

MITSUBISHI

MELSECNET/MINI-S3 - CC-Link Module Wiring Conversion Adapter

User's Manual

A6ADP-1MC16D
A6ADP-2MC16D
A6ADP-1MC16T

Thank you for buying the Mitsubishi general-purpose programmable controller MELSEC A Series

Prior to use, please read both this manual and detailed manual thoroughly and familiarize yourself with the product.



MODEL	A6ADP-U
MODEL CODE	13JY20
IB(NA)-0800373-A(0703)MEE	

● SAFETY PRECAUTIONS ●

(Always read these instructions before using this equipment)

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

In this manual, the safety instructions are ranked as “DANGER” and “CAUTION”.



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



Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.

Note that the  CAUTION level may lead to a serious consequence according to the circumstances.

Always follow the instructions of both levels because they are important to personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

[DESIGN PRECAUTIONS]

CAUTION

- Use the module in the environment described in the general specifications of the CC-Link system remote I/O module User's Manual.
Failure to do so may cause electric shock, fire, malfunction, damage or degradation of the product.

[INSTALLATION PRECAUTIONS]

CAUTION

- Fully insert a wiring conversion adapter mounting screw into a CC-Link terminal block mounting hole, and then tighten wiring conversion adapter mounting screws with specified torques.
If the A6ADP is not correctly installed or screws are not tightened properly, malfunction, failure, or drop may occur.
Tightening screws excessively may damage screws or the A6ADP, resulting in drop, short circuit, or malfunction.

[INSTALLATION PRECAUTIONS]

CAUTION

- Be sure to turn off all phases of the external supply power used by the system before mounting or removing the A6ADP.
Failure to do so may damage the product.
- Do not directly touch the conductive part or electronic components of the A6ADP.
Doing so may cause the malfunction or failure of the A6ADP.

[WIRING PRECAUTIONS]

DANGER

- Be sure to turn off all phases of the external supply power used by the system before wiring.
Failure to do so may cause an electric shock or damage of product.
- Before energizing and operating the system after wiring, be sure to attach the terminal cover supplied with the product.
Failure to do so may cause an electric shock.

CAUTION

- Tighten terminal screws within the specified torque range.
If a terminal screw is too loose, short circuit, fire, or malfunction may occur.
If too tight, it may damage screws or a module, resulting in drop, short circuit, or malfunction.
- Carefully prevent foreign matter such as dust or wire chips from entering the module.
Failure to do so may cause fire, failure, or malfunction.
- Tighten unused terminal screws within tightening 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 with the specified torque.
If any solderless space terminal is used, it may be disconnected when the terminal screw becomes loose, resulting in failure.

[STARTUP AND MAINTENANCE PRECAUTIONS]

DANGER

- Do not touch terminals while power is ON.
Doing so may cause an electric shock.
- Turn off all phases of the external supply power used by the system before cleaning the module or retightening a terminal screw or a wiring conversion adapter mounting screw.
Failure to do so may cause an electric shock.
If a terminal screw is too loose, it may cause a short circuit or malfunction.
If too tight, it may damage screws or a module, resulting in drop, short circuit, or malfunction.
- Do not disassemble or modify the A6ADP.
Doing so may cause failure, malfunction, injury, or fire.
- Do not drop or apply any strong impact to the module.
Doing so may damage the module.
- Turn off all phases of the external supply power used by the system before mounting or removing the A6ADP.
Failure to do so may cause failure or malfunction.
- Do not mount or remove the terminal block or the A6ADP more than 50 times after the first use of the product.
(IEC 61131-2 compliant)

CAUTION

- Before handling the module, touch a grounded metal object to discharge the static electricity from the human body.
Failure to do so may cause a failure or malfunction of the module.

[DISPOSAL PRECAUTIONS]

CAUTION

- When disposing of the product, treat it as industrial waste.

Revisions

* The manual number is noted at the lower left of the back cover.

Print Date	*Manual Number	Revision
Mar., 2007	IB(NA)-0800373-A	First printing

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Generic terms and abbreviations

Unless otherwise specified, this manual uses the following generic terms and abbreviations to explain the MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter.

