flag for analog output	
X(n+0)		Y(n+0)				RYn1	CH2 Enable signal flag for analog output	
, ,	Use prohibited	to Y(n+3)	Use prohibited	RXn0 to RXnF		RYn2	CH3 Enable signal flag for analog output	
	Use prohibited	Use prohibited	RYn3	CH4 Enable signal flag for analog output				
						RYn4	Offset/gain value selection	
	Communication error detection flag					RYn5 to RYnF		
X(n+4)	indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal	RX(n+1)0 to RX(n+1)7	to		Use prohibited	
X(n+5)	A64DAVC reset switch ON detection flag	Y(n+5)	Reset signal for reset switch ON detection flag	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data processing complete flag	
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag	
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag	
X(n+8) to X(n+17)	Use prohibited	Y(n+8) to Y(n+17)	Use prohibited	RX(n+1)B	Remote READY	RY(n+1)B		
		Y(n+18)	CH1 Analog output enable signal	RX(n+1)C		RY(n+1)C		
V/ 40)	D/A conversion	Y(n+19)	CH2 Analog output enable signal	RX(n+1)D		RY(n+1)D	Use prohibited	
X(n+18)	READY	Y(n+1A)	CH3 Analog output enable signal	RX(n+1)E	Use prohibited	RY(n+1)E		
		Y(n+1B)	CH4 Analog output enable signal	RX(n+1)F		RY(n+1)F		
X(n+19) to X(n+1F)	Use prohibited	Y(n+1C) to Y(n+1F)	Use prohibited					

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A64DAVC		AJ65BT-64DAV			
Address	Name	Read/write	Address	Name	Read/write	
0	CH1 Digital value setting area		RWwm	CH1 Digital value setting area		
1	CH2 Digital value setting area		RWwm+1	CH2 Digital value setting area		
2	CH3 Digital value setting area		RWwm+2	CH3 Digital value setting area		
3	CH4 Digital value setting area		RWwm+3	CH4 Digital value setting area	W	
4	CH1 Analog output disable/enable setting area		RWwm+4	Analog output enable/disable area		
5	CH2 Analog output disable/enable setting area	RWwm+5				
6	CH3 Analog output disable/enable setting area	R/W	RWwm+6	Use prohibited	_	
7	CH4 Analog output disable/enable setting area		RWwm+7			
8	Resolution of digital value setting area		RWm	CH1 Set value check code		
9	Error code storage area		RWrn+1	CH2 Set value check code	R	
			RWrn+2	CH3 Set value check code		
			RWrn+3	CH4 Set value check code		
			RWrn+4	Error code		
			RWrn+5			
			RWrn+6	Use prohibited	_	
			RWrn+7			

(2) Comparisons between A64DAVC and AJ65SBT-62DA

(a) Performance specifications comparisons

○: Compatible, △: Partial change required, ×: Not compatible

	Ì						O: Co	mpatible,	_∆:Pa		required, x: Not compatible
Item	A64E	DAVC				AJ6	5SBT-62E)A		Compati- bility	Precautions for replacement
Digital input	(1) 16-bit signed bin (2) Setting range: Set resolution 1/4000 1/8000 1/12000	Setting r -4000 to -8000 to -12000 to	4000		Voltage: 16bits signed binary (-4096 to +4095) Current: 16bits signed binary (0 to 4095)				×	The setting range has been changed.	
Analog output	-10 to 0 t (external loa 2k Ω to	d resistance	ə:	Voltage: -10 to +10VDC (external load resistance: 2k Ω to 1M Ω) Current: 0 to 20mA DC (external load resistance: 0 to 60			stance: () (A DC) Ω)	0		
I/O characteristics	Digital value re	1/12000 12000 6000 0 -6000 -12000	Analog output value* +10V +5V 0V -5V -10V 0 OV and	Voltage	Digital input value -4000 to +4000	Analog output -10 to +10V User range setting 1 (-10 to +10V) 0 to 5V I to 5V User range setting 2	Accu. Ambient temperature 0 to 55 °C ± 0.4% (± 40mV) ± 0.4% (± 20mV)	Ambient temperature 25±5°C ±0.2% (±20mV)	Maximu m resoluti on 2.5mV	Δ	The digital input range is different.
Maximum resolution of digital value	0.83mV(1/12000)		Current	0 to	(0 to 5V) 0 to 20mA 4 to 20mA User range	±0.4% (±80 μ A)	±0.2% (±40 μ A)	5μΑ	×	The maximum resolution is different.
Overall accuracy (accuracy of maximum value)	± 1.0% (:	± 100mV)		Factory-set: -1				(±40μ λ)	4μΑ	0	
Maximum conversion speed	Within 25ms (1 channel is san					1m	s/channe	I		0	
Absolute maximum output	-	_			Volt	age: ± 1	2V, currei	nt: +21m/	A	0	
Number of analog output points	4 channe	ls/module				2 char	nnels/mod	dule		×	Please consider replacing by using two or more AJ65SBT-62DA modules.
Insulation method	Between the out programmable cont Photocoupl (non-isolation be	roller power er isolation	r supply:	Between communication line and all analog outputs: Photocoupler isolation between power supply line and all analog outputs: Photocoupler isolation (non-isolated between channels)			0				
Number of occupied I/O stations (number of points)	4 stations	(32 points)				(RX/RY	station 32 points w 4 points			×	The number of occupied stations has been changed.

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Item	A64DAVC	AJ65SBT-62DA	Compati- bility	Precautions for replacement	
Connected terminal	47-point terminal block	25-point terminal block	×		
Applicable wire size	0.75 to 2mm ² (Applicable tightening torque 39 to 59 N • cm)	0.3 to 0.75mm ²	×	Change in wiring is	
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3 (conforming to JIS C 2805) [Applicable wire size: 0.3 to 1.25mm²] V2-MS3, RAV2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm²]	Change in wiring is required.		
24VDC internal current consumption	0.12A	0.16A	×	The current consumption has increased.	
Weight	1.01kg	0.20kg	0		
External dimensions	170(H) × 100(W) × 80(D)mm	50(H) × 118(W) × 40(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.	

○: Compatible, △: Partial change required, ×: Not compatible

	tial change	required, x: Not compatible			
Item	A64DAVC	AJ65SE	T-62DA	Compati- bility	Precautions for replacement
D/A output enable/disable function	Selects on each channel whether to output D/A conversion values or offset values. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.	Selects on each cha output D/A conversion values. Note, however, that speed is fixed regard enable/disable setting	on values or offset the conversion dless of the output	0	
D/A conversion enable/disable function	-	Selects whether to e A conversion on eac By making unused c conversion prohibite can be shortened.	h channel. hannels D/A	-	
Output range switching function	_	Sets the analog outs channel and change characteristics. The following eight i selected: Output range -10 to +10V 0 to 5V 1 to 5V 0 to 20mA 4 to 20mA User range setting 1 (-10 to +10V) User range setting 2 (0 to 5V) User range setting 3 (0 to 20mA)	s the I/O conversion	_	
HOLD/CLEAR setting	As the analog output status of the programmable controller CPU that is in RUN, at STOP, or in an error status, switching the type of output values as desired between D/A conversion values, offset values and 0V/0mA is possible.	In preparation for the programmable contractor stop status or the ALD/A conversion due settings can be confuncted whether to hold or classification output offset values output from each characteristics.	oller CPU enters a 165SBT-62DA stops to an error, this igured to select ear analog values) that are being	0	
Offset/gain value selection	Changes the I/O conversion characteristics.	Changes the I/O cor characteristics as de offset/gain settings of for each channel wit various register.	esired. For that, can be configured	0	



I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

	A64I	DAVC		AJ65SBT-62DA				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0)		Y(n+0)		RXn0 to RXnB	Use prohibited	RYn0	CH1 Analog output enable/disable flag	
to X(n+3)	Use prohibited	to Y(n+3)	Use prohibited	RXnC	E ² PROM write error flag	RYn1	CH2 Analog output enable/disable flag	
Χ(11.5)		1(11.3)		RXnD	Use prohibited			
				RxnE	•			
				RXnF	Test mode flag			
X(n+4)	Communication error detection flag indicating that execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal	RX(n+1)0 to RX(n+1)7	Use prohibited	RYn2 toRY(n+1)7	Use prohibited	
	A64DAVC reset		Reset signal for		Initial data		Initial data	
X(n+5)	switch ON	Y(n+5)	reset switch ON	RX(n+1)8	processing	RY(n+1)8	processing	
	detection flag		detection flag		request flag		complete flag	
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag	
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag	
X(n+8)		Y(n+8)						
to	Use prohibited	to	Use prohibited	RX(n+1)B	Remote READY			
X(n+17)		Y(n+17)						
		Y(n+18)	CH1 Analog output					
			enable signal					
	D/A conversion	Y(n+19)	CH2 Analog output			RY(n+1)B		
X(n+18)	READY		enable signal CH3 Analog output	RX(n+1)C		to	Use prohibited	
	NEADT	Y(n+1A)	enable signal	to	Use prohibited	RY(n+1)F	·	
		Y(n+1B)	CH4 Analog output enable signal	RX(n+1)F	ose prombited			
X(n+19)		Y(n+1C)	<u> </u>					
to	Use prohibited	to	Use prohibited					
X(n+1F)		Y(n+1F)						

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

A64DAVC			AJ65SBT-62DA		
Address	Name	Read/write	Address	Name	Read/write
0	CH1 Digital value setting area		RWwm	CH1 Digital value setting	
1	CH2 Digital value setting area		RWwm+1	CH2 Digital value setting	W
2	CH3 Digital value setting area		RWwm+2	Analog output enable/disable setting	VV
3	CH4 Digital value setting area		RWwm+3	Output range HOLD/CLEAR setting	
4	CH1 Analog output disable/enable setting area		RWrn	CH1 Check code	
5	CH2 Analog output disable/enable setting area	R/W	RWrn+1	CH2 Check code	
6	CH3 Analog output disable/enable setting area		RWrn+2	Error code	R
7	CH4 Analog output disable/enable setting area		RWrn+3	Use prohibited	
8	Resolution of digital value setting				
0	area				
9	Error code storage area				



(3) Comparisons between A64DAVC and AJ65VBTCU-68DAVN

(a) Performance specifications comparisons

O: Compatible	∴ Partial change required,	v · Not compatible
(). Compande,	A. Fartial Charige required.	X . NOL COMPANDIE

		O. Compatible, △. P		e required, × : Not compatible
Item	A64DAVC	AJ65VBTCU-68DAVN	Compati- bility	Precautions for replacement
Digital input	(1) 16-bit signed binary value (2) Setting range: Set resolution Setting range 1/4000 -4000 to 4000 1/8000 -8000 to 8000 1/12000 -12000 to 12000	16bits signed binary (-4096 to +4095)	×	The setting range has been changed.
Analog output	-10 to 0 to 10VDC (external load resistance: 2k Ω to 1M Ω)	-10 to +10V DC (external load resistance: 2k Ω to 1M Ω)	0	
I/O characteristics	Digital value resolution	Digital input value	Δ	The digital input range is different.
Maximum resolution of digital value	0.83mV(1/12000)	(0.000)	×	The maximum resolution is different.
Overall accuracy (accuracy relative to maximum value)	± 1.0% (± 100mV)		0	
Maximum conversion speed	Within 25ms/4 channels (1 channel is same period of time)	1ms/channel	0	
Absolute maximum output	-	± 12V	0	
Analog output points	4 channels/module	8 channels/module	Δ	The number of channels has increased.
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolated between channels)	Isolated locations Isolation method withstand voltage Between communication line and all analog outputs: Between power supply line and all analog outputs: Between power supply line and all analog outputs: Between power supply line and all analog outputs: Between Non-channels isolated	0	
Number of occupied I/O stations (number of points)	4 stations (32 points)	When set to Ver.1 remote device station (Ver.1 compatible slave station): 3 stations (RX/RY 32 points each, RWr/RWw 12 points each) When set to Ver.2 remote device station (Ver.2 compatible slave station): 1 station (Expanded cyclic setting: 4X) (RX/RY 32 points each, RWr/RWw 16 points each)	×	The number of occupied stations has been changed.

			○: Compatible, △: F	Partial change	e required, ×: Not compatible
Item	A64DAVC	AJ65\	/BTCU-68DAVN	Compati- bility	Precautions for replacement
Connected terminal Applicable wire	47-point terminal block 0.75 to 2mm ²	One-touch connector for communication	Communication line: Ver.1.10- compatible CC-Link dedicated cable 0.5mm² (AWG 20)[\phi2.2 to 3.0], shield wire 0.5mm²		
size	(Applicable tightening torque 39 to 59 N - cm)	One-touch connector for power supply/FG	(AWG 20) 0.66 to 0.98mm ² (AWG 18)[φ 2.2 to 3.0] wire diameter 0.16mm or more		Change in wiring is
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	One-touch connector for analog I/O		×	required.
24VDC internal current consumption	0.12A		0.15A		The current consumption has increased.
Weight	1.01kg		0.16kg		
External dimensions	170(H) × 100(W) × 80(D) mm	115(H) × 41(W) × 67(D) mm		×	The overall size differs. Pay attention to the mounting dimensions.

○: Compatible, △: Partial change required, ×: Not compatible

14				Compati-	equired, × : Not compatible Precautions for
Item	A64DAVC	AJ65VB1C	U-00DAVN	bility	replacement
	Selects on each channel whether to	Selects on each cha	nnel whether to		
D/A output	output D/A conversion values or offset	output D/A conversion	on values or offset		
enable/disable	l '	values.			
function	values. Note, however, that the conversion speed is fixed regardless of	Note, however, that	the conversion	0	
TUTICUOTI	,	speed is fixed regard	dless of the output		
	the output enable/disable setting.	enable/disable setting	g.		
		Selects whether to e	nable or disable D/		
D/A conversion		A conversion on each	h channel.		
enable/disable	_	By making unused of	hannels D/A	_	
function		conversion prohibite	d, sampling period		
		can be shortened.			
		Sets the analog outp	out range on each		
		channel and change	s the I/O conversion		
		characteristics.			
		The following five ou	tput ranges can be		
		selected:			
Output range		Output range	Set value		
switching	_	-10 to +10V	0 _H	-	
function		0 to 5V	1 _H		
		1 to 5V	2 _H		
		User range setting 1 (-10 to +10V)	3 _H		
		User range setting 2 (0 to 5V)	4 _H		
	As the analog output status of the	In preparation for the	e event that the		
	programmable controller CPU that is in	programmable contr	oller CPU enters a		
	RUN, at STOP, or in an error status,	stop status or the AJ	65VBTCU-68DAVN		
	switching the type of output values as	stops D/A conversion	n due to an error,		
HOLD/CLEAR	desired between D/A conversion values,	this settings can be	configured to select	0	
setting	offset values and 0V/0mA is possible.	whether to hold or cl	ear analog values		
	D/A conversion value outputs, offset	(output offset values) that are being		
	value outputs and 0V/0mA outputs can	output from each cha	,		
	be revised arbitrarily.	those stops.	-		
		Changes the I/O cor	iversion		
0" "]	characteristics as de	sired. For that,		
Offset/gain	Changes the I/O conversion	offset/gain settings of	an be configured	0	
value selection	characteristics.	for each channel wit	hout a aid of a		
		various register.			

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

A64DAVC			AJ65VBTCU-68DAVN				
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description
X(n+0) to	Use prohibited	Y(n+0)	Use prohibited	RXn0		RYn0	CH1 Analog output enable/disable flag
X(n+3)	Ose pronibiled	Y(n+3)	ose pronibiled	to	Use prohibited	RYn1	CH2 Analog output enable/disable flag
	Communication error detection flag			RXnB		RYn2	CH3 Analog output enable/disable flag
	indicating that execution of the		Error detection reset	RXnC	E ² PROM write error flag	RYn3	CH4 Analog output enable/disable flag
X(n+4)	FROM and TO instructions resulted in a communication error	Y(n+4)	signal			RYn4	CH5 Analog output enable/disable flag
	A64DAVC reset			RXnD		RYn5	CH6 Analog output enable/disable flag
X(n+5)	switch ON	Y(n+5)	Reset switch ON detection flag	to	Use prohibited	RYn6	CH7 Analog output enable/disable flag
	detection flag			RX(n+1)7		RYn7	CH8 Analog output enable/disable flag
X(n+6)	Use prohibited	Y(n+6)	Use prohibited				
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal			RYn8 to RY(n+1)7	Use prohibited
X(n+8) to	Use prohibited	Y(n+8) to	Use prohibited	RX(n+1)8	Initial data processing	RY(n+1)8	Initial data processing
X(n+17)	Ose profilbited	Y(n+17)	Ose proffibiled	KX(II+1)0	request flag	K1(II+1)0	complete flag
		Y(n+18)	CH1 Analog output enable signal	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag
X(n+18)	A/D conversion	Y(n+19)	CH2 Analog output enable signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset
λ(11. 10)	READY	Y(n+1A)	CH3 Analog output enable signal	RX(n+1)B	Remote READY		
		,		RX(n+1)C		RY(n+1)B to	Use prohibited
X(n+19) to X(n+1F)	Use prohibited	Y(n+1C) to Y(n+1F)	Use prohibited	to RX(n+5)F	Use prohibited	RY(n+5)F	



Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

For details on buffer memory and sequence progra				AJ65VBTCU-68DAVN	
Address	Name	Read/write	Address	Name	Read/write
0	CH1 Digital value setting area		RWwm+0	CH1 Digital value setting	
1	CH2 Digital value setting area	1	RWwm+1	CH2 Digital value setting	
2	CH3 Digital value setting area	1	RWwm+2	CH3 Digital value setting	
3	CH4 Digital value setting area	1	RWwm+3	CH4 Digital value setting	
4	CH1 Analog output disable/enable setting area		RWwm+4	CH5 Digital value setting	
5	CH2 Analog output disable/enable setting area	R/W	RWwm+5	CH6 Digital value setting	
6	CH3 Analog output disable/enable setting area		RWwm+6	CH7 Digital value setting	W
7	CH4 Analog output disable/enable setting area		RWwm+7	CH8 Digital value setting	
8	Resolution of digital value setting area		RWwm+8	Analog output enable/disable setting	
9	Error code storage area		RWwm+9	CH1 to CH4 Output range setting	
			RWwm+A	CH5 to CH8 Output range setting	
			RWwm+B	HOLD/CLEAR setting	
			RWrn+0	CH1 Check code	
			RWrn+1	CH2 Check code	
			RWrn+2	CH3 Check code	
			RWrn+3	CH4 Check code	
			RWrn+4	CH5 Check code	R
			RWrn+5	CH6 Check code	
			RWrn+6	CH7 Check code	
			RWrn+7	CH8 Check code	
			RWrn+8	Error code	
			RWrn+9		
			to	Use prohibited	_
			RWrn+B		

(4) Comparisons between A64DAIC and AJ65BT-64DAI

(a) Performance specifications comparisons

	O: Compatible, △: Partial change required, ×: Not compa						
Item	A64DAIC	AJ65BT-64DAI	Compati- bility	Precautions for replacement			
Digital input	(1) 16-bit signed binary value (2) Setting range: Set resolution Setting range 1/4000 0 to 4000 1/8000 0 to 8000 1/12000 0 to 12000	16bits signed binary (valid bits: 12 bits) 0 to 4095	×	The setting range has been changed.			
Analog output	0 to 20mA DC (external load resistance: 0 to 600 Ω)	Current: +4 to 20mA DC (external load resistance: 0 to 600 Ω)	0				
I/O characteristics	Digital value resolution	Digital input value 4000 +20mA 2000 +12mA 0 +4mA	Δ	The digital input range is different.			
Maximum resolution of digital value	1.3 μA(1/2000)	4 μA(1/4000)	×	The maximum resolution is different.			
Overall accuracy (accuracy relative to maximum value)	± 1.0%(0					
Maximum conversion speed	Within 25ms/4 channels (1 channel is same period of time)	Max. 1ms/channel (4ms/4 channels)	0				
Analog output	4 channe	els/module	0				
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolated between channels)	Between output channels: Non-isolated (Between external power supply and analog output: Transformer isolation)	0				
Number of occupied I/O stations (number of points)	4 stations (32 points)	2 stations: (RX/RY 32 points each, RWr/RWw 8 points each)	×	The number of occupied stations has been changed.			
Connected terminal	47-point terminal block	27-point terminal block	×				
Applicable wire size	0.75 to 2mm ² (applicable tigh	0	Change in wiring is required.				
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	RAV1.25-3.5 (conforming to JIS C 2805), RAV2-3.5	×	roquirou.			
24VDC internal current consumption	0.15A	0.27A	×	The current consumption has increased.			
Weight External dimensions	1.01kg 170(H) × 100(W) × 80(D) mm	0.4kg 65(H) × 151.9(W) × 63(D) mm	×	The overall size differs. Pay attention to the mounting dimensions.			



○: Compatible, △: Partial change required, ×: Not compatible

Item A64DAIC AJ65BT-64DAI Compatibility Precaution replacem By turning the analog output enable By turning the analog output enable Image: Compatibility or compatibility or	
By turning the analog output enable	ent
signal ON or OFF with the sequence	
program, it is possible to select the type	
With the analog output enable signals of output values at each channel from D/	
Analog output (Yn+18 to Yn+1B), it is possible to select A converted analog values and output	
enable signal the type of output values at each offset values.	
channel from D/A converted analog Note, however, that the D/A conversion	
values and output offset values. time (conversion speed) is fixed	
regardless of the setting of the analog	
output enable signal.	
By writing "0" or "1" to the address of the	
Analog output Stores the channel to disable analog remote register using the sequence	
enable/disable output from (0V/0mA) in the buffer program, it is possible to select on each	
setting memory of the A64DAIC. channel whether to enable or disable	
outputs of analog values.	
In preparation for the event that the	
programmable controller CPU enters a	
stop status or the AJ65BT-64DAI stops	
In preparation for the event that the	
I HLD/CLR terminal can be used to select I	
programmable controller CPU enters a stop status or an error status, the HOLD/ whether to hold or clear analog values	
HOLD/CLEAR (output offset values) that are being	
setting CLEAR terminal can be used to select output from each channel right before	
HOLD or CLEAR (offset values or 0V/	
0mA) analog values that are stored provided on the front of the module and	
before a stop or an error occurrence. this selection can be made on all	
channels at once.	
(Including the case of the	
disconnections of link communication)	
I/O conversion characteristics can be	
changed as desired when the detailed	
ones are required. To do this, short the	
test mode terminal to enter a test mode,	
offset/gain Schanges the I/O conversion and configure the offset/gain settings for	
Offset/gain Changes the I/O conversion each channel without a aid of a various	
setting characteristics. register. Also, if detailed I/O conversion	
characteristics are not required, the	
default offset/gain values can be used	
by turning on the I/O signal RYn4 (offset/	
gain selection) to the master station.	

I/O signal is different, so the sequence program must be changed. For details on I/O signals and sequence programs, refer to the User's Manual.

A64DAIC			AJ65BT-64DAI					
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description	
X(n+0)	Use prohibited	Y(n+0)	Use prohibited			RYn0	CH1 Analog output enable flag	
X(n+3)	Ose profilbited	Y(n+3)	Ose profibiled			RYn1	CH2 Analog output enable flag	
	Communication error detection flag			RXn0		RYn2	CH3 Analog output enable flag	
	indicating that execution of the		Error detection	to RXnF	Use prohibited	RYn3	CH4 Analog output enable flag	
X(n+4)	FROM and TO instructions	Y(n+4)	reset signal		Ose prombited	RYn4	Offset/gain value selection	
	resulted in a					RYn5		
	communication					to		
	error					RYnF	Use prohibited	
	A64DAIC reset		Reset switch ON	RX(n+1)0		RY(n+1)0	ose prombited	
X(n+5)	switch ON	Y(n+5)	detection flag reset	to		to		
	detection flag		signal	RX(n+1)7		RY(n+1)7		
					Initial data		Initial data	
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RX(n+1)8	processing request	RY(n+1)8	processing	
					flag		complete flag	
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag	
X(n+8) to X(n+17)	Use prohibited	Y(n+8) to Y(n+17)	Use prohibited	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag	
X(n+18)	D/A conversion READY	Y(n+18)	CH1 Analog output enable signal	RX(n+1)B	Remote READY	RY(n+1)B		
		Y(n+19)	CH2 Analog output enable signal	RX(n+1)C		RY(n+1)C		
X(n+19)		Y(n+1A)	CH3 Analog output enable signal	RX(n+1)D		RY(n+1)D	Use prohibited	
to X(n+1F)	Use prohibited	Y(n+1B)	CH4 Analog output enable signal	RX(n+1)E	Use prohibited	RY(n+1)E		
	to	Y(n+1C) to Y(n+1F)	Use prohibited	RX(n+1)F		RY(n+1)F	+1)F	

Buffer memory allocation is different, so the sequence program must be changed. For details on buffer memory and sequence programs, refer to the User's Manual.

	A64DAIC		AJ65BT-64DAI		
Address	Name	Read/write	Address	Name	Read/write
0	CH1 Digital value setting area		RWwm	CH1 Digital value setting area	
1	CH2 Digital value setting area		RWwm+1	CH2 Digital value setting area	
2	CH3 Digital value setting area		RWwm+2	CH3 Digital value setting area	w
3	CH4 Digital value setting area		RWwm+3	CH4 Digital value setting area] "
4	CH1 Analog output disable setting area		RWwm+4	Analog output enable/disable area	
5	CH2 Analog output disable setting area	R/W	RWwm+5		
6	CH3 Analog output disable setting area	-	RWwm+6	Use prohibited	-
7	CH4 Analog output disable setting area		RWwm+7		
8	Resolution of digital value setting area		RWrn	CH1 Set value check code	
9	Error code storage area		RWrn+1	CH2 Set value check code	R
			RWrn+2	CH3 Set value check code	K
			RWrn+3	CH4 Set value check code	
			RWrn+4	Error code	
			RWrn+5		
			RWrn+6	Use prohibited	-
			RWrn+7		

(5) Comparisons between A64DAIC and AJ65SBT-62DA

(a) Performance specifications comparisons

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

		O: Compatible, △: Pa	Compati-	e required, × : Not compatible Precautions for
Item	A64DAIC	AJ65SBT-62DA	bility	replacement
Digital input	(1) 16-bit signed binary value (2) Setting range: Set resolution Setting range 1/4000 0 to 4000 1/8000 0 to 8000 1/12000 0 to 12000	Voltage: 16-bit signed binary (-4096 to +4095) Current: 16bits signed binary (0 to 4095)	×	The setting range has been changed.
Analog output	0 to 20mA DC (external load resistance: 0 to 600 Ω)	Voltage: -10 to +10V DC (external load resistance: $2k\Omega\ \ \text{to }1\text{M}\Omega\)\\ 0\ \text{to }2\text{0mA}\ \text{DC}$ (external load resistance: 0 to 600 Ω)	0	
I/O characteristics	Digital value resolution	Digital input value	Δ	The digital input range is different.
Maximum resolution of digital value	1.3 μA(1/12000)	(0 to 5V) 10 to 20mA 4 to 20mA 4 to 20mA 2 to 80 \(\pm \) (\pm 40 \(\pm \) (\pm 40 \(\pm \) A) 4 to 80 \(\pm \) (\pm 40 \(\pm \) (\pm 40 \(\pm \) A) 4 to 80 \(\pm \) (\pm 40 \(\pm \) A) 5 \(\pm \) A 4 to 20mA 5 \(\pm \) A 4 to 20mA 5 \(\pm \) A 4 to 20mA 5 \(\pm \) A 4 to 20mA 5 \(\pm \) A 4 to 20mA 4 to 20mA 5 \(\pm \) A 6 to 20mA 7 to 20mA 8 to 20mA 9 to 20mA 9 to 20mA 9 to 20mA 10 to	×	The maximum resolution is different.
Overall accuracy (accuracy relative to maximum value)	$\pm \ 1.0\% (\pm \ 200\ \mu A)$	Factory-set: -10 to +10V.	0	
Maximum conversion speed	Within 25ms/4 channels (1 channel is same period of time)	1ms/channel	0	
Number of analog output points	4 channels/module	2 channels/module	×	Please consider replacing by using two or more AJ65SBT-62DA modules.
Insulation method	Between the output terminal and programmable controller power supply: Photocoupler isolation (non-isolated between channels)	Between communication line and all analog outputs: Photocoupler isolation between power supply line and all analog outputs: Photocoupler isolation (non-isolated between channels)	0	
Number of occupied I/O stations (number of points)	4 stations (32 points)	1 stations (RX/RY 32 points each, RWr/RWw 4 points each)	×	The number of occupied stations has been changed.
Connected terminal	47-point terminal block	25-point terminal block	×	
Applicable wire size	0.75 to 2mm ² (Applicable tightening torque 39 to 59 N - cm)	0.3 to 0.75mm ²	×	Change in wiring is
Applicable solderless terminal	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	 RAV1.25-3 (conforming to JIS C 2805) [Applicable wire size: 0.3 to 1.25mm²] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm²] 	×	required.

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Item	A64DAIC	AJ65SBT-62DA	Compati- bility	Precautions for replacement
24VDC				
internal	0.15A	0.16A	×	The current consumption
current	0.13A	0.16A		has increased.
consumption				
Weight	1.01kg	0.20kg	0	
External				The overall size differs.
dimensions	170(H) × 100(W) × 80(D) mm	50(H) × 118(W) × 40(D) mm	×	Pay attention to the
				mounting dimensions.

 $\bigcirc : Compatible, \ \triangle : Partial \ change \ required, \ \times : Not \ compatible$

			J: Compatible, ∆: Pa		e required, × : Not compatible
Item	A64DAIC	AJ65SE	BT-62DA	Compati- bility	Precautions for replacement
D/A output enable/disable function	Selects on each channel whether to output D/A conversion values or offset values. Note, however, that the conversion speed is fixed regardless of the output enable/disable setting.	Selects on each cha output D/A conversi values. Note, howev conversion speed is the output enable/di	on values or offset ver, that the fixed regardless of sable setting.	0	
D/A conversion enable/disable function	-	Selects whether to e D/A conversion on e By making unused o conversion prohibite can be shortened.	each channel. channels D/A	-	
Output range switching function	_	characteristics.	set value OH OH SH OH OH OH OH OH OH OH	-	
HOLD/CLEAR setting	As the analog output status of the programmable controller CPU that is in RUN, at STOP, or in an error status, switching the type of output values as desired between D/A conversion values, offset values and 0V/0mA is possible. D/A conversion value outputs, offset value outputs and 0V/0mA outputs can be revised arbitrarily.	In preparation for the programmable control stop state or the AJI D/A conversion due settings can be control whether to hold or control for control from each characteristics.	roller CPU enters a 65SBT-62DA stops to an error, this figured to select lear analog values s) that are being	0	
Offset/gain setting	Changes the I/O conversion characteristics.	Changes the I/O colling characteristics as do offset/gain settings of for each channel with various register.	esired. For that, can be configured	0	



The sequence program must be changed as the I/O signals differ.

For details on I/O signals and sequence programs, refer to the User's Manual.

		DAIC		AJ65SBT-62DA			
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description
				RXn0 to	Use prohibited	RYn0	CH1 Analog output
X(n+0)		Y(n+0)		RXnB	·		enable/disable flag
to X(n+3)	Use prohibited	to Y(n+3)	Use prohibited	RXnC	E ² PROM write error flag	RYn1	CH2 Analog output enable/disable flag
	Communication error detection flag			RXnD RXnE	Use prohibited		
	indicating that			RXnF	Test mode flag		
X(n+4)	execution of the FROM and TO instructions resulted in a communication error	Y(n+4)	Error detection reset signal	RX(n+1)0 to RX(n+1)7	Use prohibited	RYn2 to RY(n+1)7	Use prohibited
X(n+5)	A64DAIC reset switch ON detection flag	Y(n+5)	Reset switch ON detection flag reset signal	RX(n+1)8	Initial data processing request flag	RY(n+1)8	Initial data processing complete flag
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RX(n+1)9	Initial data setting complete flag	RY(n+1)9	Initial data setting request flag
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RX(n+1)A	Error status flag	RY(n+1)A	Error reset request flag
X(n+8)		Y(n+8)					_
to X(n+17)	Use prohibited	to Y(n+17)	Use prohibited	RX(n+1)B	Remote READY		
		Y(n+18)	CH1 Analog output enable signal	RX(n+1)C		RY(n+1)B	
V/ : 40\	D/A conversion	Y(n+19)	CH2 Analog output enable signal	RX(n+1)D	l la a manalailaita d	to RY(n+1)F	Use prohibited
X(n+18)	READY	Y(n+1A)	CH3 Analog output enable signal	RX(n+1)E	Use prohibited		
		Y(n+1B)	CH4 Analog output enable signal	RX(n+1)F			
X(n+19)		Y(n+1C)					
to	Use prohibited	to	Use prohibited				
X(n+1F)		Y(n+1F)					

8

9

(d) Buffer memory addresses comparisons

value setting area

Error code storage area

The sequence program must be changed as the buffer memory assignments differ. For details on buffer memory and sequence programs, refer to the User's Manual.

AJ65SBT-62DA A64DAIC Address Address Read/write Name Read/write Name CH1 Digital value setting 0 CH1 Digital value setting area RWwm CH2 Digital value setting area CH2 Digital value setting RWwm+1 W 2 CH3 Digital value setting area RWwm+2 Analog output enable/disable setting 3 CH4 Digital value setting area RWwm+3 Output range HOLD/CLEAR setting CH1 Analog output 4 CH1 Check code RWrn disable/enable setting area CH2 Analog output 5 RWrn+1 CH2 Check code R disable/enable setting area R/W CH3 Analog output 6 RWrn+2 Error code disable/enable setting area CH4 Analog output 7 RWrn+3 Use prohibited disable/enable setting area Resolution of digital

6.2.3 Comparison of temperature input module

(1) Comparisons between A64RD3C and AJ65BT-64RD3

(a) Performance specifications comparisons

○: Compatible, △: Partial change required, ×: Not of	compatible
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		O: Compatible, △: P		ge required, \times : Not compatible
Item	A64RD3C AJ65BT-64RD3		Compati- bility	Precautions for replacement
Measurement method	3-wir	0		
Connectable	Pt100 (JIS C 1604-1989,	0		
platinum	DIN43760-1980)	Pt100, JPt100		_
resistance thermometer	JPt100 (JIS C 1604-1981)		0	
T	Pt100: -180[°C] to +600[°C]		0	
Temperature input range	(27.08 Ω to 313.59 Ω) Pt100: -180[°C] to +600[°C]	-180[°C] to 600[°C]		
inputrange	(25.8 Ω to 317.28 Ω)		0	
	_	ned binary		
Detected		o +6000 mal place × 10)	0	
temperature		ned binary		
value	=	o +600000	0	
		al places × 1000)		
Resolution	· · · · · · · · · · · · · · · · · · ·	25°C	0	
		Ambient temperature		,
		(25 ± 5°C): ± 0.1%		
Overall	± 1%	(accuracy relative to maximum value)		
accuracy	(accuracy relative to full-scale)	Ambient temperature	0	
		(20 °C or less, 30 °C or more): \pm 0.25%		
		(accuracy relative to maximum value)		
Conversion speed	40ms/e	channel	0	
Number of				
temperature	4 channels/module	4 channels/module	0	
input points				
Output current				The temperature detecting
for temperature	4.2mA (MIN.), 4.7mA (MAX.)	1mA	×	output current has been
detection				changed.
	Between input terminal and programmable	Between platinum resistance thermometer		
Insulation	controller:	input and CC-Link transmission line:	0	
method	Photocoupler isolation	Photocoupler isolation		
	(non-isolated between channels)	(non-isolated between channels)		
Number of				
occupied		4 stations		
stations	4 stations (32 points)	(RX/RY 128 points each,	0	
(number of occupied		RWw/RWr 16 points each)		
points)				
Connected				Change in wiring is
terminal block	47-point terminal block	27-point terminal block	×	required.
Applicable wire	0.75 to	2.002		·
size	0.75 to 2	2.00mm ²	0	
Applicable	V1.25-3, V1.25-YS3A,	RAV 1.25-3.5, RAV 2-3.5		Change in wiring is
solderless	V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	(conforming to JIS C 2805)	×	required.
terminal	v2-33, v2-133M	(comorning to 515 C 2005)		roquireu.
24VDC internal				
current	0.2A	0.17A	0	
consumption				
Weight	0.81kg	0.38kg	0	
External	470(1) 400(1) 20(7)	05(1) 454 0(1) 22(5)		The overall size differs.
dimensions	170(H) × 100(W) × 80(D)mm	65(H) × 151.9(W) × 63(D) mm	×	Pay attention to the
				mounting dimensions.

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

ltem	A64RD3C	AJ65BT-64RD3	Compati- bility	Precautions for replacement
Conversion enable/disable specification for each channel	Selects on each channel whether to e	0		
Sampling/ averaging processing specification	Performs processing on a detected temperature in the specified processing method, and stores the processed data to the buffer memory. The following three processing methods are available: Sampling processing Time averaging processing Count averaging processing	Selects on each channel whether to perform the sampling processing or movement averaging processing. (default… sampling processing)	Δ	The AJ65BT-64RD4 has been provided the movement averaging processing instead of the averaging processing on A64RD3C.
Storage of detected temperature value	The value down to the 1st decimal place and the value down to the 3rd decimal place are stored to the buffer memory. Value down to 1st decimal place (16-bit signed binary) Example) 53.8(°C) → 538 Value down to 3rd decimal place (32-bit signed binary) Example) 216.025(°C) → 216025	The value down to the 1st decimal place and the value down to the 3rd decimal place are stored to the remote register.	0	
Wire break detection	Detects wire breaks on the connected Pt100 or cable. Wire breaks on each channel are detected, and the wire break detection flag (X19 to X1A) corresponding to each channel is turned ON.	Detects wires breaks on the connected platinum resistance thermometer for each channel.	0	
Specification of platinum temperature measuring resistor type	Specifies platinum temperature measuring resistor type to be used. The following two types of platinum temperature measuring resistors can be used: • Pt100··· new JIS • DIN type (JIS C 1604-1989, DIN43760-1980) • JPt100··· conventional JIS type (JIS C 1604-1981)	Specifies platinum temperature measuring resistor type to be used. The following two types of platinum temperature measuring resistors can be used: Pt100······new JIS, IEC type (JIS C 1604-1997, IEC 751 1983) JPt100···conventional JIS type (JIS C 1604-1981)	0	

The sequence program must be changed as the I/O signals differ.

For details on I/O signals and sequence programs, refer to the User's Manual.

		RD3C	p g ,		AJ65B1	Γ-64RD3	
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description
X(n+0) to	Use prohibited	Y(n+0)	Use prohibited	RXn0	CH1 Conversion completed flag	RYn0	CH1 Conversion enable flag
X(n+3)	Coo promotion	Y(n+3)	Coo promonos	RXn1	CH2 Conversion completed flag	RYn1	CH2 Conversion enable flag
				RXn2	CH3 Conversion completed flag	RYn2	CH3 Conversion enable flag
Y(n+4)	FROM/TO instruction error	Y(n+4)	Error detection	RXn3	CH4 Conversion completed flag	RYn3	CH4 Conversion enable flag
X(n+4)	detection flag	1 (11+4)	reset signal	RXn4	CH1 Wire break detection flag	RYn4	CH1 Sampling processing/ movement averaging processing specification flag
Y/a+E\	A64RD3C reset	V(n+E)	Reset switch ON Y(n+5) detection flag reset signal	RXn5	CH2 Wire break detection flag	RYn5	CH2 Sampling processing/ movement averaging processing specification flag
X(n+5) switch ON detection flag	detection flag	1(11+3)		RXn6	CH3 Wire break detection flag	RYn6	CH3 Sampling processing/ movement averaging processing specification flag
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RXn7	CH4 Wire break detection flag	RYn7	CH4 Sampling processing/ movement averaging processing specification flag
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RXn8	E ² PROM error flag	RYn8 to	Use prohibited
X(n+8) to X(n+17)	Use prohibited			RXn9	Test mode flag	RY(n+7)6	
X(n+18)	READY flag			RXnA to RX(n+7)7	Use prohibited	RY(n+7)7	Offset/gain value selection flag
X(n+19)	CH1 Wire break detection flag	Y(n+8)	Use prohibited	RX(n+7)8	Initial data processing request flag	RY(n+7)8	Initial data processing complete flag
X(n+1A)	CH2 Wire break detection flag	Y(n+1F)	Ose prombited	RX(n+7)9	Initial data setting complete flag	RY(n+7)9	Initial data setting request flag
X(n+1B)	CH3 Wire break detection flag			RX(n+7)A	Error status flag	RY(n+7)A	Error reset
X(n+1C)	CH4 Wire break detection flag			RX(n+7)B	Remote READY	RY(n+7)B	
X(n+1D) to X(n+1F)	Use prohibited			RX(n+7)C to RX(n+7)F	Use prohibited	to RY(n+7)F	Use prohibited

The sequence program must be changed as the buffer memory assignments differ. For details on buffer memory and sequence programs, refer to the User's Manual.

	A64RD3C	1 0	AJ65BT-64RD3			
Address	Name	Read/write	Address	Name	Read/write	
0	Conversion enable/disable					
U	specification					
1	Averaging processing specification	,	RWwm			
2	CH1 Averaging time, count	R/W	to	Use prohibited	_	
3	CH2 Averaging time, count		RWwm+15			
4	CH3 Averaging time, count					
5	CH4 Averaging time, count					
6	CH1 Detected temperature value		RWrn	CH1 Detected temperature value (16 bits)		
7	CH2 Detected temperature value		RWrn+1	CH2 Detected temperature value (16 bits)		
8	CH3 Detected temperature value		RWrn+2	CH3 Detected temperature value (16 bits)		
9	CH4 Detected temperature value	R	RWrn+3	CH4 Detected temperature value (16 bits)		
10	CH1 Detected temperature value (L)	ĸ	RWrn+4	CH1 Detected temperature value	R	
11	(32 bits) (H)		RWrn+5	(32 bits)		
12	CH2 Detected temperature value (L)		RWrn+6	CH2 Detected temperature value		
13	(32 bits) (H)		RWrn+7	(32 bits)		
14	CH3 Detected temperature value (L)		RWrn+8	CH3 Detected temperature value		
15	(32 bits) (H)		RWrn+9	(32 bits)		
16	CH4 Detected temperature value (L)		RWrn+10	CH4 Detected temperature value		
17	(32 bits) (H)		RWrn+11	(32 bits)		
18	Write data error code	R/W	RWrn+12			
19	Conversion completed flag	R	to	Use prohibited		
20	Specification of platinum temperature measuring resistor type	R/W	RWrn+15	Ose prombited	_	



(2) Comparisons between A64RD4C and AJ65BT-64RD4

(a) Performance specifications comparisons

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

		O: Compatible, ∆	. Partiai cha	inge required, ×: Not compatible
Item	A64RD4C	AJ65BT-64RD4	Compati- bility	Precautions for replacement
Measuring method	4-wir	e type	0	
Connectable	Pt100		_	
platinum	(JIS C 1604-1989, DIN43760-1980)		0	
temperature		Pt100,JPt100		
measuring	JPt100 (JIS C 1604-1981)		0	
resistor				
Tomporatura	Pt100: -180[°C] to +600[°C]		0	
Temperature input range	(27.08 Ω to 313.59 Ω) JPt100: -180[°C] to +600[°C]	-180[℃] to 600[℃]		
iliput ralige	(25.8 Ω to 317.28 Ω)		0	
		I ned binary		
Detected	=	o +6000	0	
Detected	(down to 1 deci	mal place × 10)		
temperature value	32bits sig	ned binary		
value	-180000 t	o +600000	0	
	(down to 3 decimal			
Resolution	0.02	25°C	0	
		Ambient temperature: (25 ± 5 °C) ± 0.1%		
Overall	± 1%	(accuracy relative to maximum value) Ambient temperature	0	
accuracy	(accuracy relative to full-scale)	(20°C or less, 30°C or more):	O	
		± 0.25%		
		(accuracy relative to maximum value)		
Conversion	40ms/	0		
speed	4011157		0	
Number of				
temperature	4 channels/module	4 channels/module	0	
input points				The feature of the feature
Output current	4.2mA (MINI) 4.7mA (MAY)	1mA		The temperature detecting
for temperature detection	4.2mA (MIN.), 4.7mA (MAX.)	IIIIA	×	output current has been changed.
detection	Between input terminal and	Between platinum temperature measuring		changed.
Insulation	programmable controller:	resistor input and CC-Link transmission line:		
method	Photocoupler isolation	Photocoupler isolation	0	
	(non-isolated between channels) (non-isolated between channels)			
Number of				
occupied		4 stations		
stations	4 stations (32 points)	(RX/RY 128 points each,	0	
(number of		RWw/RWr 16 points each)		
occupied points) Connected				
terminal block	47-point terminal block	27-point terminal block	×	Change in wiring is required.
Applicable wire		1		
size	0.75 to	2.00mm ²	0	
Applicable	V4.05.0.V4.05.V004	DAV/4.05.0.5. DAV/0.0.5		
solderless	V1.25-3, V1.25-YS3A,	RAV 1.25-3.5, RAV 2-3.5	×	Change in wiring is required.
terminal	V2-S3, V2-YS3A	(conforming to JIS C 2805)		
24VDC				
internal current	0.15A	0.17A	0	
consumption	0.041	0.001		
Weight	0.81kg	0.38kg	0	The overall size differs.
External	170(H) × 100(W) × 80(D) mm	65(H) × 151.9(W) × 63(D) mm	×	Pay attention to the mounting
dimensions	170(11) × 100(44) × 00(D) 111111	00(11) × 131.3(VV) × 03(D) 111111	^	dimensions.
			I	differisions.

 \bigcirc : Compatible, \triangle : Partial change required, \times : Not compatible

Item	A64RD4C	AJ65BT-64RD4	Compati-	Precautions for
	ACTRICATE OF THE PROPERTY OF T	ACCOST CIRCI	bility	replacement
Conversion				
enable/disable	Calcata an agab abannal whather to a			
specification for each	Selects on each channel whether to en	0		
channel				
Chamilei	Performs processing on a detected			
	temperature in the specified processing			
0 " '	method, and stores the processed data			The AJ65BT-64RD4 has
Sampling/	to the buffer memory.	Selects on each channel whether to		been provided the
averaging	The following three processing methods	perform the sampling processing or	Δ	movement averaging
processing specification	are available:	movement averaging processing. (default ··· sampling processing)		processing instead of the averaging processing on
specification	Sampling processing	(default ··· sampling processing)		A64RD3C.
	Time averaging processing			A041000.
	Count averaging processing			
	The value down to the 1st decimal place			
01	and the value down to the 3rd decimal			
Storage of detected	 place are stored to the buffer memory. Value down to 1st decimal place 	The value down to the 1st decimal place		
	(16-bit signed binary)	and the value down to the 3rd decimal	0	
temperature value	Example) 53.8(°C) → 538	place are stored to the remote register.		
value	Value down to 3rd decimal place			
	(32-bit signed binary) Example) 216.025(°C) → 216025			
	Detects wire breaks on the connected			
	Pt100 or cable.	Detects wires breaks on the connected		
Wire break	A wire break on a wire on a channel is	platinum temperature measuring	0	
detection	detected, turning the ∑ wire break	resistor for each channel.	_	
	detection flag (X19) ON.			
	Specifies the platinum temperature	Specifies the platinum temperature		
	measuring resistor type to be used.	measuring resistor type to be used.		
Specification	The following two types of platinum	The following two types of platinum		
of platinum	temperature measuring resistor can be	temperature measuring resistor can be	_	
temperature	used:	used:	0	
measuring	• Pt100···new JIS • DIN type	Pt100·····new JIS, IEC type		
resistor type	(JIS C 1604-1989, DIN43760-1980) • JPt100··· conventional JIS type	(JIS C 1604-1997, IEC 751 1983) • JPt100··· conventional JIS type		
	(JIS C 1604-1981)	(JIS C 1604-1981)		

The sequence program must be changed as the I/O signals differ.

For details on I/O signals and sequence programs, refer to the User's Manual.

	A64RD4C			AJ65BT-64RD4			
Device No.	Description	Device No.	Description	Device No.	Description	Device No.	Description
X(n+0) to	Use prohibited	Y(n+0) to	Use prohibited	RXn0	CH1 Conversion completed flag	RYn0	CH1 Conversion enable flag
X(n+3)	ose prombited	Y(n+3)	ose prombited	RXn1	CH2 Conversion completed flag	RYn1	CH2 Conversion enable flag
				RXn2	CH3 Conversion completed flag	RYn2	CH3 Conversion enable flag
X(n+4)	FROM/TO instruction error	Y(n+4)	Error detection	RXn3	CH4 Conversion completed flag	RYn3	CH4 Conversion enable flag
	detection flag	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	reset signal	RXn4	CH1 Wire break detection flag	RYn4	CH1 Sampling processing/ movement averaging processing specification flag
V(0+E)	A64RD4C reset	V(2+E)	Reset switch ON	RXn5	CH2 Wire break detection flag	RYn5	CH2 Sampling processing/ movement averaging processing specification flag
X(n+5) switch OI detection fl	detection flag	Y(n+5)	detection flag reset signal	RXn6	CH3 Wire break detection flag	RYn6	CH3 Sampling processing/ movement averaging processing specification flag
X(n+6)	Use prohibited	Y(n+6)	Use prohibited	RXn7	CH4 Wire break detection flag	RYn7	CH4 Sampling processing/ movement averaging processing specification flag
X(n+7)	Communication completion response signal wait flag	Y(n+7)	Communication reset signal	RXn8	E ² PROM error flag	RYn8 to	Use prohibited
X(n+8) to X(n+17)	Use prohibited			RXn9	Test mode flag	RY(n+7)6	
X(n+18)	READY flag			RXnA to RX(n+7)7	Use prohibited	RY(n+7)7	Offset/gain value selection flag
X(n+19)	Σ wire break detection flag	Y(n+8) to	Use prohibited	RX(n+7)8	Initial data processing request flag	RY(n+7)8	Initial data processing complete flag
		Y(n+1F)		RX(n+7)9	Initial data setting complete flag	RY(n+7)9	Initial data setting request flag Error reset
X(n+1A)	11			RX(n+7)A	Error status flag	RY(n+7)A	request flag
to X(n+1F)	Use prohibited			RX(n+7)B RX(n+7)C to	Remote READY Use prohibited	RY(n+7)B to	Use prohibited
				RX(n+7)F	ese p. simulou	RY(n+7)F	

The sequence program must be changed as the buffer memory assignments differ. For details on buffer memory and sequence programs, refer to the User's Manual.