Generic name/Abbreviation	Description
A6ADP	Generic name for the A6ADP-1MC16D/ A6ADP-2MC16D/ A6ADP-1MC16T type MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter
A6ADP-1MC16D	Abbreviation of the A6ADP-1MC16D type MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter
A6ADP-2MC16D	Abbreviation of the A6ADP-2MC16D type MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter
A6ADP-1MC16T	Abbreviation of the A6ADP-1MC16T type MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter
CC-Link remote I/O module	Abbreviation of the CC-Link system remote I/O module
MINI-S3 module	Abbreviation of the MELSECNET/MINI-S3 remote I/O module

About the Manuals

The following manuals are also related to this product.
Order them by referring to the table below as necessary.

Manual name	Manual No. (Model code)
CC-Link System Remote I/O Module User's Manual This manual explains the specifications and external wiring for the I/O module of the CC-Link system remote I/O module. (Sold separately)	IB-66728 (13J878)
A2C, MELSECNET/MINI-S3 I/O MODULE User's Manual This manual explains the specifications of I/O module that can be connected to the MELSECNET/MINI-S3. (Sold separately)	SH-3546 (13JL00)
Transition from MELSECNET/MINI-S3, A2C(I/O) to CC-Link Handbook This manual explains the comparison of performance specifications and functions of the MELSECNET/MINI-S3, A2C(I/O).	L-08061ENG

Compliance with the EMC and low voltage directives

When incorporating the Mitsubishi PLC into other machinery or equipment and keeping compliance with the EMC and low voltage directives, refer to Chapter 3 “EMC and Low Voltage Directives” of the User’s Manual (Hardware) included with the CPU module or base unit used.

The CE logo is printed on the rating plate of the PLC, indicating compliance with the EMC and low voltage directives.

To conform this product to the EMC and low voltage directives, refer to the Section of “CC-Link Modules” in Chapter 3 “EMC and Low Voltage Directives” of the User’s Manual (Hardware) of the CPU module used.

1. Overview

This manual describes the specifications, part names, procedures for replacement, and external dimensions for the A6ADP-1MC16D/ A6ADP-2MC16D/ A6ADP-1MC16T type MELSECNET/MINI-S3 - CC-Link module wiring conversion adapter.

For the general specifications, refer to the following manual.

- CC-Link System Remote I/O Module User's Manual.

The A6ADP is a wiring conversion adapter where a terminal block for the existing MINI-S3 module can be used in the CC-Link remote I/O module.

Using the A6ADP enables to save the trouble of rewiring and prevent from miswiring in case of replacement.

However, in the case of changing from a communication cable into a CC-Link dedicated cable and wiring for communication/power supply, rewiring according to the specifications of the CC-Link remote I/O module is necessary.

Table 1.1 Table compatible with applied A6ADP

MINI-S3 module	CC-Link remote I/O module	Applied A6ADP
AJ35TB1-16D	AJ65BTB1-16D	A6ADP-1MC16D
AJ35TB2-16D	AJ65BTB2-16D	A6ADP-2MC16D
AJ35TB1-16T	AJ65BTB1-16T	A6ADP-1MC16T