	A64RD4C	1 0	AJ65BT-64RD4			
Address	Name	Read/write	Address	Name	Read/write	
0	Conversion enable/disable					
U	specification					
1	Averaging processing specification	,	RWwm			
2	CH1 Averaging time, count	R/W	to	Use prohibited	_	
3	CH2 Averaging time, count		RWwm+15			
4	CH3 Averaging time, count	,				
5	CH4 Averaging time, count					
6	CH1 Detected temperature value		RWrn	CH1 Detected temperature value (16 bits)		
7	CH2 Detected temperature value		RWrn+1	CH2 Detected temperature value (16 bits)		
8	CH3 Detected temperature value		RWrn+2	CH3 Detected temperature value (16 bits)		
9	CH4 Detected temperature value	R	RWrn+3	CH4 Detected temperature value (16 bits)		
10	CH1 Detected temperature value (L)	K	RWrn+4	CH1 Detected temperature value	R	
11	(32 bits) (H)		RWrn+5	(32 bits)		
12	CH2 Detected temperature value (L)	,	RWrn+6	CH2 Detected temperature value		
13	(32 bits) (H)		RWrn+7	(32 bits)		
14	CH3 Detected temperature value (L)	,	RWrn+8	CH3 Detected temperature value		
15	(32 bits) (H)		RWrn+9	(32 bits)		
16	CH4 Detected temperature value (L)	,	RWrn+10	CH4 Detected temperature value		
17	(32 bits) (H)		RWrn+11	(32 bits)		
18	Write data error code	R/W				
19	Conversion completed flag	R	RWrn+12 to	Lisa prohibited		
20	Specification of platinum temperature measuring resistor type	R/W	RWrn+15	Use prohibited .		

REPLACING THE HIGH-SPEED COUNTER MODULE

7.1 List of Alternative High-speed Counter Module Models

MELSECNET/MINI-S3, A2C models to be discontinued		Alternative model for CC-Link	
Product name	Model name	Model name	Remarks (restrictions)
High-speed counter module	AD61C		1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size change of signal wire 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Change in interface specifications of coincidence output 5) Change in functional specifications: Not required 6) Change in dimensions for mounting to the panel: Required
	AD62C	AJ65BT-D62	1) Change in external wiring: Wiring change due to differences in terminal blocks, communication cable change to CC-Link dedicated cable, applicable wire size of signal lead change 2) Change in number of modules: Not required 3) Change in program: Change to programs for CC-Link 4) Change in performance specifications: Counting range change, external output specifications change 5) Change in functional specifications: Limit switch output function not provided 6) Change in dimensions for mounting to the panel: Required

7.2 High-speed Counter Module Comparison

(1) Comparison between AD61C and AJ65BT-D62

(a) Performance specifications comparisons

	lten		ADE	_	○: Compatible, △: Partial chan AJ65BT-D62 Counting speed switch settings switch HIGH side LOW side		nge required, Compatibility	× : Not compatible Precautions for replacement
	Number of occupied stations (occupied points)		4 stations (32 points)		4 sta	ations RWw/RWr 16 points each)	0	
Nu	mber of channe	els		2	channels		0	
		Phase			put, 2-phase input		0	
	Count input signal	Signal level (φ A, φ B)		5VDC \ 12VDC 24VDC /	2 to 5mA	0		
		Counting	1-phase input	50KPPS	200KPPS	10KPPS	0	
		speed (max.)	2-phase input	50KPPS	200KPPS	7KPPS	0	
		Counting range	0 1	0 to 16,777,215 (decimal notation): Binary format 24bits			0	
_		System		Addition/subtraction preset counter + ring counter function		UP/DOWN preset counter + ring counter function		
Performance specifications of one channel	Counter	Min. count pulse width (1-, 2-phase	10µs 11	D _U s	5µs 2.5µs 2.5µs 1	100 µs 142 µs 150 50 71 71 71 µs µs µs µs (1-phase input)	0	
		input)	Set input rise and to 5 μ s or less. Duty ratio 50%	fall times	Set input rise and fa less. Duty ratio 50%	Il times to 2 μ s or	0	
ormano	Maximum	Comparison range	Binary format 24bits				0	
Perf	/minimum comparison	Comparison result	Setting value < Count value Set value = Count value Setting value > Count value		Setting value Set value = Setting value	0		
		Preset	12/24VD 5VDC		5/12/24VD	C 2 to 5mA		At AJ65BT- D62, external
	External input	Count disable	12/24VD 5VDC			_	Δ	input/output specifications
		Function start	-	-	5/12/24VD	C 2 to 5mA		are different, so confirm the
	External output	Coincidence output	Transistor (open		12/24VDC 2/	A per common	Δ	external device specifications.
	VDC internal cunsumption	ırrent	0.1	5A	0.0	07A	0	
	eight		1.0	kg	0.4	1kg	0	
External dimensions		170(H) × 100(V	V) × 80(D) mm	0.41kg 65(H) × 151.9(W) × 63(D) mm		×	The overall size differs. Pay attention to the mounting	

dimensions



(b) Functional comparisons

O: Compatible, ∧: Partial change required, ×: Not compatible

		○: Compatible, △: Part	ial change require	
Item	AD61C	AJ65BT-D62	Compatibility	Precautions for replacement
Count function at 1-phase/ 2-phase pulse input	 Captures 1-phase or 2-phase pulses from a pulse generator, and counts each of these pulses at its rise and fall. 1-phase input · · · Two counts are performed on a single pulse. 2-phase input · · · Four counts are performed on a single pulse at each of the A and B phases. Specifies the addition and subtraction counts in buffer memory during 1-phase input. During 2-phase input, it is automatically judged to perform addition when the A phase pulse comes before the B phase pulse, and perform subtraction when the B phase pulse comes before the A phase pulse. 	Captures 1-phase or 2-phase pulses from a pulse generator, and counts each of these pulses at its rise and fall. 1-phase input • • • Two counts are performed on a single pulse. 2-phase input • • • Four counts are performed on a single pulse at each of the A and B phases. Specifies the addition and subtraction counts to RY during 1-phase input. During 2-phase input, it is automatically judged to perform addition when the A phase pulse comes before the B phase pulse, and perform subtraction when the B phase pulse comes before the A phase pulse.	0	
Comparison signal output function for counter value	 Compares the counter value with the set value, and outputs result signals of small, large (>, <), or coincidence (=) to the programmable controller CPU. Performs external outputs of the coincidence signal to the external (EQU) terminal when the set value coincides with the count value. Note, however, that to do this the coincidence signal output enable flag must be turned ON beforehand by the sequence program. 	Sets the output status of any channel in advance, and compares it with the current value to output ON/OFF signals.	0	
Preset function	 Changes the current counter value Execution of a preset is performed an external preset. 		0	
Ring counter function	Outputs the coincidence signal when the set value matches the counter value, and set the current value as the preset value. Note, however, that to do this the ring counter switch must be turned ON.	Counts repeatedly between the ring counter value and the preset value by the ring counter command.	0	
Count start/ stop function by external input	Starts or stops counting by the external disable (DIS) terminal turning ON/OFF.	-	Δ	This is performed on the function start terminal.
Hardware reset function	 Initializes (clears data and sets default value) AD61C I/O signals and buffer memory by the reset switch on the front of the AD61C. 	-	×	This function is not available.
Error detection function	Stores the first error to buffer memory if any errors are found in communication (FROM/TO instructions) from the programmable controller CPU to buffer memory on AD61C.	-	×	This function is not available.

(c) Programmable controller CPU I/O signal comparisons

The sequence program must be changed as the I/O signals differ.

For details on I/O signals and sequence programs, refer to the User's Manual.

	For details on I/O signals and sequence pro						eiei iu	AJ65BT			
Devi	ce No.		Devic	e No.	Decemention	Devic	e No.			e No.	Description
CH1	CH2	Description	CH1	CH2	Description	CH1	CH2	Description	CH1	CH2	Description
X00 t	to X03	Use prohibited	Y00 to	o Y03	Use prohibited	RXn0	RXn4	Counter value large (Point No. 1)	RYn0 to RYnF		Use prohibited
X0-	4 *1	Communication error detection	Y04	1 *1	Communication error detection reset	RXn1	RXn5	Counter value coincidence (Point No. 1)	RY (n+1)0	RY (n+1)7	Point No.1 coincidence signal reset command
Х	05	Detection of reset status	Y)5	Reset status detection reset	RXn2	RXn6	Counter value small (Point No.1)	RY (n+1)1	RY (n+1)8	Preset command
Х	06	Use prohibited	Y	06	Use prohibited	RXn3	RXn7	External preset command detection	RY (n+1)2	RY (n+1)9	Coincidence signal enable
X0	7 *2	Communication completion wait flag	Y07	7 *2	Communication completion wait flag reset	RXn8	RXnB	Counter value large (Point No. 2)	RY (n+1)3	RY (n+1)A	Down count command
X08 t	to X17	Use prohibited	Y08 t	o Y17	Use prohibited	RXn9	RXnC	Counter value coincidence (Point No. 2)	RY (n+1)4	RY (n+1)B	Count enable command
X18	X1C	CH1/CH2 counter value small/large	Y18	Y1C	CH1/CH2 coincidence signal reset command	RXnA	RXnD	Counter value small (Point No. 2)	RY (n+1)5	RY (n+1)C	Use prohibited
X19	X1D	CH1/CH2 counter value coincidence	Y19	Y1D	CH1/CH2 preset command	RXnE	RXnF	Use prohibited	RY (n+1)6	RY (n+1)D	Counter function selection start command
X1A	X1E	CH1/CH2 external preset request detection	Y1A	Y1E	CH1/CH2 count enable command	RX (n+1)0	RX (n+1)2	Preset completion	t	n+1)E o n+1)F	Use prohibited
X1B	X1F	CH1/CH2 preset completion	Y1B	Y1F	CH1/CH2 external preset request detection	RX (n+1)1	RX (n+1)3	Counter function detection	RY (n+2)0	RY (n+2)2	External preset detection reset command
						t	n+1)4 o n+7)7	Use prohibited	RY (n+2)1	RY (n+2)3 n+2)4	Point No.2 coincidence signal reset command
							,		t	o 1+7)7	Use prohibited
						,	n+7)8	Initial data processing request flag	RY(r	n+7)8	Initial data processing complete flag
						RX(r	n+7)9 o n+7)A n+7)B n+7)C	Use prohibited Remote READY	t	n+7)9 o n+7)F	Use prohibited
						t	o n+7)F	Use prohibited	131 (1	.,.	

^{*1, *2:} These input signals are used on the A2CCPU side.



(d) Buffer memory addresses comparisons

The sequence program must be changed as the buffer memory assignments differ. For details on buffer memory and sequence programs, refer to the User's Manual.

	AD61C		AJ65BT-D62					
Address	Name	Read/write	Add	ress	Name	Read/write		
Address	Name	Read/Wille	CH1	CH2	Name	Read/Wille		
0	CH1 mode register	R/W	RWwm	RWwm+8	Preset value setting area (L)			
1	CH1 subtraction count specification		RWwm+1	RWwm+9	(H)			
					Pulse input mode/			
2	CH1 coincidence signal output enable flag	W	RWwm+2	RWwm+A	Function selection register/	I		
_				1 CVV WIII - 7 C	External output hold/			
					clear setting area	W		
3	CH1 set value	R/W	RWwm+3	RWwm+B	Coincidence output point (L)			
4	OTTI Set value	1000	RWwm+4	RWwm+C	No.1 setting area (H)			
5	CH1 preset value	w	RWwm+5	RWwm+D	Sampling/periodic setting area			
6	OTT prodet value	**	RWwm+6	RWwm+E	Coincidence output point (L)			
7	CH2 mode register	R/W	RWwm+7	RWwm+F	No.2 setting area (H)			
8	CH2 down count specification	W	RWrn	RWrn+8	(L)			
9	CH2 coincidence signal output enable flag		RWrn+1	RWrn+9	Current value storage area (H)			
10			RWrn+2	RWrn+A	Latch count value/ (L)	1		
	CH2 set value	R/W			Sampling count value			
11	CH2 Set Value	R/VV	RWrn+3	RWrn+B	Periodic pulse count (H)			
					previous value storage area	R		
12			RWrn+4	RWrn+C	Periodic pulse count (L)			
13	CH2 preset value	W	RWrn+5	RWrn+D	present value (H)			
15			IXVVIIII	IXWIIIID	storage area			
					Sampling/periodic counter flag			
14	CH1 current value		RW	m+6	storage area			
	Of the deficit value				(common for CH1, CH2)			
15		R		n+7				
16	CH2 current value	1	RWrn+7 RWrn+E RWrn+F		Use prohibited	-		
17					Coo prombitod			
18	Error code		Kvvrn+F			<u> </u>		

(2) Comparisons between AD62C and AJ65BT-D62

(a) Performance specifications comparisons

Item			AD620	:		patible, \triangle : Partial chang	e required, ×	Precautions for
	~	501					oompunomi,	replacement
Counting speed	d switch settings	(on s	pulse/s ilk-screen m: 50kPPS)	10k pulse/s (on silk-screen diagram: 10kPPS)	Counting speed s	witch settings switch LOW side	0	
Number of occu	•	4 stations (32 points)		4 stations (RX/RY 128 points each, RWw/RWr 16 points each)		0		
Number of cha	nnels		1 chann	el	2 ch	annels	0	
Count	Phase			1-phase input, 2	-phase input		0	
input signal	Signal level $(\phi \text{ A}, \phi \text{ B})$			5VDC 12VDC 2 to 5mA 24VDC			0	
	Counting speed*	1-phase input	50k pulse/s	10k pulse/s	200kPPS	10kPPS	0	
	(max.)	2-phase input	50k pulse/s	7k pulse/s	200kPPS	7kPPS	0	
	Counting range	-	32bits signed binary -2147483648 to 2147483647			0 to 16,777,215 (decimal notation) Binary format 24bits		The counting range varies.
	Туре		UP/DOWN Preset counter + Ring counter function				0	
Counter	Minimum count pulse width	10µ (1-, 2-	20μs s 10μs phase input)	100μs 142μs 150 50 50 71 71 μs μs μs μs (1-phase input) (2-phase input)	2.5 μ s 2.5 μ s (1-, 2-phase input)	100 µS 142 µS 142 µS 150 50 171 71 71 18	0	
		Limit th	e input rise and or less Duty ratio		2 μ s.	se and fall times to or less.	0	
	Comparison	32bits signed binary		-		×		
Limit switch output	Comparison result	_	addres N/C contact	t value ≦ Dog OFF s action: nt value ≦ Dog ON		-	×	Limit switch output is not available.
External input	Preset Function start	12	2/24VDC 3/6mA,		5/12/24V[DC 2 to 5mA	Δ	As the external input/output
External output	Comparison output	Transistor (open collector) output 12/24VDC, 0.1A per point, 0.8A per common		12/24VDC 2A per common		Δ	specifications are different on AJ65BT- D62, confirm the specifications of external device.	
24VDC			0.15A		0.	07A	0	
internal current	consumption							
Weight External dimensions		17	0.86k <u>c</u> 70(H) × 100(W)		0.41kg 65(H) × 151.9(W) × 63(D) mm		×	The overall size differs. Pay attention to the mounting dimensions.



(b) Functional comparisons

 \bigcirc : Compatible, $\, \triangle$: Partial change required, $\, \times$: Not compatible

			O. Compatible, A. F.	artial charige is	equired, x . Not compatible	
	Item	AD62C	AJ65BT-D62	Compatibility	Precautions for replacement	
Pr	eset	Any value can be overwritten to the o	counter's present values.	0		
fur	nction	Preset is performed by the sequence	s performed by the sequence program or an external preset input.			
Rii	ng counter	Counts repeatedly between the ring of	counter value and the preset value by	_		
fur	nction	the ring counter command.		0		
		Sets the output status of any				
Lir	nit switch	channel in advance, and compares			The limit switch	
ou	tput	it with the current value of the limit	_	×	output function is not	
fur	nction	switch output command counter to			available.	
		output ON/OFF signals.				
	Latch	Stores the current value of the	Stores the current value of the			
	counter	counter to buffer memory when the	counter to the remote register	0		
		counter function selection start	when the counter function selection			
		command signal is input.	start command signal is input.			
		Stores the number of input pulses	Stores the number of input pulses			
on*	Sampling	to the buffer memory for the preset	to the remote register for the preset			
ecti	counter	sampling period after a signal	sampling period after a signal	0		
sel	function	carrying the counter function	carrying the counter function			
Counter function selection*		selection start command is input.	selection start command is input.			
nct		Stores the number of input pulses	Stores the number of input pulses			
er fu	Periodic	to the buffer memory at each	to the remote register at each			
unte	pulse	preset cycle time for the duration	preset cycle time for the duration	0		
S	counter	that a signal carrying the counter	that a signal carrying the counter			
	function	function selection start command is	function selection start command is			
		being input.	being input.			
	Count					
	disable	Stops counting of the pulse while the	0			
	function					

^{*:} With counter function selection, only one of the four functions can be selected and used.

(c) Programmable controller CPU I/O signal comparisons

The sequence program must be changed as the I/O signals differ. For details on I/O signals and sequence programs, refer to the User's Manual.

	AD	62C				AJ65E	3T-D62			
Device No.	Description	Device No.	Description		e No.	Description		ce No.	Description	
X00 to X03	Use prohibited	Y00 to Y03	Use prohibited	CH1 RXn0	CH2 RXn4	Counter value large		CH2 /n0	_	
	Goo promisitou		Coo promonou	700.0		(Point No. 1)	RYnF			
X04 *1	Communication error detection	Y04 *1	Communication error detection reset	RXn1	RXn5	Counter value coincidence (Point No. 1)	RY (n+1)0	RY (n+1)7	Point No.1 coincidence signal rese command	
X05	Detection of reset status	Y05	Reset status detection reset	RXn2	RXn6	Counter value small (Point No.1)	RY (n+1)1	RY (n+1)8	Preset command	
X06	Use prohibited	Y06	Use prohibited	RXn3	RXn7	External preset command detection	RY (n+1)2	RY (n+1)9	Coincidenc signal enab	
X07 *2	Communication completion wait flag	Y07 *2	Communication completion flag reset	RXn8	RXnB	Counter value large (Point No. 2)	RY (n+1)3	RY (n+1)A	Down coun command	
	Use prohibited	Y08 to Y17	Use prohibited	RXn9	RXnC	Counter value coincidence (Point No. 2)	RY (n+1)4	RY (n+1)B	Count enab	
		Y18	Count enable command	RXnA	RXnD	Counter value small (Point No. 2)	RY (n+1)5	RY (n+1)C	ı	
X08 to X1A		Y19	Down count command	RXnE	RXnF	-	RY (n+1)6	RY (n+1)D	Counter function selection sta command	
		Y1A Prese	Preset command				t	n+1)E o n+1)F	-	
X1B	Fuse blown detection	Y1B	Ring counter command	RX (n+1)0	RX (n+1)2	Preset completion	RY (n+2)0	RY (n+2)2	External pres detection res command	
X1C	Sampling/ periodic counter	Y1C	Counter function selection start	RX (n+1)1	RX (n+1)3	Counter function detection	RY (n+2)1	RY (n+2)3	Point No.2 coincidence signal rese command	
	ON/OFF flag		command	t	n+1)4 0 n+7)7	-	t	n+2)4 :o n+7)7	-	
X1D	Limit switch output READY flag	Y1D	Limit switch output command) 1+7)8	Initial data processing request flag		r+7)8	Initial data processing complete fla	
X1E	External preset request detection	Y1E	External preset request detection reset command	RX(n+7)9 to RX(n+7)A		-				
X1F	Multiple-dog setting error detection	Y1F	Multiple-dog setting error detection reset			Remote		I to		0
				t	n+7)C o n+7)F	-				

^{*1, *2:} These input signals are used on the A2CCPU side.



(d) Buffer memory addresses comparisons

The sequence program must be changed as the buffer memory assignments differ. For details on buffer memory and sequence programs, refer to the User's Manual.

	AD62C		AJ65BT-D62					
Addus	Nama	Do odkomite	Add	ress	Nama		Read/write	
Address	Name	Read/write	CH1	CH2	- Name	Reau/Wille		
0	Dresent value (L		RWwm	RWwm+8	Dreast value setting area	(L)		
1	Present value (H)	RWwm+1	RWwm+9	Preset value setting area	(H)		
					Pulse input mode/Function sele	ection		
2	Counter function selection (L		RWwm+2	RWwm+A	register/External output hold and	d clear		
	count value	R			setting area			
3	(H)	RWwm+3	RWwm+B		(L)		
	Limit switch output				Coincidence output point		W	
4	status flag		RWwm+4	RWwm+C	No.1 setting area	(H)		
	(CH1 to CH8)							
5	Pulse input mode setting		RWwm+5	RWwm+D	Sampling/periodic setting ar	ea		
6	Counter function selection		RWwm+6	RWwm+E	Coincidence output point	(L)		
	setting				No.2 setting area			
7	Preset value setting (L		RWwm+7	RWwm+F	The coming and	(H)		
8	(H		RWrn	RWrn+8	Current value storage area	(L)		
9	Ring counter value setting (L	R/W	RWrn+1	RWrn+9	Ŭ.	(H)		
10	(H)	RWrn+2	RWrn+A	Latch count value/Sampling	(L)		
			RWrn+3 RWrn+B		count value/Periodic pulse count previous value (H)			
11	Sampling/periodic setting			RWrn+B				
	-				storage area		R	
12	Communication error code		RWrn+4	RWrn+C	Periodic pulse count	(L)		
13	Multiple-dog setting error code		RWrn+5	RWrn+D	present value storage area	(H)		
					Sampling/periodic counter			
14 to 30	CH1 limit switch output data setting	3	RW	rn+6	flag storage area			
					(common for CH1, CH2)			
31 to 47	CH2 limit switch output data setting		RWrn+7					
48 to 64	CH3 limit switch output data setting			rn+E	Use prohibited		_	
65 to 81	CH4 limit switch output data setting		RWrn+F					
82 to 98	CH5 limit switch output data setting	<u></u>						
99 to 115	CH6 limit switch output data setting							
116 to 132	CH7 limit switch output data setting							
133 to 149	CH8 limit switch output data setting	3	J					

8

REPLACING THE COMMUNICATION MODULES

8.1 List of Alternative Communication Module Models

	IINI-S3, A2C models iscontinued		Alternative models for CC-Link				
Product name	Model name	Model name	Remarks (restrictions)				
Serial Communication	AJ35PTF-R2	AJ65BT-R2N	 Change in RS-232C cable (25-pin → 9-pin) Change in general-purpose I/O specifications (power voltage range, number of points) Change is required as the program is not compatible. 				
Operating box	AJ35T-OPB-P1-S3	None					
Operating box	AJ35PT-OPB-M1-S3	None					
Cable for operating box	AC30MINI	None	Transition to GOT is recommended.				
Joint box	AJ35T-JB-S3	None					
Transmission converter	AJ35PTC-CNV	AJ65SBT-RPS	New cable must be used as the two systems differ in cable types.				

8.2 Serial Communication Module Comparisons

(1) Comparisons between AJ35PTF-R2 and AJ65BT-R2N

(a) Performance specifications comparisons

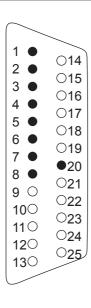
○: Compatible, △: Partial change required, x: Not compatible

		Specifi	○: Compatible, △: Pa	artiai change requi	required, × : Not compatible Precautions for
Iter	n			Compatibility	
Interface specifications		AJ35PTF-R2 RS-232C-compliant (25-pin) × 1 channel	AJ65BT-R2N RS-232C-compliant (9-pin) × 1 channel	Δ	replacement For differences in the RS-232C interface specifications, refer to 1).
Communica method	ition	Full-duplex communication system (nonprocedural)	Full-duplex communication system (nonprocedural)	0	
Synchroniza method	ation	Asynchronous method	Asynchronous method	0	
Transmissio	n speed	300, 600, 1200, 2400, 4800, 9600, 19200 bps	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps*1	0	
St	art bit	1	1	0	
Data Da	ata bit	7 or 8	7 or 8	0	
type Pa	arity bit	1 or 0 (none)	1 or 0 (none)	0	
St	op bit	1 or 2	1 or 2	0	
Error detection		Parity check (Odd or Even)	Parity check (Odd or Even)	0	
Communication		DTR/DSR (ER/DR) control	DTR/DSR (ER/DR) control	0	
control		XON/XOFF (DC1/DC3) control	DC1/DC3 control	0	
Transmissic distance	n	15m	Up to 15m	0	
OS receive b	ouffer	2048 bytes	5120 bytes	0	
General- purpose I/O	Input Output	12/24VDC (sink type) × 4 points Transistor output (sink type) 12/24VDC × 4 points	24VDC (sink type) × 2 points Transistor output (sink type) 12/24VDC × 2 points	Δ	For differences in the general- purpose I/O specifications, refer to 2) and 3).
Number of o	occupied	4 stations	1 station	×	The number of occupied stations is different.
Power supp	ly voltage	15.6 to 31.2VDC	24VDC	0	
Current con	sumption	130mA (24V)	110mA (24V)	0	
Weight		0.71kg	0.40kg	0	
Max. size of send/ receive buffer		1000 bytes each for send/receive (1000 bytes for total of send and receive)	(1536 words for total of send and receive)	0	
External dimensions		250(H) × 132(W) × 41(D)mm	80(H) × 170(W) × 47(D)mm	×	The overall size differs. Pay attention to the mounting dimensions.