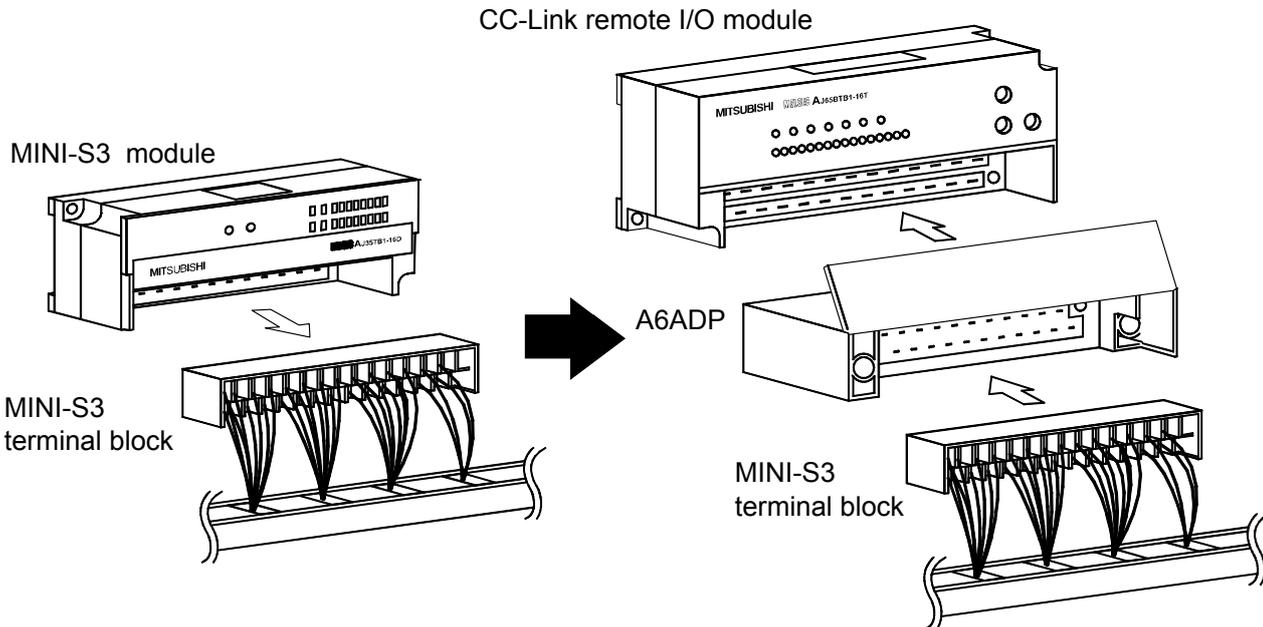


Figure 1.1 Schematic diagram for MINI-S3 - CC-Link module replacement

2. Performance Specification

2.1 Performance specifications

The following describes the performance specifications of the A6ADP.

Model name		A6ADP-1MC16D	A6ADP-2MC16D	A6ADP-1MC16T
External dimensions	W	137.9mm (5.43inch)	183.4mm (7.22inch)	137.9mm (5.43inch)
	H	28.1mm (1.11inch)	28.1mm (1.11inch)	28.1mm (1.11inch)
	D	59.15mm (2.33inch)	59.15mm (2.33inch)	59.15mm (2.33inch)
Weight		0.15kg	0.20kg	0.15kg
Adapter or terminal block mounting screw		M4 screw Tightening torque range: 78 to 118N•cm		
CTL+terminal screw		-	-	M3 screw Tightening torque range: 49 to 78.4N•cm
Applicable solderless terminal		-	-	RAV-1.25-3 *1 V1.25-3N, V2-MS3 TGV1.25-3N, TGV2-3N, V1.25-FS3, V2-FS3 RAP1.25-3ML, RAP2-3SL
Wire size		-	-	0.75 to 2mm ²

*1: Mounting one terminal only

2.2 Specifications of terminal number sheet

(1) A6ADP-1MC16D

1	3	5	7	9	11	13	15	17	19	21	23	25		
DA	DG	+24V	24G	X0	X2	X4	X6	COM	X9	XB	XD	XF		NC
2	4	6	8	10	12	14	16	18	20	22	24	26		
84536518-001	DB	SLD	FG	NC	X1	X3	X5	X7	X8	XA	XC	XE	COM	BTB1 -16D