1) RS-232 interface specifications comparisons

The RS-232C cable must be changed as the RS-232C interface specifications are different between the AJ35PTF-R2 and AJ65BT-R2N.

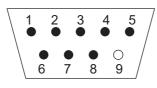
[AJ35PTF-R2]



Pin No.	Name	Signal code	Signal direction AJ35PTF-R2←External device
1	Frame ground	FG	←
2	Send data	SD(TXD)	
3	Receive data	RD(RXD)	-
4	Request to send	RS(RTS)	
5	Clear to send	CS(CTS)	←
6	Data set ready	DSR(DR)	←
7	Signal ground	SG	←
8	Carrier detect	CD	←
20	Data terminal ready	DTR(ER)	

25-pin D-sub (female) screw type 17LE-13250-22-D2AC (DDK Ltd.) or equivalent

[AJ65BT-R2N]



Use the following model as a connector of the AJ65BT-R2N side connection cable.

DDK Ltd.

Plug, chell: 17JE-23090-02 (D8A) (-CG)

Pin No.	Name	Signal code	Signal direction AJ65BT-R2N ↔ External device	
1	Data carrier detect	CD(DCD)	←—	
2	Received data	RD(RXD)	←	
3	Transmitted data	SD(TXD)		
4	Data terminal ready	ER(DTR)		
5	Signal ground	SG	-	
6	Data set ready	DR(DSR)	←	
7	Request to send	RS(RTS)		
8	Clear to send	CS(CTS)	←	
9	_	_	_	

2) General-purpose input specifications comparisons

[AJ35PTF-R2]

Item		DC input (sink type)		
		AJ35PTF-R2		Terminal layout
Number of input points		4 points		
Insulation met	hod	Photocoupler		
Rated input vo	oltage	12VDC	24VDC	
Rated input cu	ırrent	3mA	7mA	
Operating volt	age range	10.2 to 31.2VDC (ripple ratio within 5%)		
Maximum num simultaneous		100% (4 points) simultaneously ON		
ON voltage/Of	N current	9.5V or more / 2.6mA or more		
OFF voltage/C	OFF current	6V or less / 1.0mA or less		
Input resistant	се	Approx. 3.4kΩ		1 X0 0
Response	OFF→ON	10ms	or less	2 X1 0 0
time	ON→OFF	10ms	or less	3 X2 - O O
Wiring method	l for common	4 points per common		4 X3 0 0
willing method	i loi common	(common terminal: TB5)		5 COM1 + 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Operation indi	cation	ON indication (LED)		7 NC
External conne	action	8-point terminal block connector		8 NC
External confid	ection	(M3 × 6 screws)		O NC
Applicable wire	0.0170	0.75 to 2mm ²		
Applicable will	e 512e	(applicable tightening torque 7kg - cm)		
		1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3,		
Applicable solderless		V1.25-YS3A, V2-S3, V2-YS3A, 1.25-3,		
terminal		1.25-YS3A, 2-S3, 2-YS3A, V1.25-3,		
		V1.25-YS3A, V	2-S3, V2-YS3A	
Number of occupied stations		4 stations		

[AJ65BT-R2N]

Item		DC input (positive/negative common shared type)					
		AJ65BT-R2N		External connection			
Number of input points		2 points					
Isolation meth	od	Photocoupler	TO TXC R				
Rated input vo	oltage	24VDC					
Rated input cu	ırrent	Approx. 7mA					
Operating volt	age range	19.2 to 28.8VDC (ripple ratio within 5%)			图(聲(7	
Maximum nun	nber of	100%		n and m			
simultaneous	input points	100 /6	7-1-2	2 CCM1 - 11 - +	_	i	
ON voltage/OI	N current	14V or more / 3.5mA or more				Sir	
OFF voltage/C	FF current	6V or less / 1.7mA or less			4	_ <u>ه</u>	
Input resistant	ce	Approx. 3.3kΩ	Internal circuit				
Response	OFF→ON	10ms or less					
time	ON→OFF	10ms or less		'			
Wiring method	l for common	2 points/common (COM1)					
vviing method	i loi common	Positive/negative common shared type					
External connection system		7-point terminal block (M3.5 screw)	Terminal	Signal	Terminal	Signal	
			number	Oigilai	number	Oigilai	
Applicable wire size		0.75 to 2mm ²	TB1	XC	TB3	XD	
Applicable solderless terminal		RAV1.25-3.5, RAV2-3.5 (JIS C 2805-compliant)	TB2	COM1	-	ı	

3) General-purpose output specifications comparisons

[AJ35PTF-R2]

Item			Transistor output (sink type)			
			AJ35PTF-R2	Terminal layout		
Number of output points		nts	4 points			
Insulation m	ethod		Photocoupler			
Rated load v	/oltage		12/24VDC			
Operating lo	ad voltage	e range	10.2 to 31.2VDC			
Maximum lo	ad current	t	0.1A/point, 0.4A/common			
Maximum in	rush curre	ent	0.4A 100ms or less			
Leakage cur	rent at OF	F	0.1mA or less			
Maximum vo	oltage drop	p at ON	2.5V (0.1A), 1.75V (5mA), 1.7V (1mA)			
Response	OFF→C	N	2ms or less	9 Y0 L		
time	ON→OF	F F	2ms or less (resistance load)	10 Y1 L		
Surge suppr	essor		Clamp diode	11 Y2		
Wiring meth	od for con	nmon	4 points per common	12 Y3		
vviilig illetii	Wiring method for common		(common terminal: TB14)	13 12/24V 14 COM2 + +		
Operation in	dication		ON indication (LED)	l		
External cor	External connection		8-point terminal block connector	15 NC		
External con			(M3 × 6 screws)	16 NC		
Applicable	Applicable wire size		0.75 to 2mm ²			
Applicable w			(applicable tightening torque 7kg - cm)			
Applicable	oldorloss	1.25-3 1.25-YS3A 2-S3 2-YS3A V1.25-3				
Applicable s	Applicable solderless terminal		V1.25-YS3A V2-S3 V2-YS3A			
Number of occupied stations		tations	4 stations			
External pov	External power Voltage		10.2 to 31.2VDC			
supply for output Current		Current	15mA (TYP.24VDC)			

[AJ65BT-R2N]

[AJOSB1-RZN]		Transistor output (Sink type)					
		AJ65BT-R2N	atpat (Ollik t	• • •	onnection		
No. of output points		2 points					
Insulation method		Photocoupler					
Rated load	voltage	12 to 24VDC (+20/-15%)	†				
Operating load voltage range		10.2 to 28.8VDC (Ripple ratio is 5% or less)					
Max. load co	urrent	0.1A/point 0.2A/common					
Max. inrush	current	0.7A, 10ms or less					
Leakage cu	rrent at OFF	0.1mA or lower					
Max. voltage	e drop at ON	0.1VDC(TYP.)0.1A, 0.2VDC(MAX.)0.1A			ſ	LED	
Output meth	nod	sink type	TB 5	<u> </u>	□ ‡ □	Internal 🗫	
Response	OFF→ON	1ms or less				circuit	
time	ON→OFF	1ms or less (Resistance load)	†		T l		
External	Voltage	10.2 to 28.8VDC (Ripple ratio is 5% or less)	†				
power supply of output section	Current	10mA (at 24VDC) (MAX all points ON)	TB 7 TB 4 + - TB 6	Constant-voltage circuit	}		
Surge suppl	ressor	Zener diode	12/24VDC				
Wiring meth		2 points/common (COM2)	.2.2.1.20				
External connection method		7-point terminal block (M3.5 screw)					
Applicable v	vire size	0.75 to 2mm ²					
Applicable solderless		RAV1.25-3.5, RAV2-3.5					
terminal		(JIS C 2805-Compliant)					
Protective function		Overheat protective function operates in unit of 1 point.	Terminal number	Signal	Terminal number	Signal	
		Overload protective function operates in unit of 1 point.	TB4	+24V	TB6	COM2	
		(Detection disabled)	TB5	YC	TB7	YD	

(b) Functional comparisons

The following table shows serial communication module comparisons between MELSECNET/MINI-S3 and CC-Link.

O: Compatible, △: Partial change required, ×: Not compatible

Item	Functions			Precautions for	
item	AJ35PTF-R2 AJ65BT-R2N		bility	replacement	
Barcode reading	Actually required data only can be read to the programmable controller CPU regardless of the data communication protocol of the compatible barcode reader.	None	×	Utilize nonprocedural communication.	
ID card reading/ writing	Data can be read from and written to a programmable controller CPU by setting the MINI standard protocol for communication with the compatible ID card controller.	None	×	Utilize nonprocedural communication.	
Nonprocedural communication	Nonprocedural communication with external devices is available.	Nonprocedural communication with external devices is available. There are two methods for nonprocedural communications: the automatic buffer memory update function and the RIWT (RISEND) and RIRD (RIRCV) instructions.	Δ	Create new programs as there is no compatibility in programs.	

(c) Switch comparisons

The switch settings on the serial communication module are not compatible as MELSECNET/MINI-S3 and CC-Link are different networks.

For details, refer to the User's Manual for each module.

(d) Parameter comparisons

The parameter settings on the serial communication module are not compatible as MELSECNET/ MINI-S3 and CC-Link are different networks.

For details, refer to the User's Manual for each module.

(e)Program Comparisons

The I/O signals and buffer memory on the serial communication module are not compatible as MELSECNET/MINI-S3 and CC-Link are different networks.

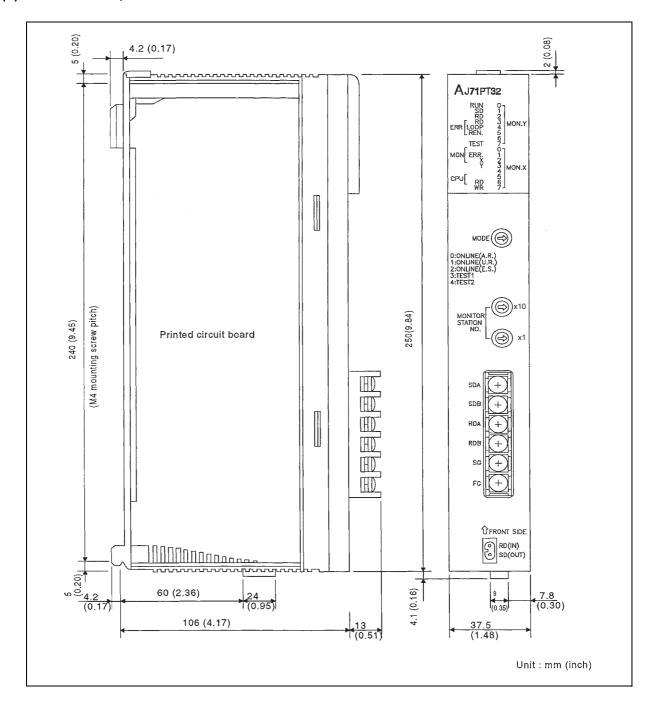
For details, refer to the User's Manual for each module.

9

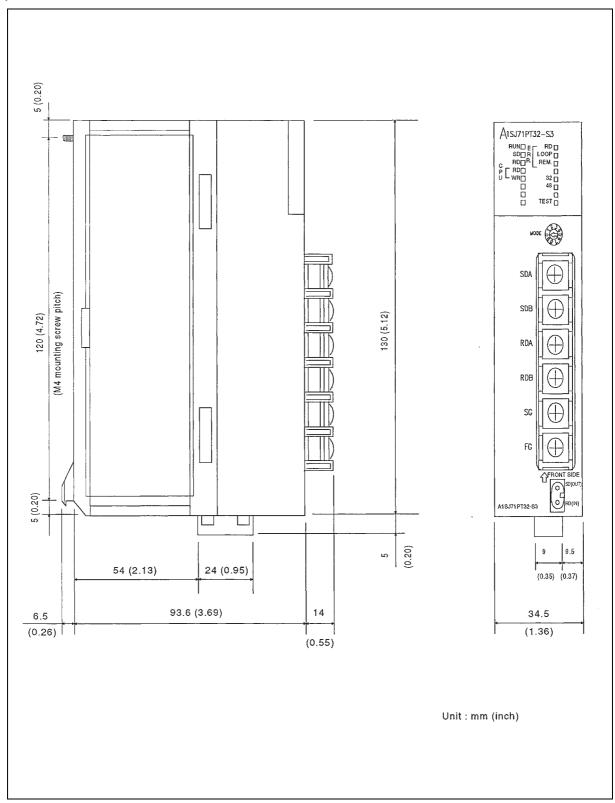
EXTERNAL DIMENSIONS

9.1 External Dimensions of MELSECNET/MINI-S3, A2C (I/O)

(1) AJ71PT32-S3, AJ71T32-S3

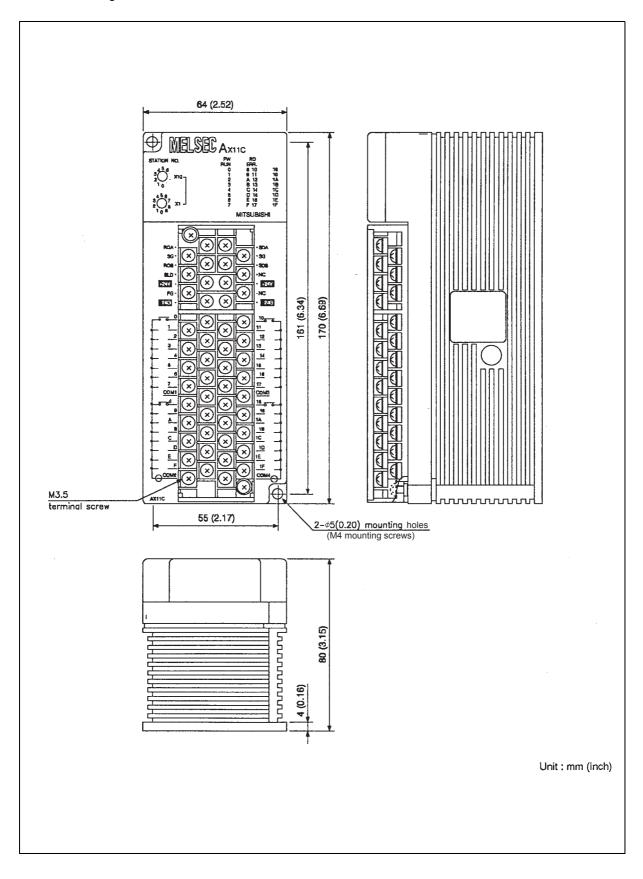


(2) A1SJ71PT32-S3, AISJ71T32-S3

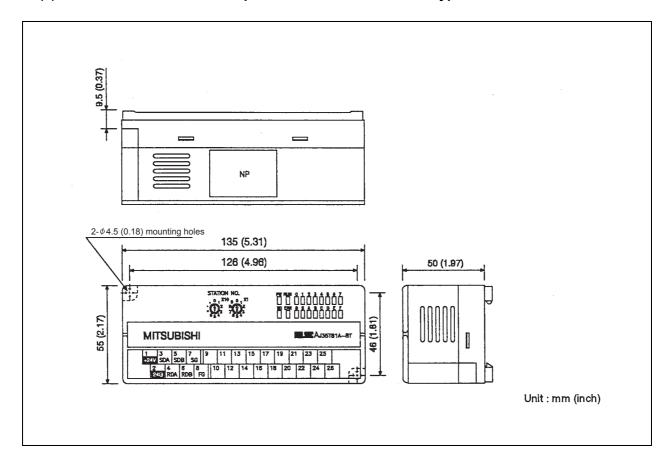


(3) A2C I/O module

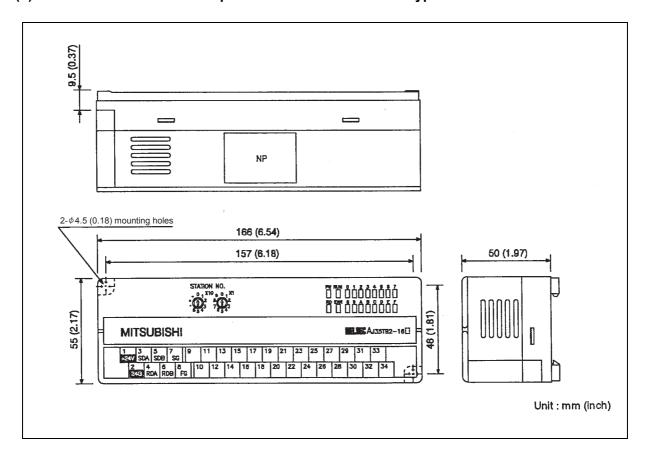
The following shows the external dimensions of the AX \square C, AY \square C, and AX \square Y \square C.



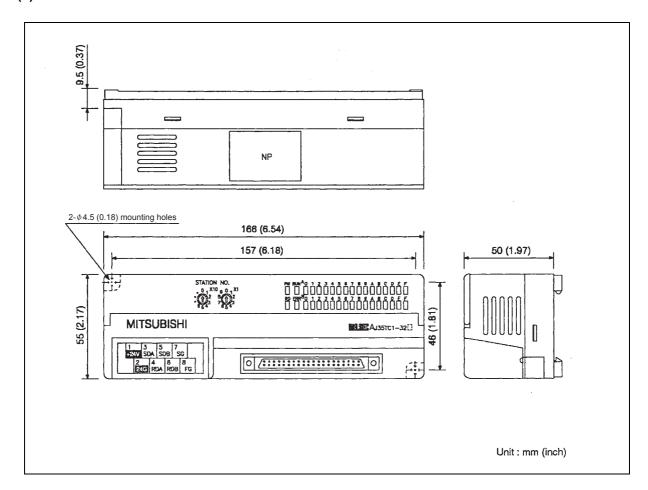
- (4) Remote terminal block I/O module, remote connector I/O module
 - (a) External dimensions of 26-point terminal block module type



(b) External dimensions of 34-point terminal block module type

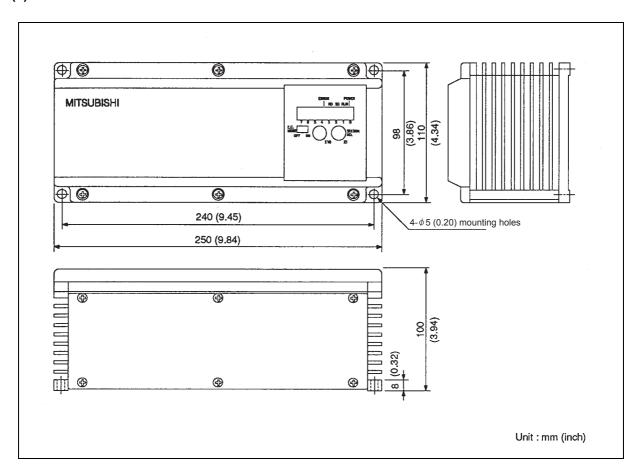


(c) External dimensions of AJ35TC1-32□



(5) Stand-alone remote I/O module

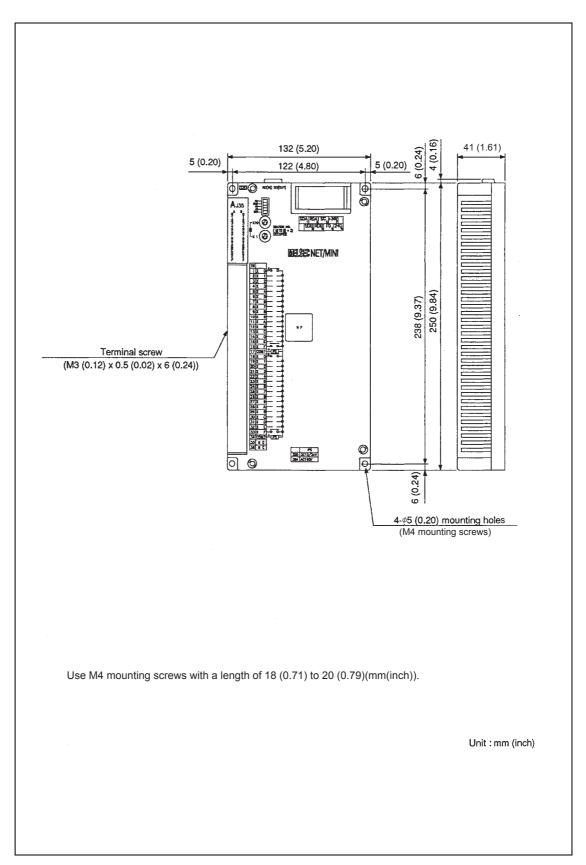
(a) External dimensions of AJ35□J-8□



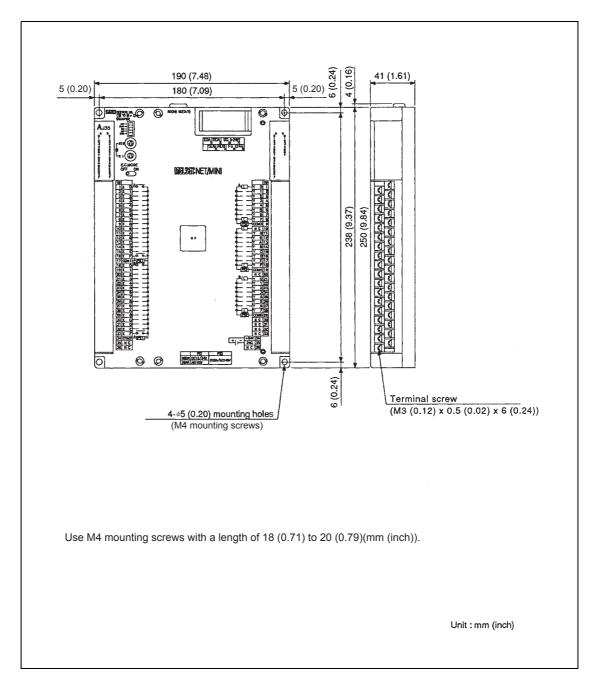
(6) Compact type remote I/O module

(a) External dimensions of AJ35PTF-32, 28, 24 \square

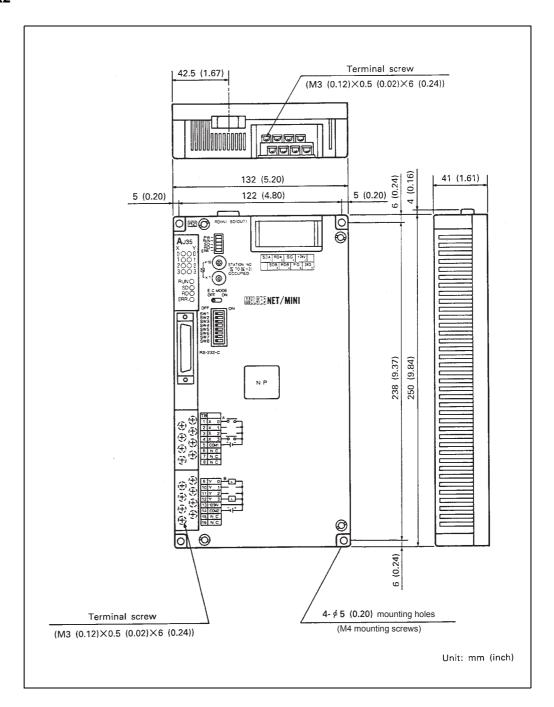
The figure below shows the external dimensions of AJ35PTF-32 \square . The external dimensions of the AJ35PTF-28 \square and AJ35PTF-24 \square are the same.



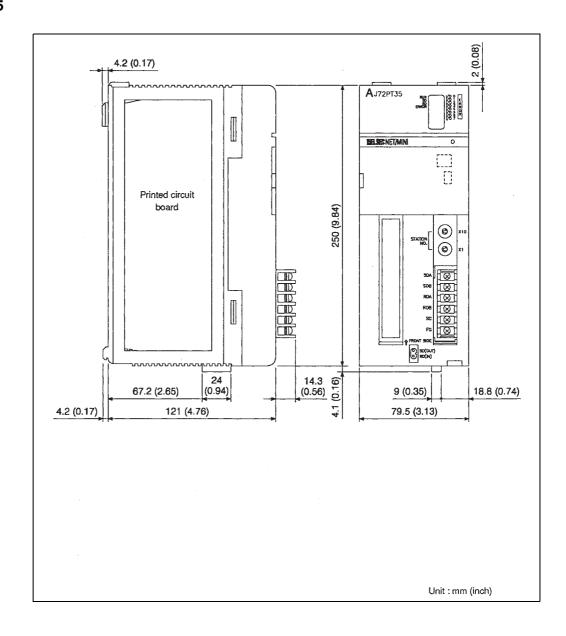
(b) External dimensions of AJ35PTF-56□□



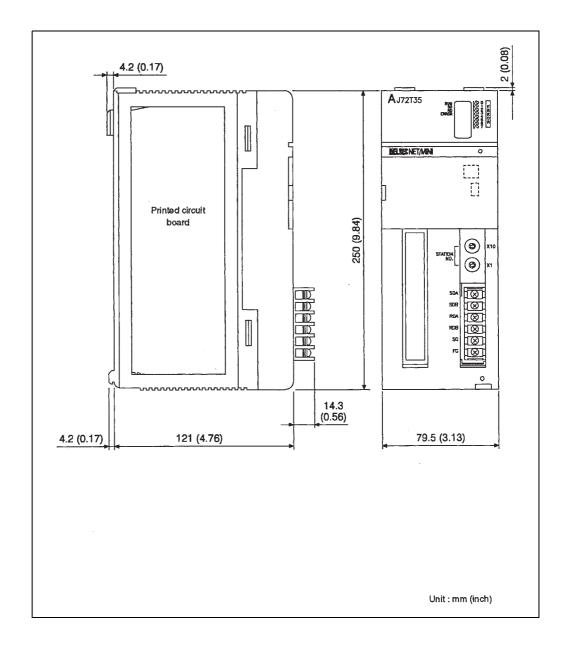
(7) AJ35PTF-R2



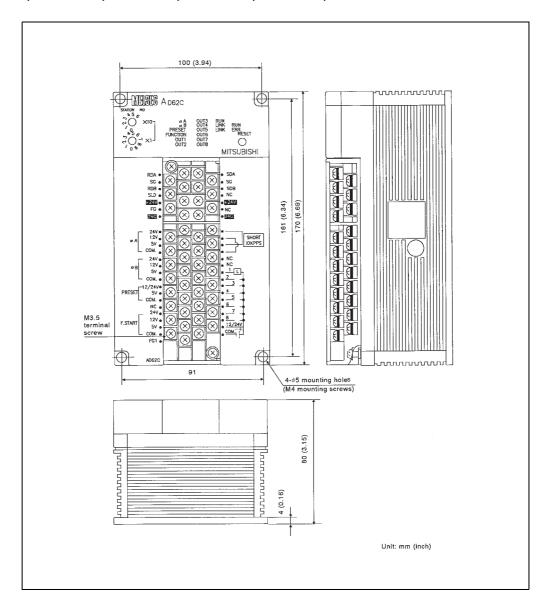
(8) AJ72PT35



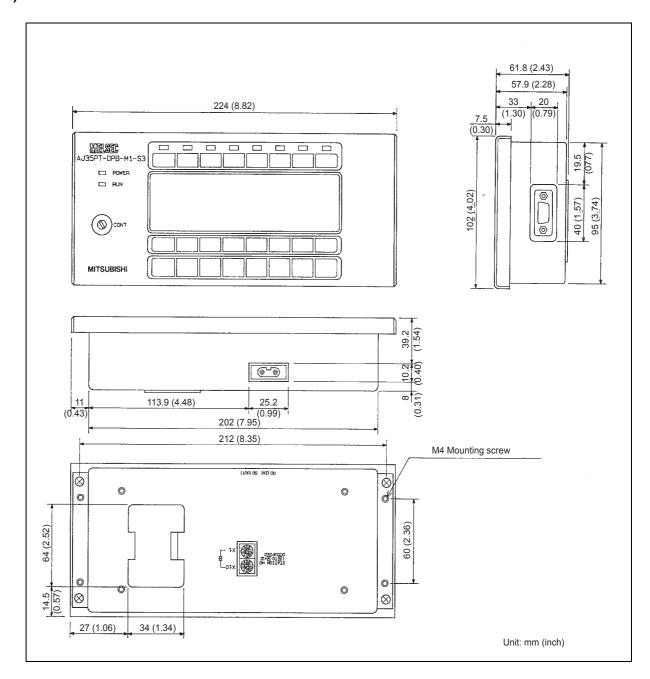
(9) AJ72T35



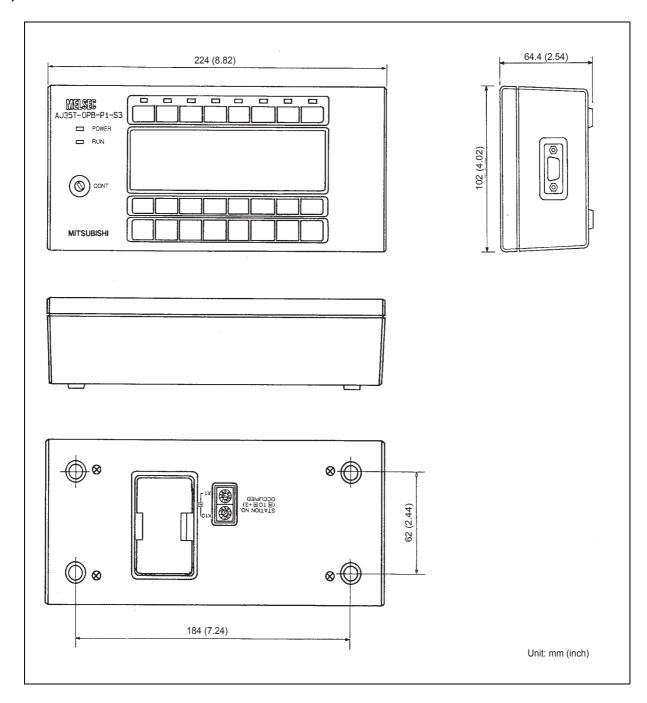
(10) AD62C, AD61C, A64RD4C, A64RD3C, A64DAVC, A64DAIC, A68ADC



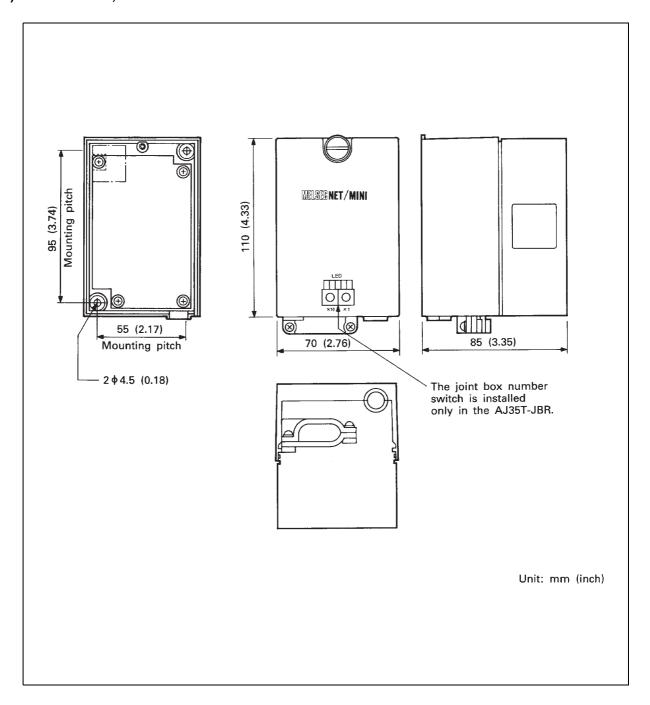
(11) AJ35PT-OPB-M1-S3



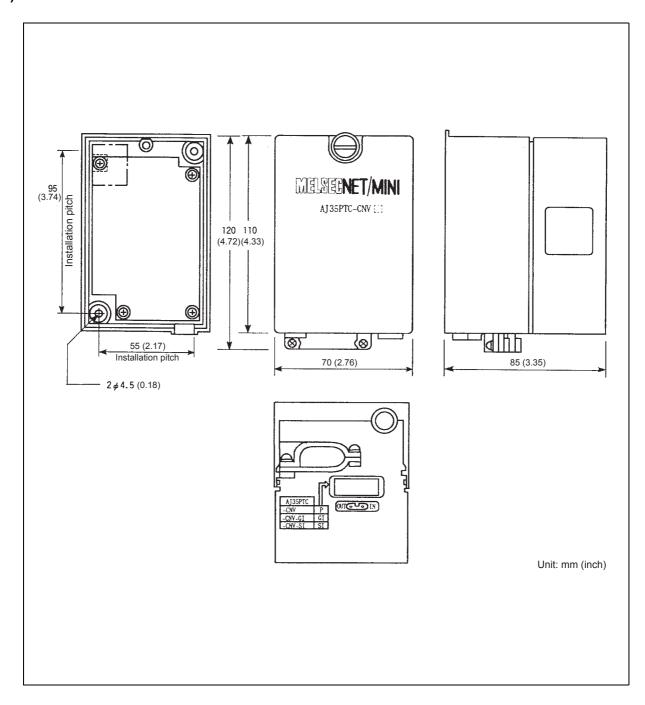
(12) AJ35T-OPB-P1-S3



(13) AJ35T-JB-S3, AJ35T-JBR-S3

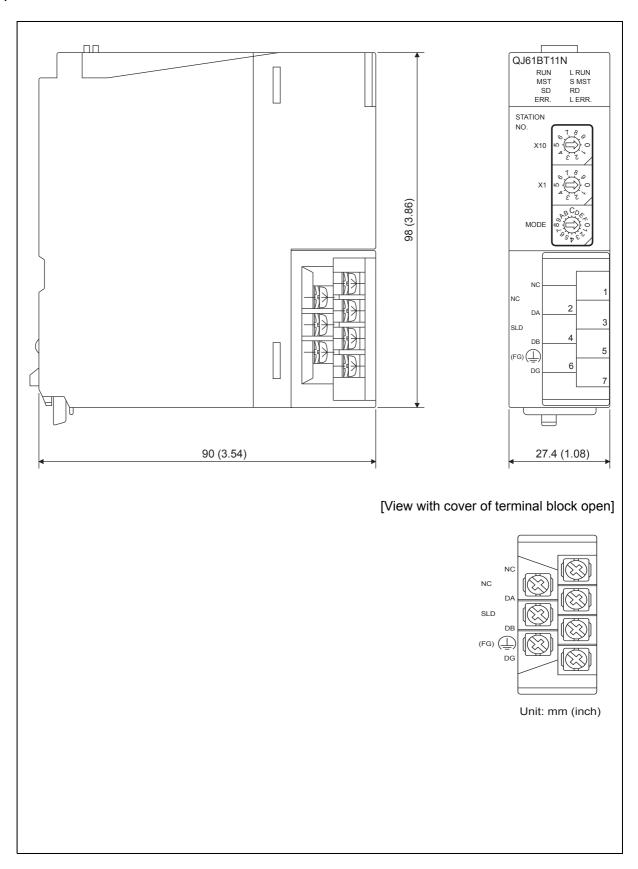


(14) AJ35PTC-CNV□

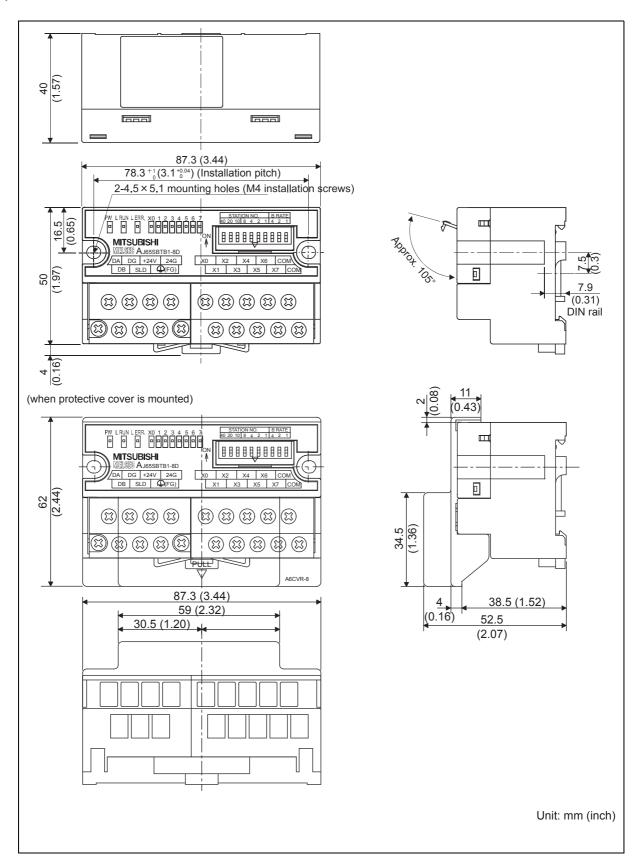


9.2 CC-Link External Dimensions

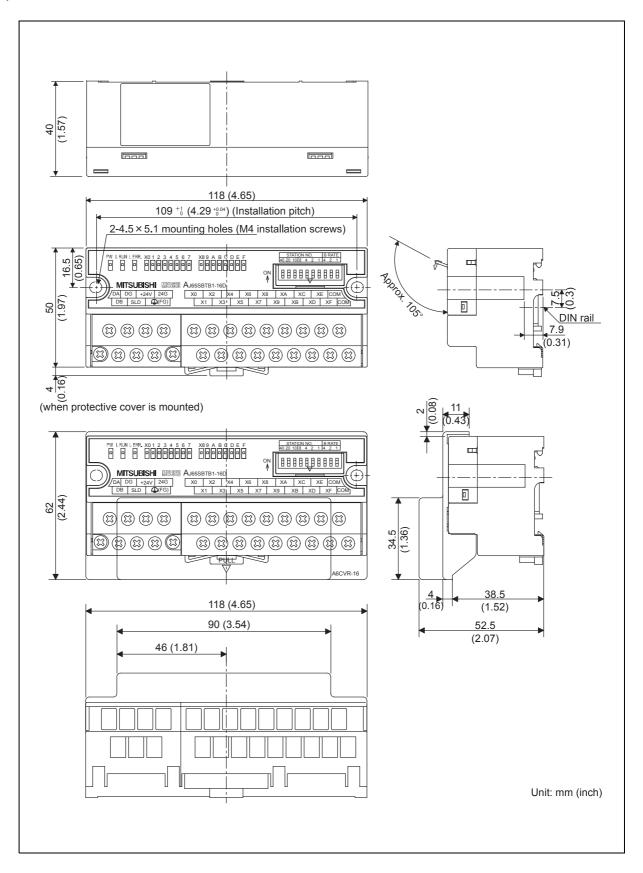
(1) QJ61BT11N



(2) AJ65SBTB1-8 □ remote I/O module

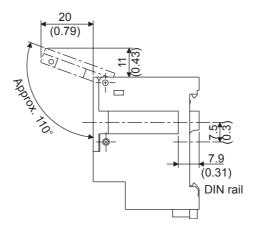


(3) AJ65SBTB1-16□ remote I/O module

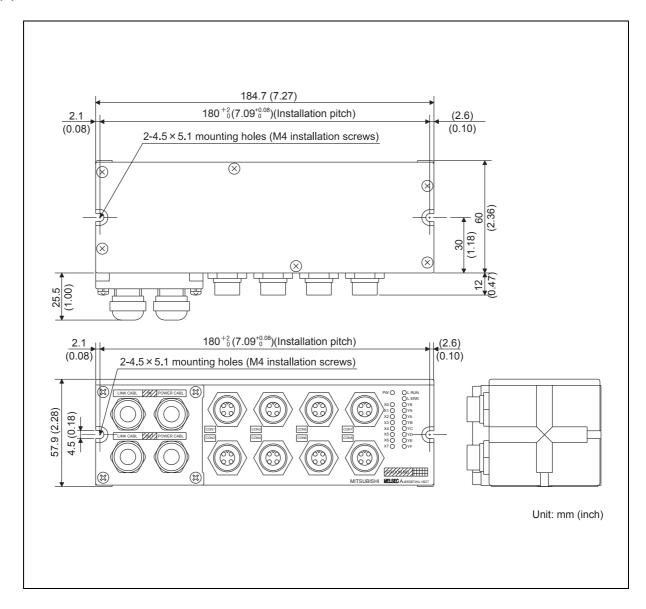




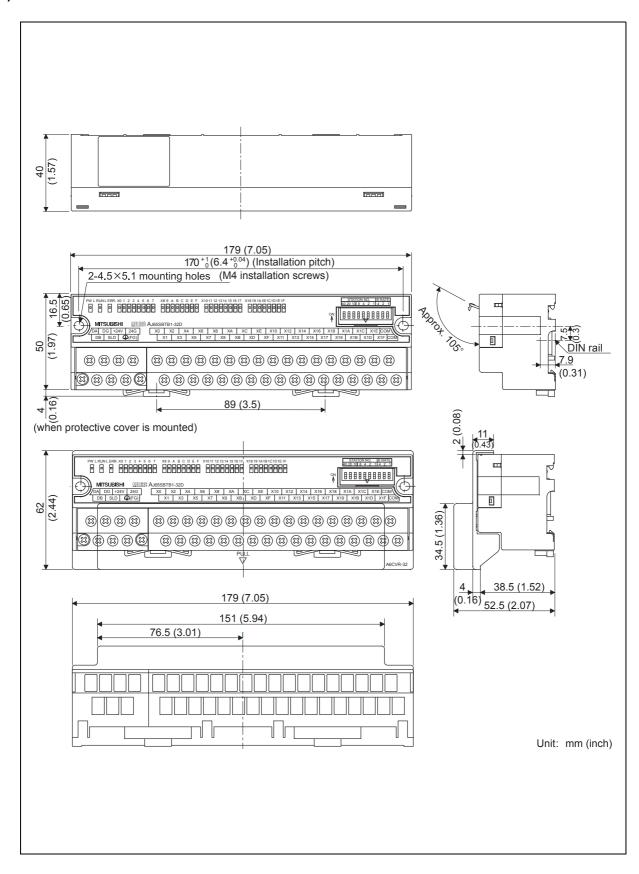
The following shows the side face of AJ65SBTB1-16D and AJ65SBTB1-16Tremote I/O modules of hardware version D or earlier.



(4) AJ65SBTW4-16 ☐ remote I/O module

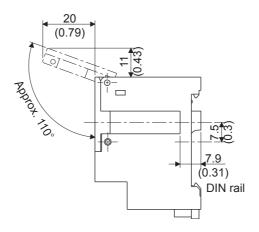


(5) AJ65SBTB1-32 □ remote I/O module

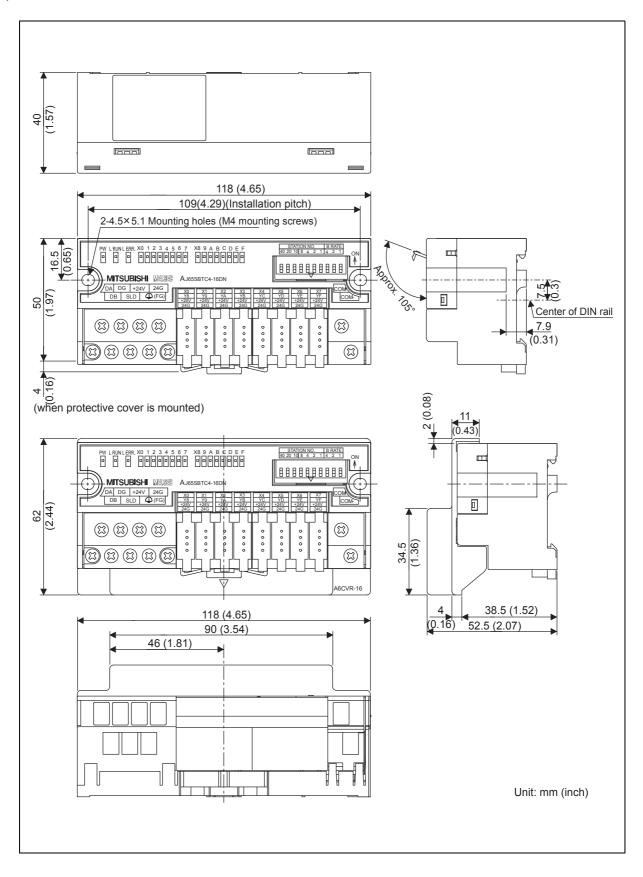




The following shows the side face of AJ65SBTB1-32D and AJ65SBTB1-32T remote I/O modules of hardware version D or earlier.

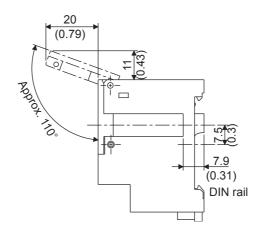


(6) AJ65SBTC4-16□, AJ65SBTC1-32□ remote I/O module



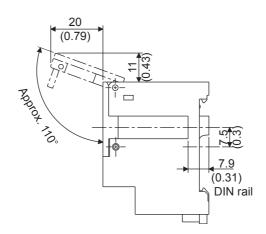


• The following shows the side face of the AJ65SBTC4-16D remote I/O module.

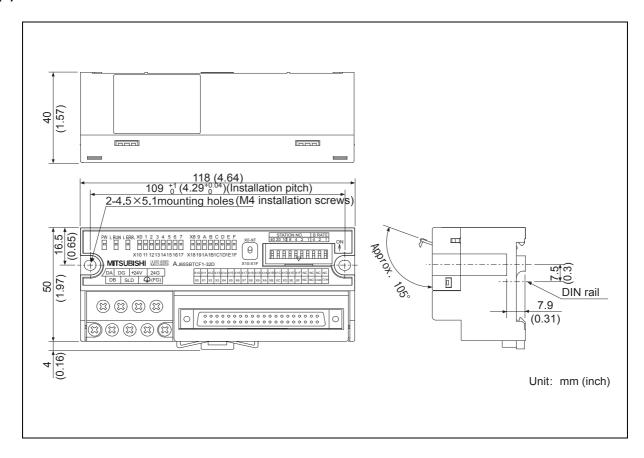


• The following shows the side face of the modules in the following table.

Model name	Target hardware version
AJ65SBTC1-32D	N or earlier
AJ65SBTC1-32D1	N or earlier
AJ65SBTC1-32T	Q or earlier
AJ65SBTC1-32T1	E or earlier
AJ65SBTC1-32DT	Q or earlier
AJ65SBTC1-32DT1	Q or earlier
AJ65SBTC1-32DT2	D or earlier
AJ65SBTC1-32DT3	D or earlier
AJ65SBTC4-16DT	J or earlier
AJ65SBTC4-16DT2	C or earlier



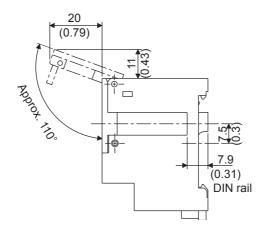
(7) AJ65SBTCF1-32□ remote I/O module



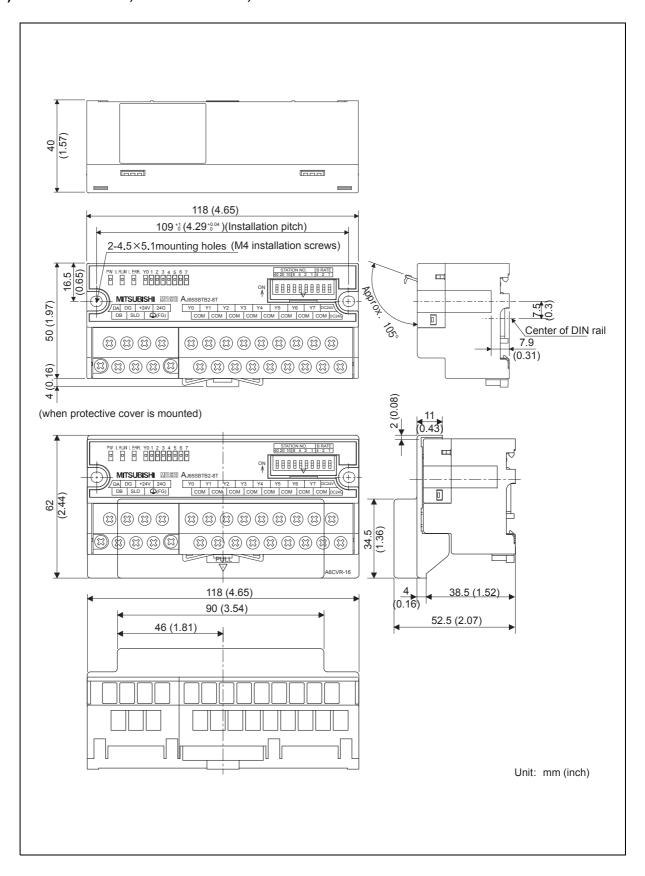


The following shows the side face of the modules in the following table.

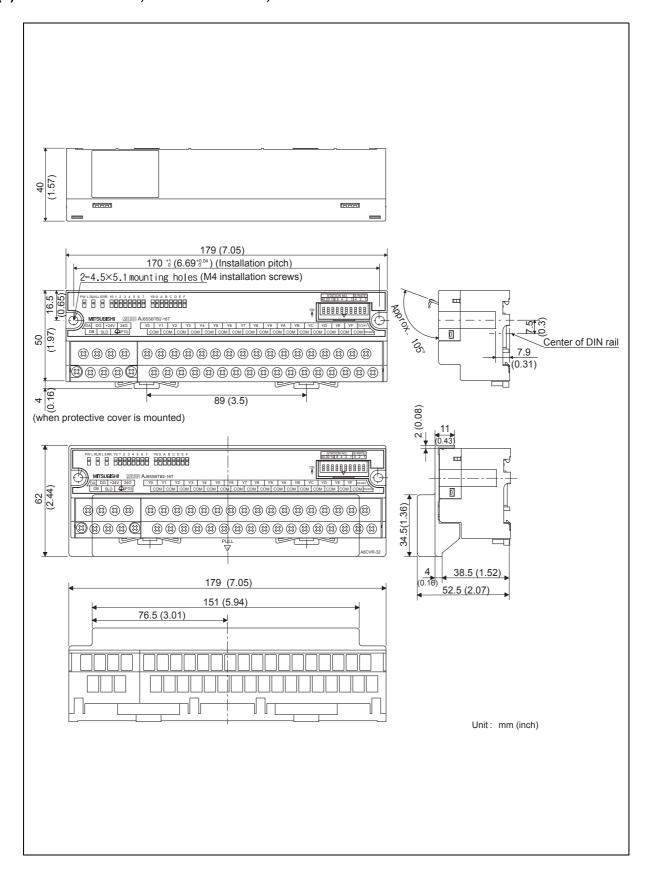
Model name	Target hardware version
AJ65SBTCF1-32D	F or earlier
AJ65SBTCF1-32T	F or earlier
AJ65SBTCF1-32DT	F or earlier



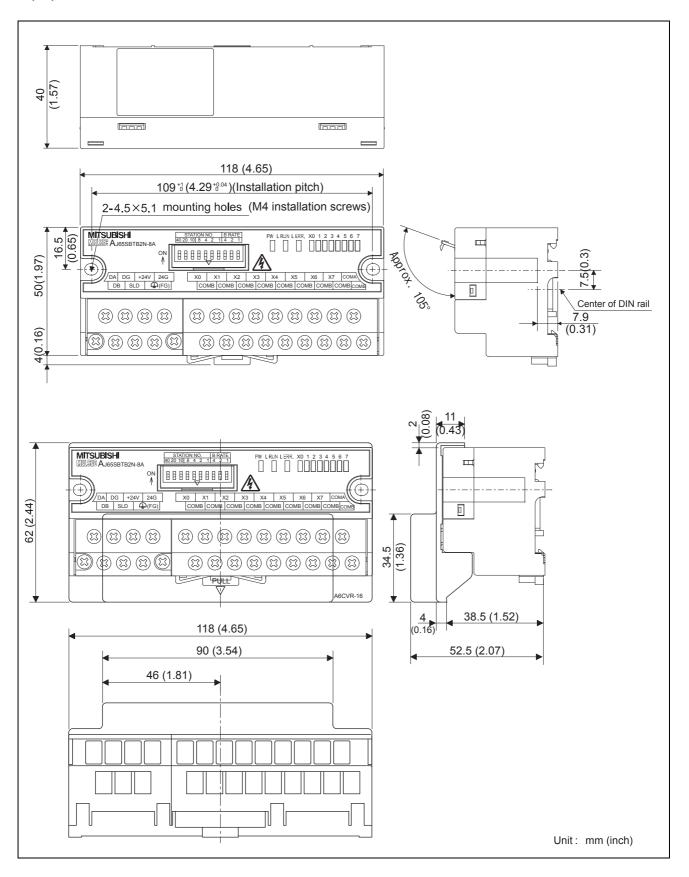
(8) AJ65SBTB2-8□, AJ65SBTB3-8□, AJ65SBTB32-8□ remote I/O module



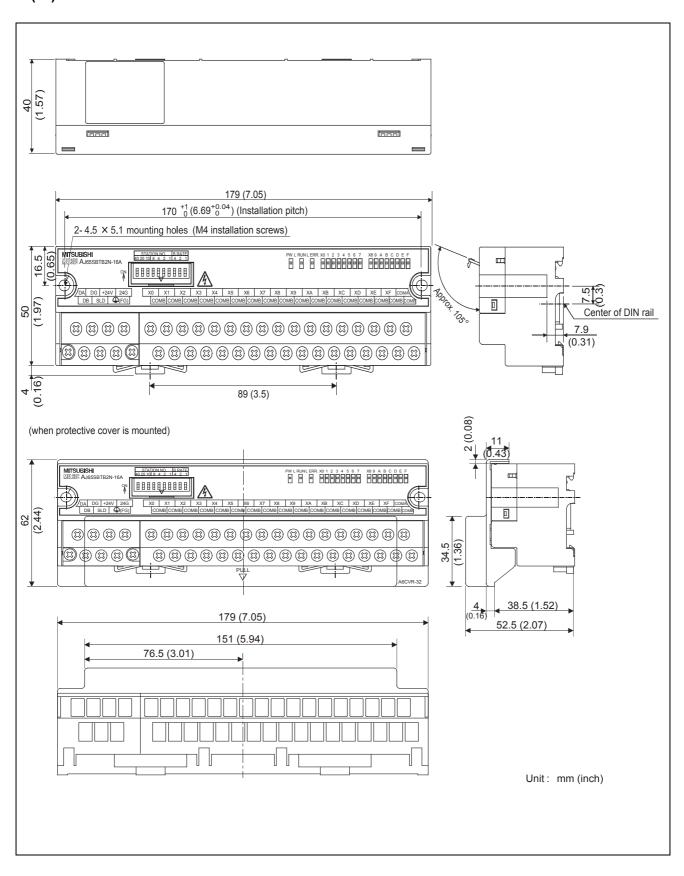
(9) AJ65SBTB2-16□, AJ65SBTB3-16□, AJ65SBTB32-16□ remote I/O module



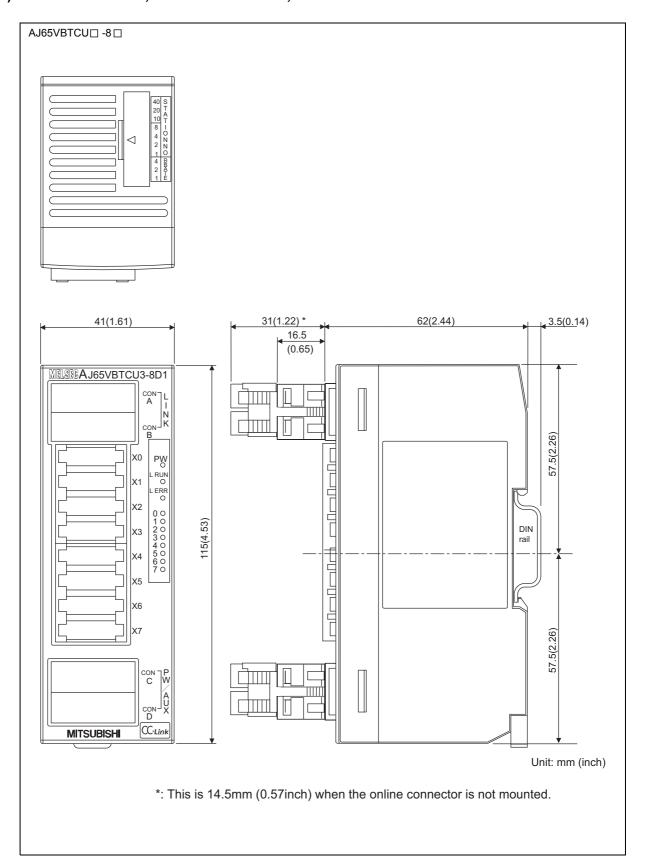
(10) AJ65SBTB2N-8□ remote I/O module

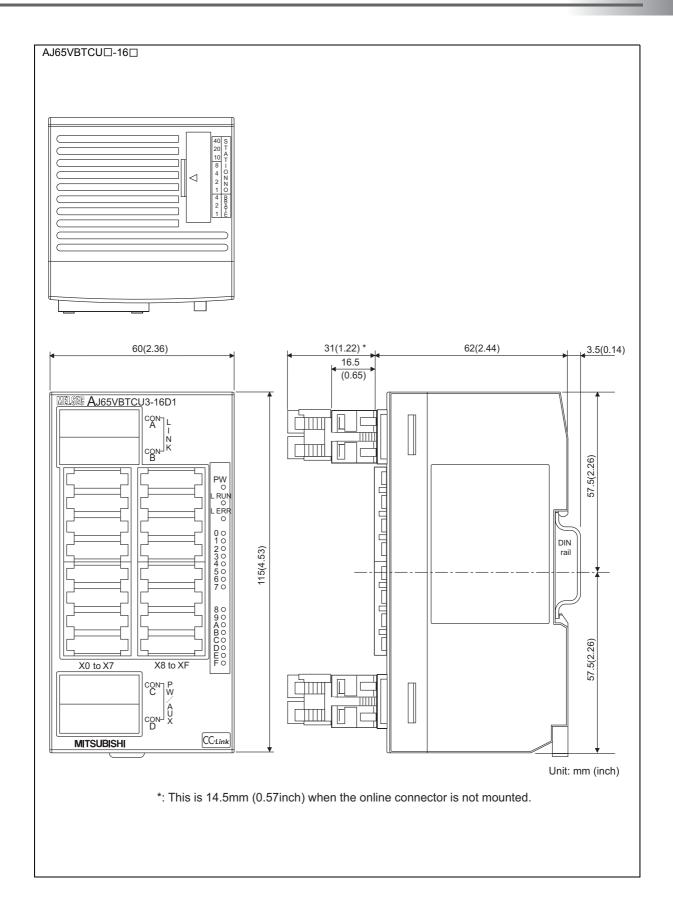


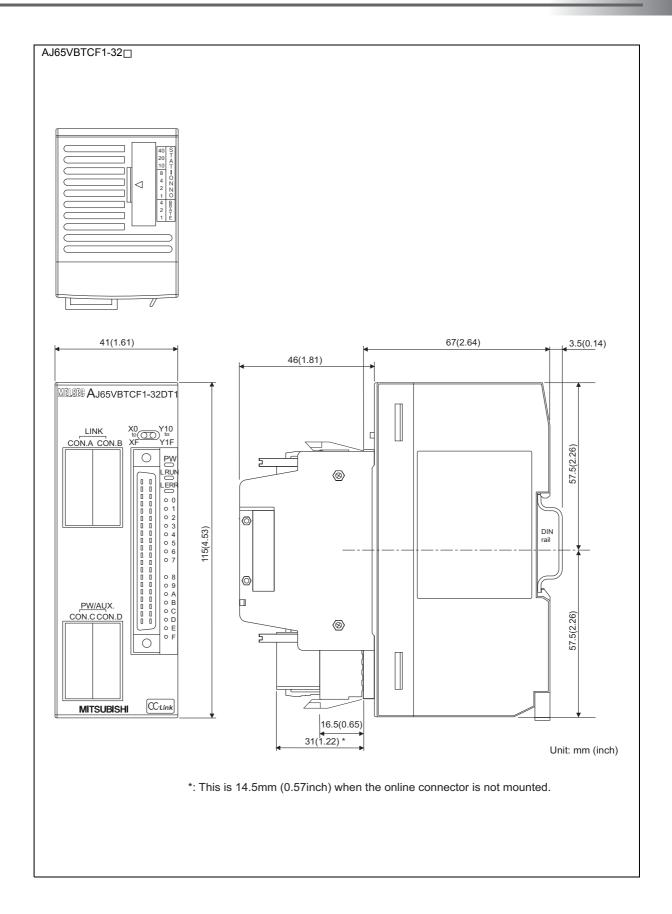
(11) AJ65SBTB2N-16□ remote I/O module



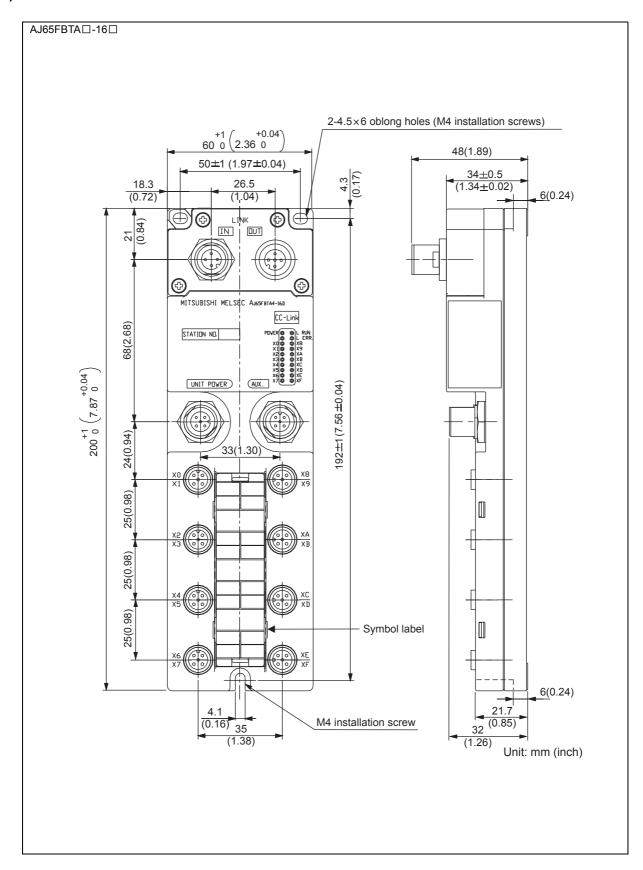
(12) AJ65VBTCU□-8□, AJ65VBTCU□-16□, AJ65VBTCF1-32□ remote I/O module



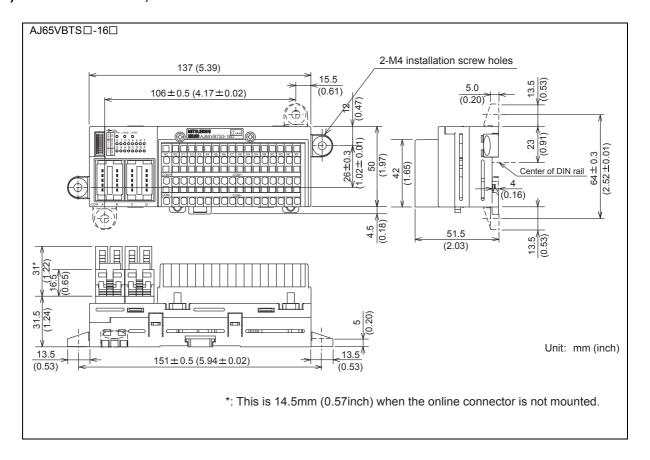


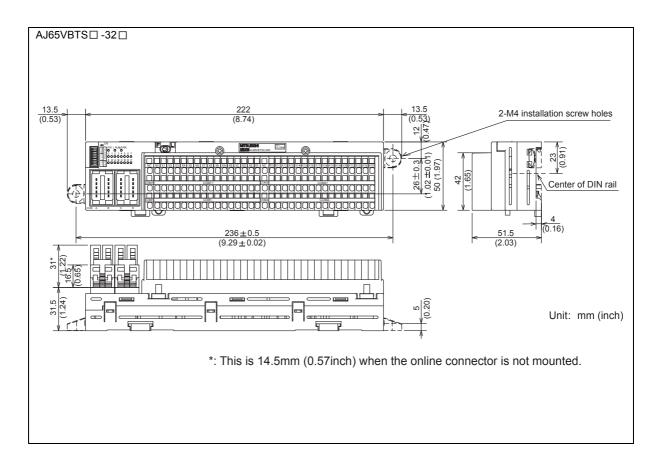


(13) AJ65FBTA □-16 □ remote I/O module

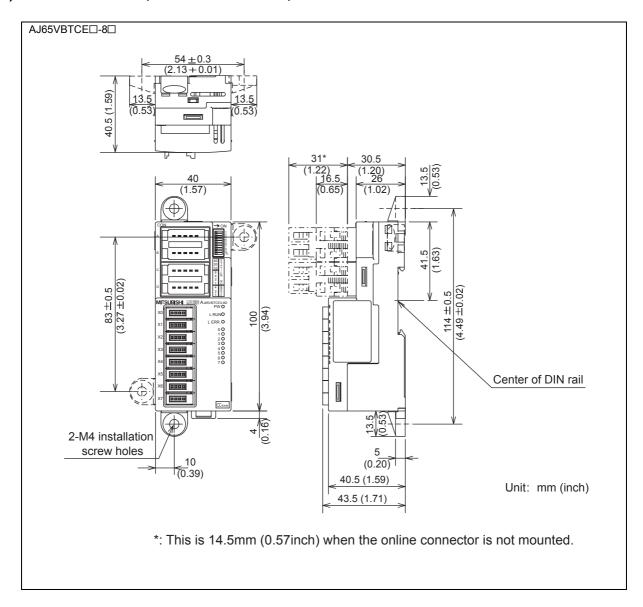


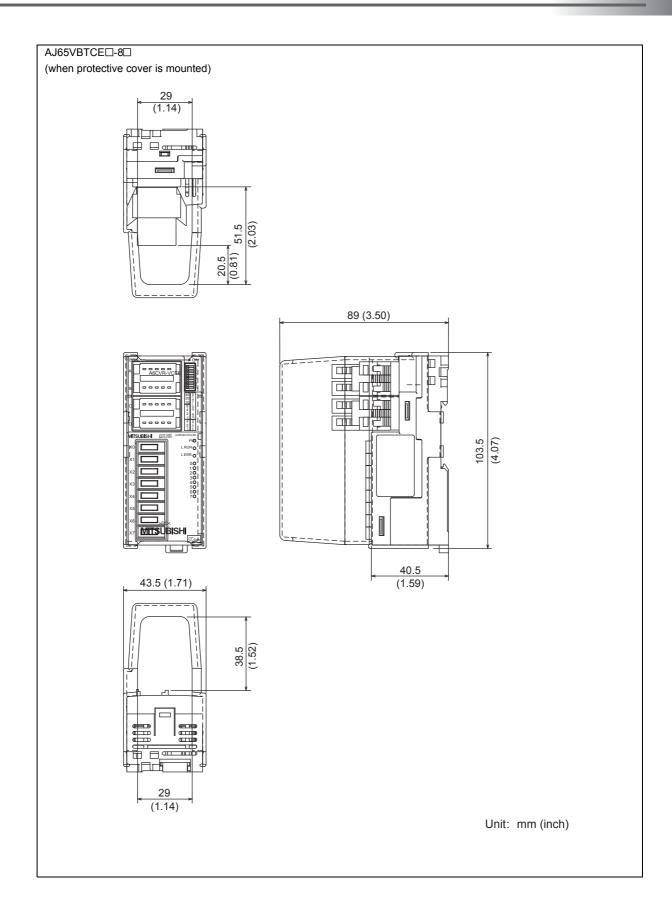
(14) AJ65VBTS□-16□, AJ65VBTS□-32□ remote I/O module

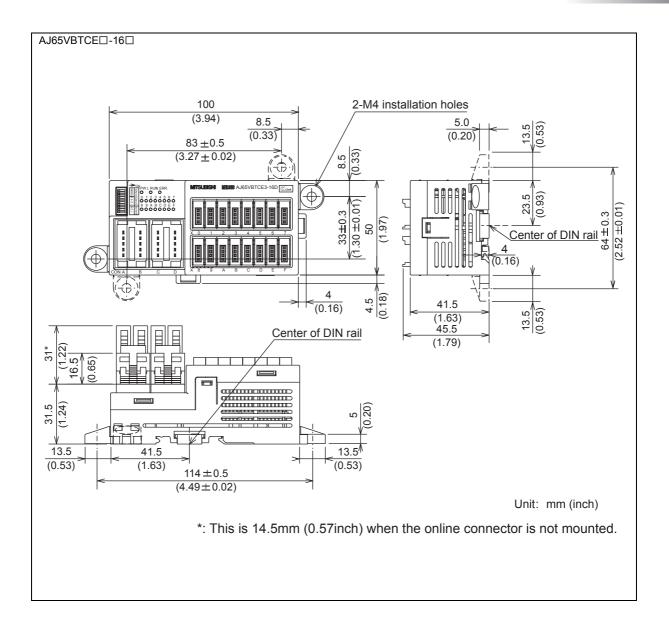


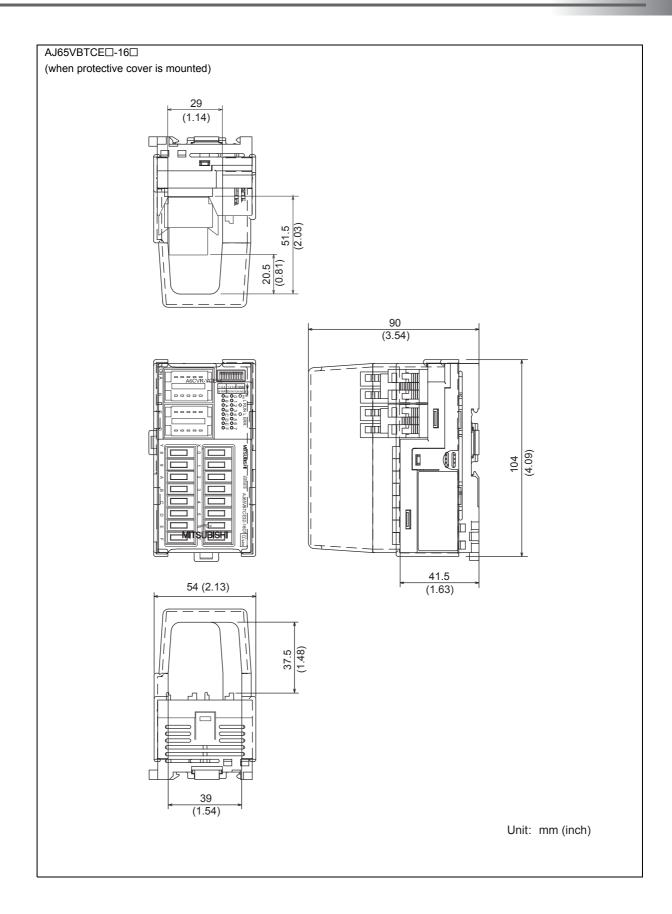


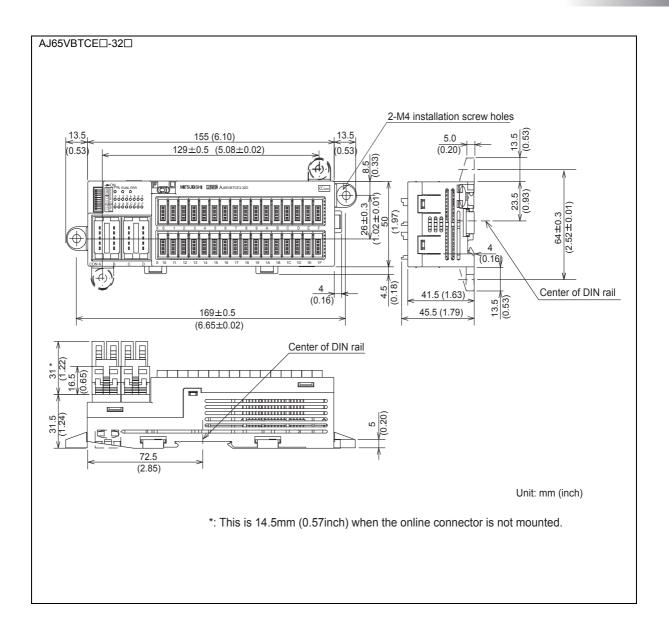
(15) AJ65VBTCE □-8 □, AJ65VBTCE □-16 □, AJ65VBTCE □-32 □ remote I/O module



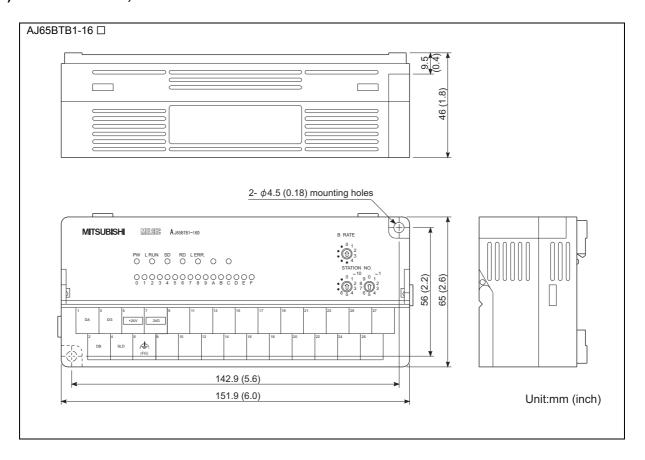


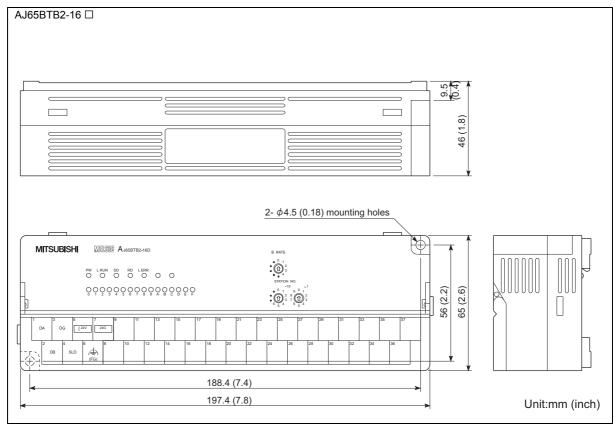






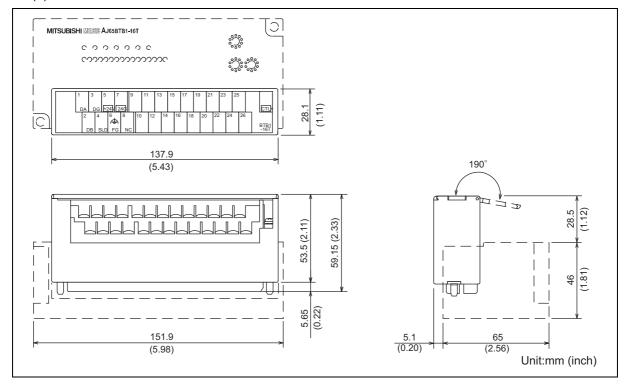
(16) AJ65BTB1-16□, AJ65BTB2-16□ remote I/O module



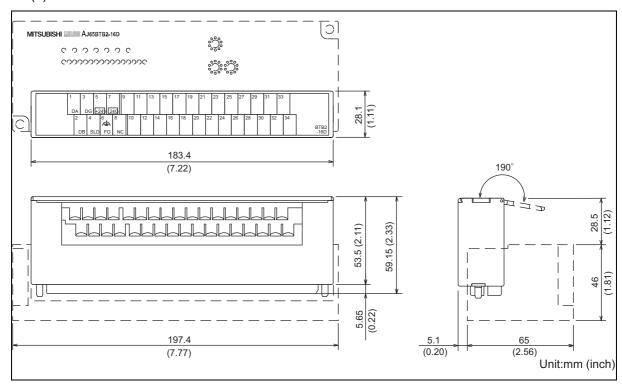


*1: When using a MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter, the external dimensions are increased by 5.1mm (0.20inch) (height) and 28.5mm (1.12inch) (depth) .

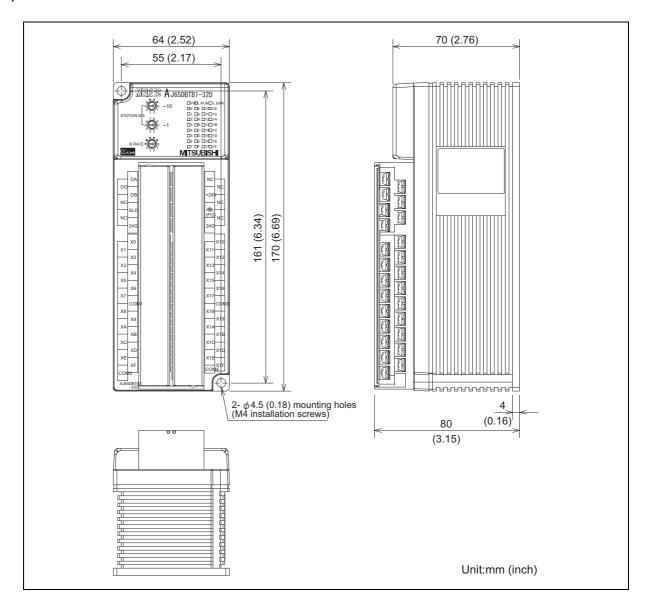
(1) A6ADP-1MC16D/A6ADP-1MC16T



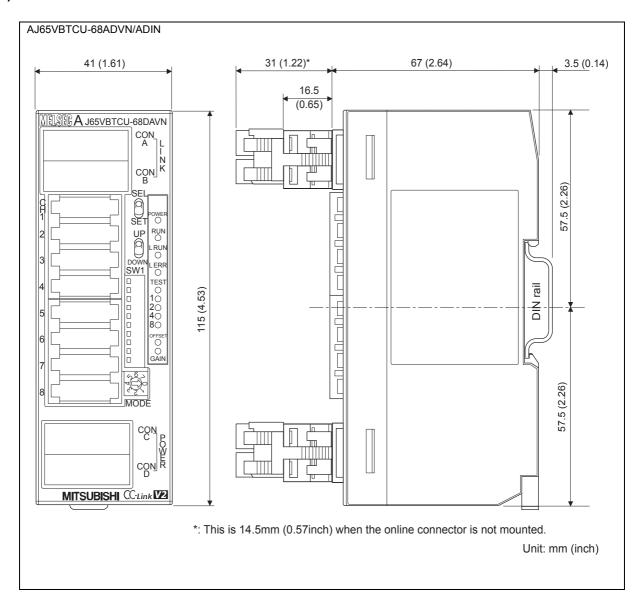
(2) A6ADP-2MC16D



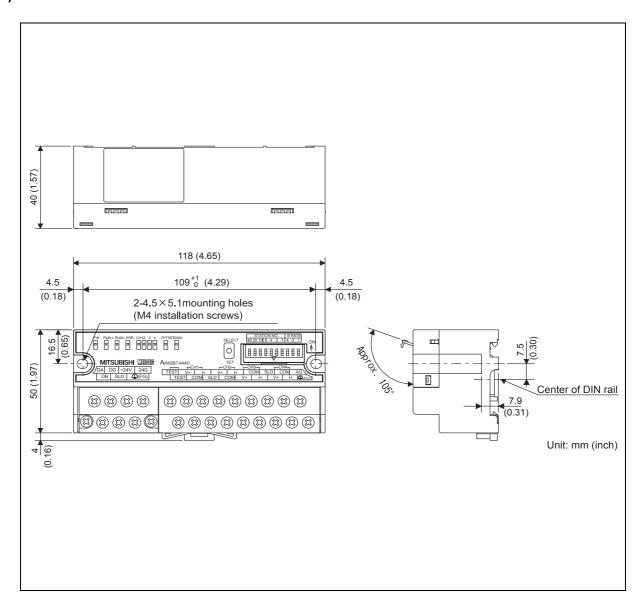
(17) AJ65DBTB1-32□ remote I/O module



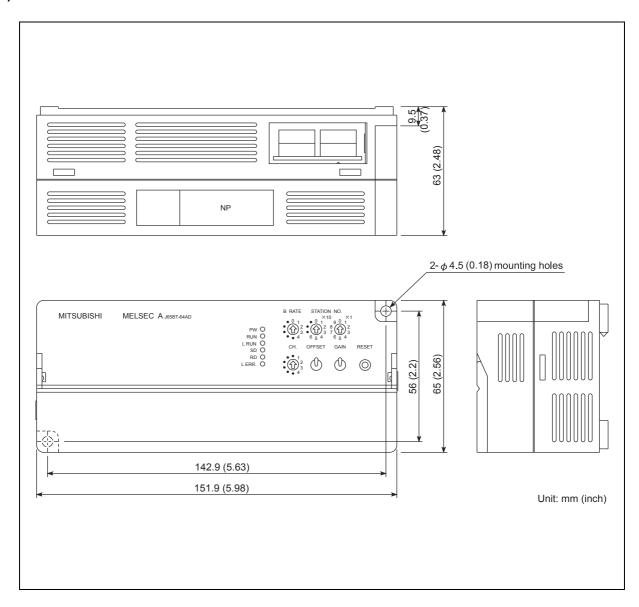
(18) AJ65VBTCU-68ADVN/ADIN



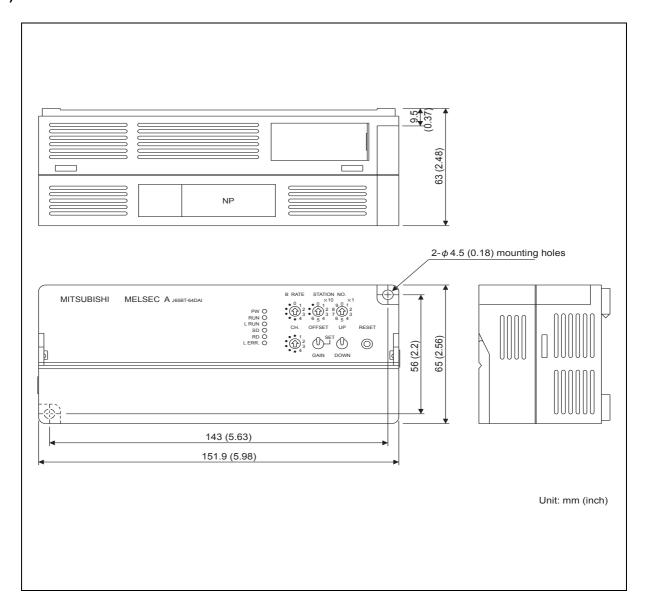
(19) AJ65SBT-64AD



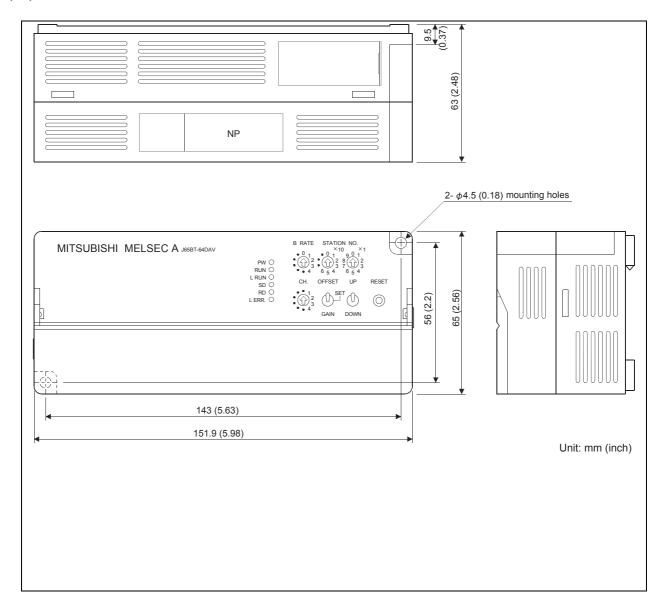
(20) AJ65BT-64AD



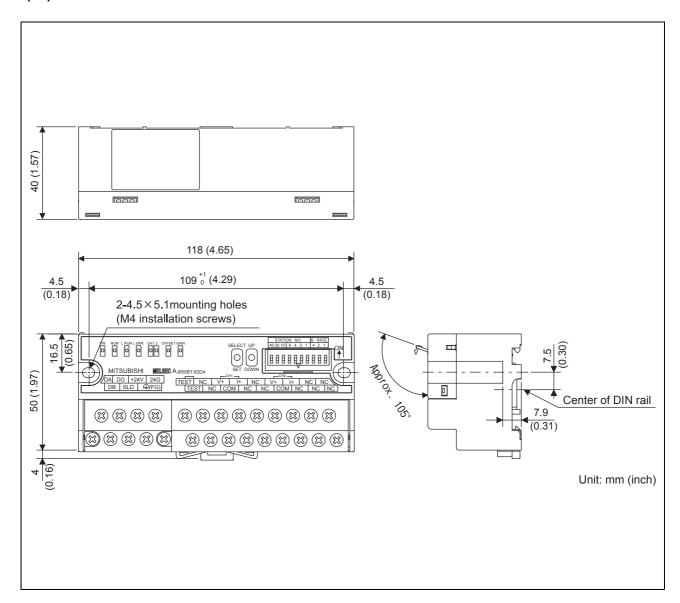
(21) AJ65BT-64DAI



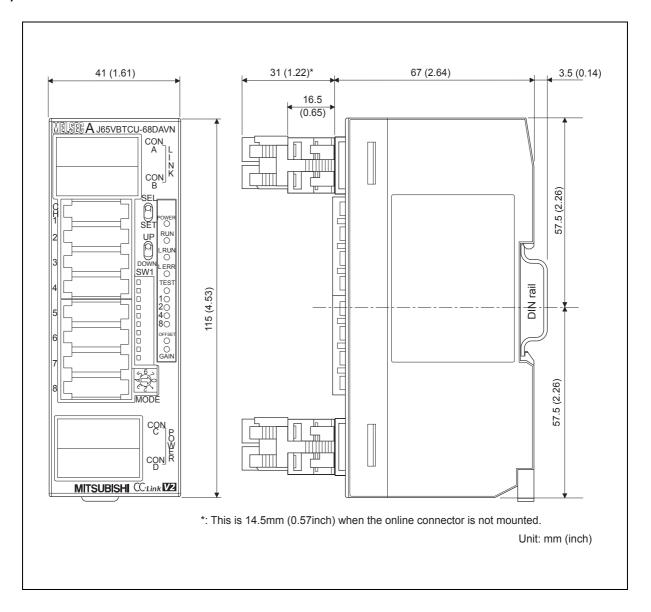
(22) AJ65BT-64DAV



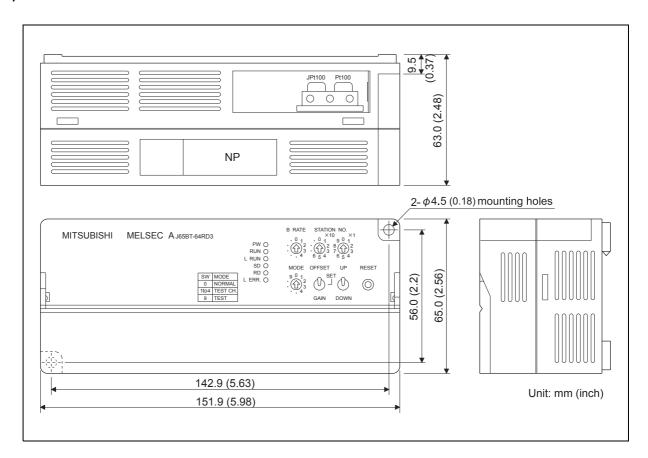
(23) AJ65SBT-62DA



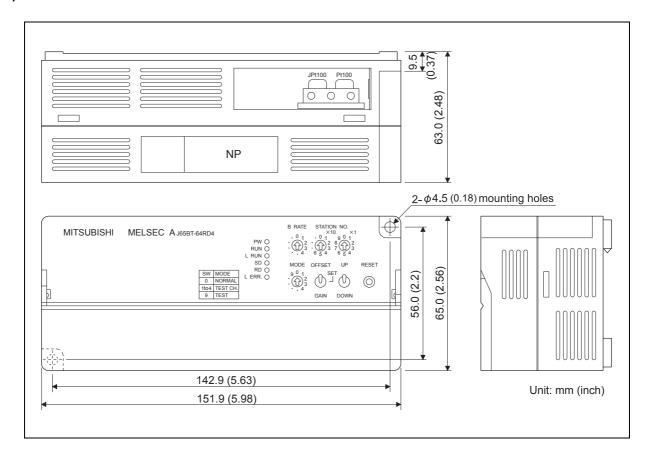
(24) AJ65VBTCU-68DAVN



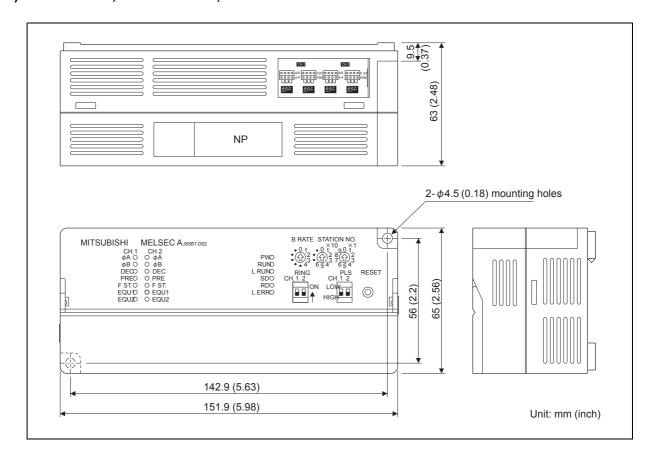
(25) AJ65BT-64RD3



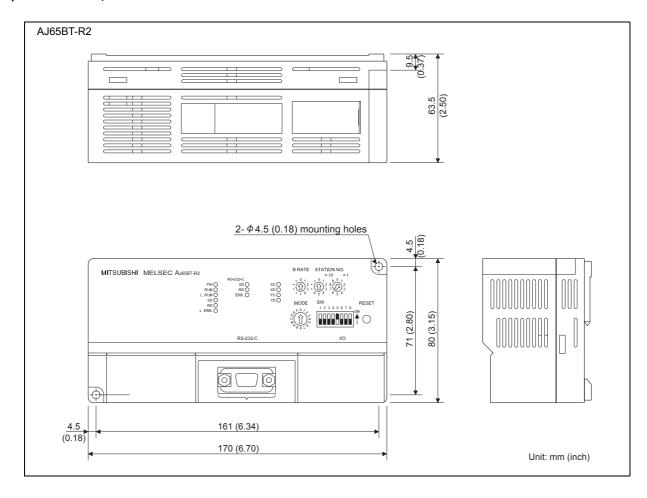
(26) AJ65BT-64RD4

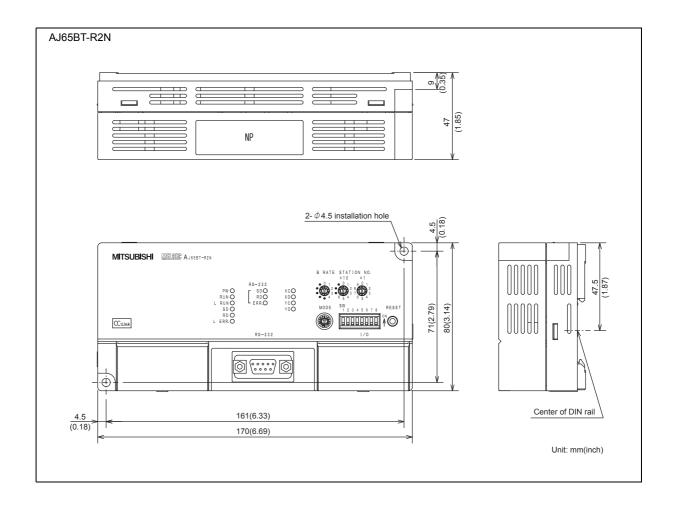


(27) AJ65BT-D62, AJ65BT-D62D, AJ65BT-D62D-S1

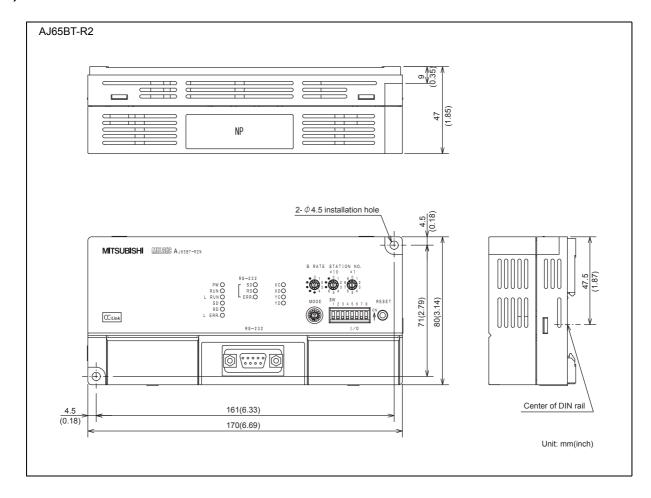


(28) AJ65BT-R2, AJ65BT-R2N





(29) AJ65BT-R2N



APPENDICES

Appendix 1 Performance Specifications Comparison between MELSECNET/MINI-S3 I/O Module and Renewal Tool for A0J2

This section shows the performance specifications comparison between MELSECNET/MINI-S3 compact type remote I/O module and interface module of renewal tool for A0J2 described in Section 1.2.

1) Specifications comparison between AJ35PTF-28DR and interface module (SC-A0JQIF28DR)

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specif	ications	AJ35PTF-28DR input specifications	SC-A0JQIF28DR input specifications	Compatibility	Precautions for replacement
Number of it	nput points	16 points	16 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	12VDC/24VDC	12VDC/24VDC	0	
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
Operating vo	oltage range	10.2 to 31.2VDC	10.2 to 26.4VDC	Δ	The operating voltage range
		(Ripple ratio within 5%)	(Ripple ratio within 5%)		differs.
Maximum n	umber of	100% (16 points/common)	100% (16 points/common)	0	
simultaneou	s input points	simultaneously ON	simultaneously ON	U	
ON voltage/	ON current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage	e/OFF current	6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resista	ince	Approx. 3.4kΩ	Approx. 3.3kΩ	0	Input resistance is smaller.
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
time	ON→OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
Common terminal arrangement		16 points/common (Common terminal: TB17)	16 points/common (Common terminal: TB17)	0	
Operation indication		Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with CC-Link input module.

 $\bigcirc : \mathsf{Compatible}, \ \triangle : \mathsf{Partially changed}, \ \times : \mathsf{Incompatible}$

Specif	ications	AJ35PTF-28DR output specifications	SC-A0JQIF28DR output specifications	Compatibility	Precautions for replacement
Number of o	output points	12 points	12 points	0	
Insulation m	nethod	Photocoupler	None	Δ	Photocoupler is provided on CC- Link output module side.
Rated switc	hing voltage/	24VDC 2A (Resistance load)/point 240VAC 2A (COS φ =1)/point 5A/common	24VDC 2A (Resistance load)/point 240VAC 2A (COS φ =1)/point 5A/common	0	
Minimum sv	vitching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv voltage	witching	264VAC 125VDC	264VAC 125VDC	0	
Maximum sy frequency	witching	3600 times/hr	3600 times/hr	0	
Mechanical	life	20 million times or more	20 million times or more	0	
		Rated switching voltage/current load 200,000 times or more	Rated switching voltage/current load 200,000 times or more	0	
Electrical life		200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 0.75A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	0	
Response	OFF→ON	10ms or less	9ms or less	Δ	In combination with CC-Link output module: 9.5ms or less*2
time	ON→OFF	12ms or less	11ms or less	Δ	In combination with CC-Link output module: 12.5ms or less*2
External	Voltage	24VDC ± 10%	24VDC±10%	0	
supply	Voltage	Ripple voltage 4Vp-p or less	Ripple voltage 4Vp-p or less	U	
power (Relay coil driving power)	Current	110mA (24VDC All points are ON.)	125mA (24VDC All points are ON.)	Δ	Review current capacity since current consumption is increased.
Surge supp	ressor	None	None	0	
Fuse rating		None	None	0	
Fuse blown		_	_	0	
Relay socke	et	None	None	0	
Common terminal arrangement		8 points/common (Common terminal: TB26) 3 points/common (Common terminal: TB31) Independent contact (Common terminal: TB33)	8 points/common (Common terminal: TB26) 3 points/common (Common terminal: TB31) Independent contact (Common terminal: TB33)	0	
Operation in	ndication	Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Speci	fications	AJ35PTF-28DR	SC-A0JQIF28DR	Compatibility	Precautions for replacement
External supply power (Module	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB27 or TB36 is required.
power supply)	Current	120mA	100mA	0	If the voltage exceeds existing power capacity, add 24VDC power supply separately.
External co	nnection	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable v	wire size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable sterminal	solderless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of o stations (nu occupied po	mber of	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		0.76kg	0.42kg	Δ	Also consider the weight of fixed stand of programmable controller.*3
External din	nensions	250(H) × 132(W) × 41(D) mm*4	182(H) × 132(W) × 41(D) mm ^{*5}	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32D.
- *2: A value when using the AJ65SBTCF1-32T.
- *3: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4: External dimensions of the AJ35PTF-28DR does not include dimensions of the optical fiber cable connector.
- *5: The external dimensions of the SC-A0JQIF28DR do not include those of its projection.

2) Specifications comparison between AJ35PTF-56DR and interface module (SC-A0JQIF56DR)

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specif	ications	AJ35PTF-56DR input specifications	SC-A0JQIF56DR input specifications	Compatibility	Precautions for replacement
Number of it	nput points	32 points	32 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	12VDC/24VDC	12VDC/24VDC	0	
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
Operating	altaga ranga	10.2 to 31.2VDC	10.2 to 26.4VDC		The operating voltage range
Operating v	bitage range	(Ripple ratio within 5%)	(Ripple ratio within 5%)	Δ	differs.
Maximum n	umber of	60% (10 points/common)	60% (10 points/common)	0	
simultaneou	s input points	simultaneously ON	simultaneously ON	0	
ON voltage/	ON current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage/OFF current		6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resistance		Approx. 3.4kΩ	Approx. 3.3kΩ	0	Input resistance is smaller.
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
		10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link
	OFF→ON				input module:
Response					6.5ms or less (2.5ms TYP.)*1
time					In combination with CC-Link
	ON→OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	input module:
					6.5ms or less (2.5ms TYP.)*1
Common ter	rminal	16 points/common	16 points/common	0	
arrangement		(Common terminal: TB17, TB34)	(Common terminal: TB17, TB34)	0	
		Available			Operation indication can be
Operation in	dication	(Turning ON the input turns LED ON)	None	Δ	checked with CC-Link input
		(Turning ON the input turns LED ON)			module.

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specif	ications	AJ35PTF-56DR output specifications	SC-A0JQIF56DR output specifications	Compatibility	Precautions for replacement
Number of o	output points	24 points	24 points	0	
Insulation m	ethod	Photocoupler	None	Δ	Photocoupler is provided on CC- Link output module side.
Rated switch	hing voltage/	24VDC 2A (Resistance load)/point 240VAC 2A (COS φ =1)/point 5A/common	24VDC 2A (Resistance load)/point 240VAC 2A (COS φ =1)/point 5A/common	0	
Minimum sv	vitching load	5VDC 1mA	5VDC 1mA	0	
Maximum so	witching	264VAC 125VDC	264VAC 125VDC	0	
Maximum sy frequency	witching	3600 times/hr	3600 times/hr	0	
Mechanical	life	20 million times or more	20 million times or more	0	
		Rated switching voltage/current load 200,000 times or more	Rated switching voltage/current load 200,000 times or more	0	
Electrical life	9	200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 0.75A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	0	
Response	OFF→ON	10ms or less	9ms or less	Δ	In combination with CC-Link output module: 9.5ms or less*2
time	ON→OFF	12ms or less	11ms or less	Δ	In combination with CC-Link output module: 12.5ms or less*2
External supply	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	24VDC±10% Ripple voltage 4Vp-p or less	0	
power (Relay coil driving power)	Current	220mA (24VDC All points are ON.)	230mA (24VDC All points are ON.)	Δ	Review current capacity since current consumption is increased.
Surge suppi	ressor	None	None	0	
Fuse rating		None	None	0	
Fuse blown indication				0	
Relay socke	et	None	None	0	
Common te		8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation in	ndication	Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specif	ications	AJ35PTF-56DR	SC-A0JQIF56DR	Compatibility	Precautions for replacement
External supply power (Module	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB35 or TB36 is required.
power supply)	Current	150mA	200mA	Δ	If the voltage exceeds existing power capacity, add 24VDC power supply separately.
External cor method	nnection	36-point terminal block connector (M3 × 6 screws) 2 pieces	36-point terminal block connector (M3 × 6 screws) 2 pieces	0	
Applicable v	vire size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable s	solderless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of o stations (nu occupied po	mber of	8 stations (8 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		1.16kg	0.62kg	Δ	Also consider the weight of fixed stand of programmable controller.*3
External din	nensions	250(H) × 190(W) × 41(D)mm*4	182(H) × 190(W) × 41(D)mm*5	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32D.
- *2: A value when using the AJ65SBTCF1-32T.
- *3: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4: External dimensions of the AJ35PTF-56DR does not include dimensions of the optical fiber cable connector.
- *5: The external dimensions of the SC-A0JQIF56DR do not include those of its projection.

3) Specifications comparison between AJ35PTF-28DT and interface module (SC-A0JQIF28DT)

O: Compatible, △: Partially changed, ×: Incompatible

Specif	ications	AJ35PTF-28DT input specifications	SC-A0JQIF28DT input specifications	Compatibility	Precautions for replacement
Number of in	nput points	16 points	16 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	12VDC/24VDC	12VDC/24VDC	0	
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
·		10.2 to 31.2VDC	10.2 to 26.4VDC	_	The operating voltage range
Operating vo	oltage range	(Ripple ratio within 5%)	(Ripple ratio within 5%)	Δ	differs.
Maximum ni	ımber of	100% (16 points/common)	100% (16 points/common)		
	s input points	simultaneously ON	simultaneously ON	0	
ON voltage/		9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
	OFF current	6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
		Approx. 3.4kΩ		0	Input registance is smaller
Input resista	rice	11	Approx. 3.3k Ω		Input resistance is smaller.
Input form	ı	Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
time	ON→OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
Common ter arrangemen		16 points/common (Common terminal: TB17)	16 points/common (Common terminal: TB17)	0	
Operation indication		Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with CC-Link input module.
Specif	ications	AJ35PTF-28DT output specifications	SC-A0JQIF28DT output specifications	Compatibility	Precautions for replacement
Number of c	utput points	12 points	12 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load v	/oltage	12VDC/24VDC	12VDC/24VDC	0	
Operating load voltage range		10.2 to 31.2VDC	10.2 to 30VDC	Δ	The operating load voltage range differs.
Maximum Io	ad current	0.5A/point, 3.2A/common	0.5A/point, 4A/common	0	The maximum load current differs.
Maximum in	rush current	4A 10ms or less	4A 10ms or less	0	
Leakage cui	rent at OFF	0.1mA or less	0.1mA or less	0	
	oltage drop at	0.9VDC (TYP.) 0.5A	0.5VDC (TYP.) 0.5A	-	
ON	3 1	1.5VDC (MAX.) 0.5A	0.8VDC (MAX.) 0.5A	0	
Output meth	ind	Sink type	Sink type	0	
	l		5 yp 5	Ŭ	In combination with
Response	OFF→ON	2ms or less	1ms or less	Δ	CC-Link output module: 1.5ms or less*2
time	ON→OFF	2ms or less (Resistance load)	1ms or less (Resistance load)	Δ	In combination with CC-Link output module: 2.5ms or less (Resistance load)*2
External	Voltage	12VDC/24VDC (10.2 to 31.2VDC)	12VDC/24VDC (10.2 to 30VDC)	Δ	The operating voltage range differs.
supply power	Current	23mA (TYP. 24VDC 8 points/common ON)	5mA (TYP. 24VDC 8 points/common ON)	0	
Surge suppr	essor	Varistor (52 to 62V)	Varistor (50.4 to 61.6V)	0	
Common terminal arrangement		8 points/common (Common terminal: TB26) 4 points/common (Common terminal: TB33)	8 points/common (Common terminal: TB26) 4 points/common (Common terminal: TB33)	0	
		Available	None	Δ	Operation indication can be checked with CC-Link output
Operation in	dication	(Turning ON the output turns LED ON)			module.
Operation in	dication	(Turning ON the output turns LED ON) None	None	0	module.

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specif	ications	AJ35PTF-28DT	SC-A0JQIF28DT	Compatibility	Precautions for replacement
External supply power (Module	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB35 or TB36 is required.
power supply)	Current	110mA	130mA	Δ	If the voltage exceeds existing power capacity, add 24VDC power supply separately.
External cor method	nnection	36-point terminal block connector (M3 × 6 screws)	36-point terminal block connector (M3 × 6 screws)	0	
Applicable v	vire size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable s	solderless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of o stations (nu occupied po	mber of	4 stations (4 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		0.65kg	0.36kg	Δ	Also consider the weight of fixed stand of programmable controller.*3
External din	nensions	250(H) × 132(W) × 41(D)mm*4	182(H) × 132(W) × 41(D)mm*5	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32D.
- *2: A value when using the AJ65SBTCF1-32T.
- *3: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4: External dimensions of the AJ35PTF-28DT does not include dimensions of the optical fiber cable connector.
- *5: The external dimensions of the SC-A0JQIF28DT do not include those of its projection.

4) Specifications comparison between AJ35PTF-56DT and interface module (SC-A0JQIF56DT)

O: Compatible, △: Partially changed, ×: Incompatible

Specif	ications	AJ35PTF-56DT input specifications	SC-A0JQIF56DT input specifications	Compatibility	Precautions for replacement
Number of i	nput points	32 points	32 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	12VDC/24VDC	12VDC/24VDC	0	
Rated input	current	Approx. 3mA/Approx. 7mA	Approx. 3mA/Approx. 7mA	0	
		10.2 to 31.2VDC	10.2 to 26.4VDC		The operating voltage range
Operating v	oltage range	(Ripple ratio within 5%)	(Ripple ratio within 5%)	Δ	differs.
Maximum n	umber of	60% (10 points/common)	60% (10 points/common)		
simultaneou	s input points	simultaneously ON	simultaneously ON	0	
ON voltage/	ON current	9.5VDC or more/2.6mA or more	9.5VDC or more/2.6mA or more	0	
OFF voltage	OFF current	6VDC or less/1.0mA or less	6VDC or less/1.0mA or less	0	
Input resista	ince	Approx. 3.4kΩ	Approx. 3.3kΩ	0	Input resistance is smaller.
Input form		Sink input (Input current flows off.)	Sink input (Input current flows off.)	0	
Response	OFF→ON	10ms or less (6ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
time	ON→OFF	10ms or less (7.5ms TYP.)	5ms or less (1ms TYP.)	Δ	In combination with CC-Link input module: 6.5ms or less (2.5ms TYP.)*1
Common te	rminal	16 points/common	16 points/common	0	
arrangemer	t	(Common terminal: TB17, TB34)	(Common terminal: TB17, TB34)	O	
Operation in	dication	Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with CC-Link input module.
Specif	ications	AJ35PTF-56DT output specifications	SC-A0JQIF56DT output specifications	Compatibility	Precautions for replacement
Number of o	output points	24 points	24 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated load voltage		12VDC/24VDC	12VDC/24VDC	0	
Operating lo	ad voltage	10.2 to 31.2VDC	10.2 to 30VDC	Δ	The operating load voltage range differs.
Maximum Ic	ad current	0.5A/point, 3.2A/common	0.5A/point, 4A/common	0	The maximum load current differs.
Maximum in	rush current	4A 10ms or less	4A 10ms or less	0	
Leakage cu	rent at OFF	0.1mA or less	0.1mA or less	0	
Maximum v	oltage drop at	0.9VDC (TYP.) 0.5A	0.5VDC (TYP.) 0.5A	0	
ON		1.5VDC (MAX.) 0.5A	0.8VDC (MAX.) 0.5A	0	
Output meth	od	Sink type	Sink type	0	
Pasnonsa	OFF→ON	2ms or less	1ms or less	Δ	In combination with CC-Link output module: 1.5ms or less ^{*2}
Response	ON→OFF	2ms or less (Resistance load)	1ms or less (Resistance load)	Δ	In combination with CC-Link output module: 2.5ms or less (Resistance load)*2
External	Voltage	12VDC/24VDC (10.2 to 31.2VDC)	12VDC/24VDC (10.2 to 30VDC)	Δ	The operating voltage range differs.
supply	Current	23mA	5mA		
power	Current	(TYP. 24VDC 8 points/common ON)	(TYP. 24VDC 8 points/common ON)	0	
Surge suppressor		Varistor (52 to 62V)	Varistor (50.4 to 61.6V)	0	
Common terminal		8 points/common	8 points/common		
arrangemen	t	(Common terminal: TB9, TB19, TB29)	(Common terminal: TB9, TB19, TB29)	0	
Operation in	dication	Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.
		None	None		
Fuse		None	None	0	

 $\bigcirc : Compatible, \ \triangle : Partially \ changed, \ \times : Incompatible$

Specif	ications	AJ35PTF-56DT	SC-A0JQIF56DT	Compatibility	Precautions for replacement
External supply power (Module	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB35 or TB36 is required.
power supply)	Current	160mA	260mA	Δ	If the voltage exceeds existing power capacity, add 24VDC power supply separately.
External cor method	nnection	36-point terminal block connector (M3 × 6 screws) 2 pieces	36-point terminal block connector (M3 × 6 screws) 2 pieces	0	
Applicable v	vire size	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable s	solderless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of costations (number occupied po	mber of	8 stations (8 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		1.09kg	0.49kg	Δ	Also consider the weight of fixed stand of programmable controller.*3
External din	nensions	250(H) × 190(W) × 41(D)mm*4	182(H) × 190(W) × 41(D)mm*5	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32D.
- *2: A value when using the AJ65SBTCF1-32T.
- *3: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *4: External dimensions of the AJ35PTF-56DT does not include dimensions of the optical fiber cable connector.
- *5: The external dimensions of the SC-A0JQIF56DT do not include those of its projection.

5) Specifications comparison between AJ35PTF-24R and interface module (SC-A0JQIF24R)

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specif	ications	AJ35PTF-24R output specifications	SC-A0JQIF24R output specifications	Compatibility	Precautions for replacement
Number of c	output points	24 points	24 points	0	
Insulation m	ethod	Photocoupler	None	Δ	Photocoupler is provided on CC- Link output module side.
Datad audital	hing valtage/	24VDC 2A (Resistance load)/point	24VDC 2A (Resistance load)/point		
	hing voltage/	240VAC 2A (COS ϕ =1)/point	240VAC 2A (COS ϕ =1)/point	0	
current		5A/common	5A/common		
Minimum sw	itching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv voltage	witching	264VAC 125VDC	264VAC 125VDC	0	
Maximum sy frequency	witching	3600 times/hr	3600 times/hr	0	
Mechanical	life	20 million times or more	20 million times or more	0	
		Rated switching voltage/current load	Rated switching voltage/current load	0	
		200,000 times or more	200,000 times or more	0	
		200VAC 1.5A, 240VAC 1A	200VAC 1.5A, 240VAC 1A		
F1 (2) P6		(COS ϕ =0.7) 200,000 times or more	$(COS \phi = 0.7) 200,000 \text{ times or more}$		
Electrical life	9	200VAC 1A, 240VAC 0.5A	200VAC 0.75A, 240VAC 0.5A	0	
		$(COS \phi = 0.35) 200,000 \text{ times or more}$	$(COS \phi = 0.35) 200,000 \text{ times or more}$		
		24VDC 1A, 100VDC 0.1A	24VDC 1A, 100VDC 0.1A		
		(L/R=7ms) 200,000 times or more	(L/R=7ms) 200,000 times or more		
Response	OFF→ON	10ms or less	9ms or less	Δ	In combination with CC-Link output module: 9.5ms or less *1
time	ON→OFF	12ms or less	11ms or less	Δ	In combination with CC-Link output module: 12.5ms or less *1
External	Voltage	24VDC ± 10%	24VDC ± 10%	0	
supply	voltage	Ripple voltage 4Vp-p or less	Ripple voltage 4Vp-p or less	O	
power (Relay coil driving power)	Current	220mA (24VDC All points are ON.)	230mA (24VDC All points are ON.)	0	Review current capacity since current consumption is increased.
Surge suppr	essor	None	None	0	
Fuse rating		None	None	0	_
Fuse blown indication		-	_	0	
Relay socket		None	None	0	
Common ter		8 points/common	8 points/common	0	
arrangemen Operation in		(Common terminal: TB9, TB19, TB29) Available (Turning ON the output turns LED ON)	(Common terminal: TB9, TB19, TB29) None	Δ	Operation indication can be checked with CC-Link output module.

 \bigcirc : Compatible, \triangle : Partially changed, \times : Incompatible

Specif	ications	AJ35PTF-24R	SC-A0JQIF24R	Compatibility	Precautions for replacement
External	Voltage	15.6 to 31.2VDC	-	0	
supply power (Module power supply)	Current	120mA	-	0	
External cor	nnection	36-point terminal block connector	36-point terminal block connector	_	_
method		(M3 × 6 screws)	(M3 × 6 screws)	0	
Applicable v	vire size	0.75 to 2mm ² (Applicable tightening torque 69N - cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable s	olderless	R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of o stations (nu occupied po	mber of	4 stations (4 stations × 8 points)	-	_	When using the AJ65SBTCF1-32T, the number of occupied stations is 1 station (When using CC-Link, it is 1 station × 32 points).
Weight		0.80kg	0.47kg	Δ	Also consider the weight of fixed stand of programmable controller.*2
External din	nensions	250(H) × 132(W) × 41(D) mm ^{*3}	182(H) × 132(W) × 41(D)mm*4	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

- *1: A value when using the AJ65SBTCF1-32T.
- *2: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *3: External dimensions of the AJ35PTF-24R does not include dimensions of the optical fiber cable connector.
- *4: The external dimensions of the SC-A0JQIF24R do not include those of its projection.

6) Specifications comparison between AJ35PTF-56AR and interface module (SC-A0JQIF56AR)

O: Compatible, △: Partially changed, ×: Incompatible

Specif	ications	AJ35PTF-56AR input specifications	SC-A0JQIF56AR input specifications	Compatibility	Precautions for replacement
Number of input points		32 points	32 points	0	
Insulation m	ethod	Photocoupler	Photocoupler	0	
Rated input	voltage	100 to 120VAC 50/60Hz	100 to 120VAC 50/60Hz	0	
Rated input	current	10mA (100VAC 60Hz)	10mA (100VAC 60Hz)	0	
Operating v	oltage range	85 to 132VAC (50/60Hz±5%)	85 to 132VAC (50/60Hz±5%)	0	
Maximum n	umber of	100% (16 points/common)	60% (10 points/common)		The maximum number of
simultaneou	s input points	simultaneously ON	simultaneously ON	Δ	simultaneous input points differs.
ON voltage/	ON current	80VAC or more/6mA or more	80VAC or more/6mA or more	0	
OFF voltage/OFF current		40VAC or less/4mA or less	26VAC or less/1.7mA or less	Δ	OFF voltage/OFF current is smaller.*1
Inrush current		Maximum 300mA, Within 0.3ms (132VAC)	Maximum 300mA, Within 0.3ms (132VAC)	0	
Input impedance		Approx. $10k\Omega$ (60Hz), Approx. $12k\Omega$ (50Hz)	Approx. $10k\Omega$ (60Hz), Approx. $12k\Omega$ (50Hz)	0	
Response	OFF→ON	15ms or less (6ms TYP.)	14ms or less (11ms TYP.)	Δ	In combination with CC-Link input module: 15.5ms or less (12ms TYP.)*2
time	ON→OFF	25ms or less (16ms TYP.)	19ms or less (13ms TYP.)	Δ	In combination with CC-Link input module: 21.5ms or less (14ms TYP.)*2
Common terminal arrangement		16 points/common (Common terminal: TB17, TB34)	16 points/common (Common terminal: TB17, TB34)	0	
Operation indication		Available (Turning ON the input turns LED ON)	None	Δ	Operation indication can be checked with CC-Link input module.

 $\bigcirc \hbox{: Compatible, \triangle: Partially changed, \times: Incompatible}$

Specif	ications	AJ35PTF-56AR output specifications	SC-A0JQIF56AR output specifications	Compatibility	Precautions for replacement
Number of output points		24 points	24 points	0	
Insulation method		Photocoupler	None	Δ	Photocoupler is provided on CC- Link output module side.
Rated switch	hing voltage/	24VDC 2A (Resistance load)/point 240VAC 2A (COS φ =1)/point 5A/common	24VDC 2A (Resistance load)/point 240VAC 2A (COS φ =1)/point 5A/common	0	
Minimum sw	vitching load	5VDC 1mA	5VDC 1mA	0	
Maximum sv	witching	264VAC 125VDC	264VAC 125VDC	0	
Maximum sy frequency	witching	3600 times/hr	3600 times/hr	0	
Mechanical	life	20 million times or more	20 million times or more	0	
		Rated switching voltage/current load 200,000 times or more	Rated switching voltage/current load 200,000 times or more	0	
Electrical life		200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 1A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	200VAC 1.5A, 240VAC 1A (COS ϕ =0.7) 200,000 times or more 200VAC 0.75A, 240VAC 0.5A (COS ϕ =0.35) 200,000 times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms) 200,000 times or more	0	
Response	OFF→ON	10ms or less	9ms or less	Δ	In combination with CC-Link output module: 9.5ms or less*3
time	ON→OFF	12ms or less	11ms or less	Δ	In combination with CC-Link output module: 12.5ms or less *3
External supply	Voltage	24VDC ± 10% Ripple voltage 4Vp-p or less	24VDC±10% Ripple voltage 4Vp-p or less	0	
power (Relay coil driving power)	Current	220mA (24VDC All points are ON.)	230mA (24VDC All points are ON.)	Δ	Review current capacity since current consumption is increased.
Surge suppressor		None	None	0	
Fuse rating		None	None	0	
Fuse blown indication		_	<u>-</u>	0	
Relay socket		None	None	0	
Common terminal arrangement		8 points/common (Common terminal: TB9, TB19, TB29)	8 points/common (Common terminal: TB9, TB19, TB29)	0	
Operation indication		Available (Turning ON the output turns LED ON)	None	Δ	Operation indication can be checked with CC-Link output module.

O: Compatible, △: Partially changed, ×: Incompatible

Specifications		AJ35PTF-56AR	SC-A0JQIF56AR	Compatibility	Precautions for replacement
External supply power (Module	Voltage	15.6 to 31.2VDC	24VDC±10% Ripple voltage 4Vp-p or less	Δ	To deliver a power for programmable controller operation, connecting a module power supply to the interface module, TB35 or TB36 is required.
power supply)	Current	150mA	210mA	Δ	If the voltage exceeds existing power capacity, add 24VDC power supply separately.
External co	nnection	36-point terminal block connector (M3 × 6 screws) 2 pieces	36-point terminal block connector (M3 × 6 screws) 2 pieces	0	
Applicable wire size		0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0.75 to 2mm ² (Applicable tightening torque 69N • cm)	0	
Applicable solderless terminal		R1.25-3, R2-3, RAV1.25-3, RAV2-3	1.25-3, 1.25-YS3A, 2-S3, 2-YS3A, V1.25-3, V1.25-YS3A, V2-S3, V2-YS3A	0	
Number of occupied stations (number of occupied points)		8 stations (8 stations × 8 points)	-	-	When using the AJ65SBTCF1-32D and AJ65SBTCF1-32T, the number of occupied stations is 2 stations (When using CC-Link, it is 1 station × 32 points).
Weight		1.20kg	0.66kg	Δ	Also consider the weight of fixed stand of programmable controller.*4
External dimensions		250(H) × 190(W) × 41(D)mm*5	182(H) × 190(W) × 41(D)mm*6	×	Check the dimensions since they depend on the installation type (building-up/horizontal/separate type).

^{*1:} Check that the specifications of leakage current of the used sensor and switches are equal to or less than the OFF current value.

If leakage current is equal to or more than the OFF current specifications, take measures against it with referring to "Input Module Troubleshooting" in the following handbook.

(Handbook for replacement)

Renewal tool for A0J2 series Transition from MELSEC-A0J2(H) series to renewal system using renewal tool (refer to Appendix 2.5.)

- *2: A value when using the AJ65SBTCF1-32D.
- *3: A value when using the AJ65SBTCF1-32T.
- *4: The weight of fixed stand of programmable controller depends on replacement type of renewal tool for A0J2.
- *5: External dimensions of the AJ35PTF-56AR does not include dimensions of the optical fiber cable connector.
- *6: The external dimensions of the SC-A0JQIF56AR do not include those of its projection.

Appendix 2 Related Manuals

Appendix 2.1 Replacement handbooks

No.	Manual Name	Manual Number	Model 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 from MELSEC-A/QnA Large Type Series to AnS/Q2AS Small Type Series Handbook	L-08064ENG	-
9	Transition of CPUs in MELSEC Redundant System Handbook (Transition from Q4ARCPU to QnPRHCPU)	L-08117ENG	-

Appendix 2.2 MELSECNET/MINI-S3

No.	Manual Name	Manual Number	Model Code
1	MELSECNET/MINI-S3 Master Module Type AJ71PT32-S3, AJ71T32-S3, A1SJ71PT32-S3, A1SJ71T32-S3 User's Manual	IB-66565	13JE64
2	A2C, MELSECNET/MINI-S3 I/O MODULE User's Manual	SH-3546	13JL00
3	Analog-Digital Converter Module type A68ADC User's Manual	IB-66247	13J782
4	Digital-Analog Converter Module type A64DAVC/A64DAIC User's Manual	IB-66248	13J783
5	Pt100 input module type A64RD3C/4C User's Manual	IB-66312	13J671
6	High Speed Counting Module type AD61C User's Manual	IB-66246	13J779
7	High speed counter unit type AD62C User's Manual	IB-66400	13JE17
8	RS-232C interface unit type AJ35PTF-R2 User's Manual	IB-66219	13J771
9	Operating boxes type AJ35PT-OPB-M1/AJ35T-OPB-P1 User's Manual	IB-66218	13J770
10	Transmission converter unit type AJ35PTC(PP)-CNV-(SI/GI) User's Manual	IB-66349	13J669

Appendix 2.3 CC-Link

No.	Manual Name	Manual Number	Model Code
1	Open Field Network CC-Link, CC-Link/LT Catalog	L-08038E	-
2	CC-Link and CC-Link/LT Compatible Product databook	L-08039E	-
3	CC-Link System Master/Local Module User's Manual	SH-080394	13JR64
4	CC-Link System Compact Type Remote I/O Module User's Manual	SH-4007	13JL72
5	CC-Link System Remote I/O Module User's Manual	IB-66728	13J878
6	MELSECNET/MINI-S3 - CC-Link Module Wiring Conversion Adapter User's Manual A6ADP-1MC16D/A6ADP-1MC16T/A6ADP-2MC16D	IB-0800373	13JY20
7	AJ65BT-64AD Analog-Digital Converter Module User's Manual	SH-3614	13J893
8	Analog-Digital Converter Module type AJ65SBT-64AD User's Manual	SH-080106	13JR18
9	Analog-Digital Converter Module type AJ65VBTCU-68ADVN/ADIN User's Manual	SH-080401E	13JR65
10	Digital-Analog Conversion Module type AJ65BT-64DAV/DAI User's Manual	SH-3615	13J895
11	Digital-Analog Converter Module type AJ65SBT-62DA User's Manual	SH-080107	13JR19
12	Digital-Analog Converter Module type AJ65VBTCU-68DAVN User's Manual	SH-080402E	13JR66
13	Pt 100 Temperature Input Module Type AJ65BT-64RD3/AJ65BT-64RD4 User's Manual	SH-4001	13JL54
14	High-Speed Counter Module type AJ65BT-D62/AJ65BT-D62D/ AJ65BT-D62D-S1 User's Manual	IB-66823	13JL45
15	CC-Link System RS-232 Interface Module User's Manual (Nonprocedural Protocol Mode) (AJ65BT-R2N)	SH-080685ENG	13JZ00
16	CC-Link System RS-232 Interface Module User's Manual (MELSOFT Connection Mode) (AJ65BT-R2N)	SH-080687ENG	13JZ01
17	CC-Link System Repeater Optical Repeater Module User's Manual AJ65SBT-RPS/AJ65SBT-RPG	IB-0800089	13JQ85

Appendix 2.4 Products manufactured by Mitsubishi Electric Engineering Co., Ltd.

No.	Catalog name	Catalog Number
1	Mitsubishi Programmable Controller Upgrade Tool	SAN C033E·04Z

Appendix 2.5 Products manufactured by Mitsubishi Electric System & Service Co., Ltd.

No.	Data/catalog	Number
1	Renewal tool for A0J2 series Transition from MELSEC-A0J2(H) series to renewal system using renewal tool	X903071003
2	Replace A0J2(H) system with Q series using existing wiring!	X900707-115
3	Renewal tool for A0J2 series Interface module User's manual	X903071001
4	Renewal tool for A0J2 series Fixed stand/Base adaptor Replacement manual	X903071002

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 of damages caused by any cause found not to be the responsibility of Mitsubishi, loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products, special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products, 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.



Mitsubishi Programmable Controller



HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN NAGOYA WORKS : 1-14 , YADA-MINAMI 5-CHOME , HIGASHI-KU, NAGOYA , JAPAN

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