(2) A6ADP-2MC16D

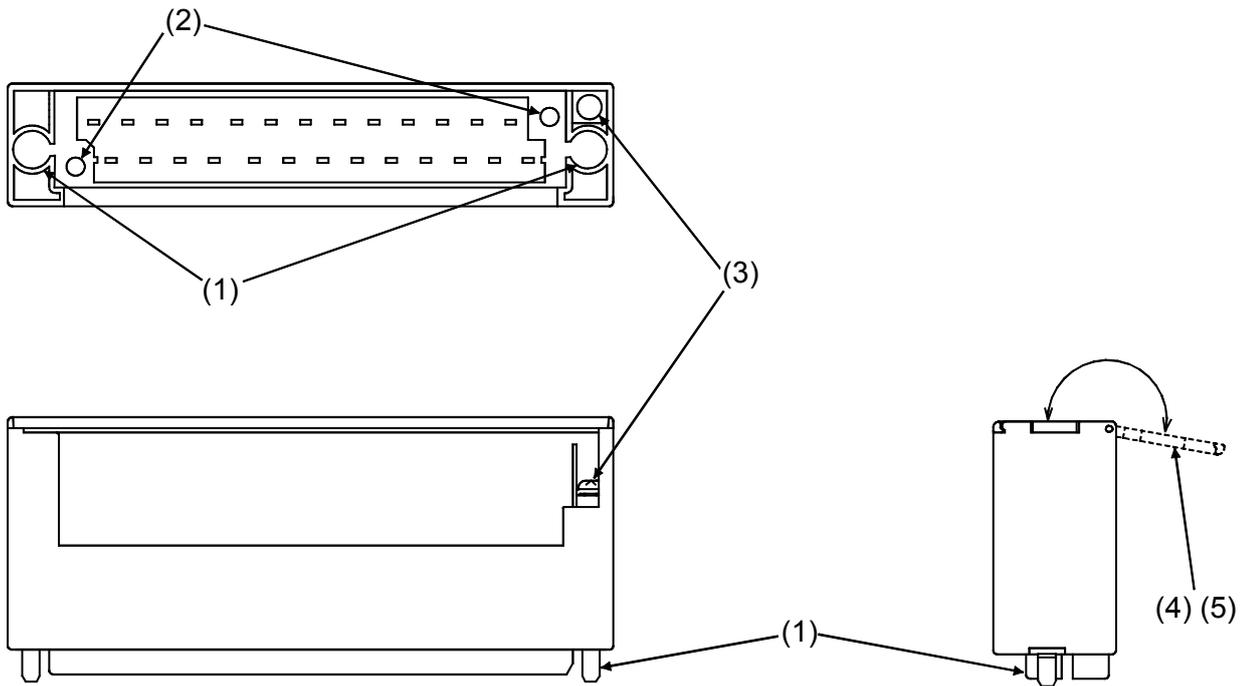
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33		
DA	DG	+24V	24G	COMA	X0	X1	COMB	X4	X5	COMB	X8	X9	COMB	XC	XD	COMB		
2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34		
84536521-001	DB	SLD	FG	NC	COMB	COMB	X2	X3	COMB	X6	X7	COMB	XA	XB	COMB	XE	XF	BTB2 -16D

(3) A6ADP-1MC16T

1	3	5	7	9	11	13	15	17	19	21	23	25		
DA	DG	+24V	24G	Y0	Y2	Y4	Y6	COM-	Y9	YB	YD	YF		CTL+
2	4	6	8	10	12	14	16	18	20	22	24	26		
84536519-001	DB	SLD	FG	NC	Y1	Y3	Y5	Y7	Y8	YA	YC	YE	COM-	BTB1 -16T

3. Part Names

This chapter describes part names of the A6ADP.



No.	Name	Application
(1)	Wiring conversion adapter mounting screw	Screw for mounting the A6ADP to a CC-Link remote I/O terminal block base (M4 screw)
(2)	Terminal block mounting screw	Screw for mounting the MINI-S3 terminal block to the A6ADP (M4 screw)
(3)	CTL+ terminal screw	Terminal screw for external supply power of the output part (M3 screw) (For replacing the output module only)
(4)	Terminal cover	Terminal block cover dedicated to the A6ADP (open/close)
(5)	Terminal number sheet	Terminal number sheet dedicated to the A6ADP

4. Procedures for Replacement

This chapter describes the procedures for replacing the MINI-S3 module with the CC-Link remote I/O module, including the A6ADP installation.

For the mounting hole measurement or the wiring of lines for communication or power supply, refer to the following manual.

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

1) Remove the MINI-S3 module from the setting place.

2) Loosen a MINI-S3 terminal block mounting screw, and remove a terminal block.

3) Remove the terminal number sheet cover and terminal block of the CC-Link remote I/O module.

4) Mount the A6ADP, using terminal block mounting holes of the CC-Link remote I/O module.

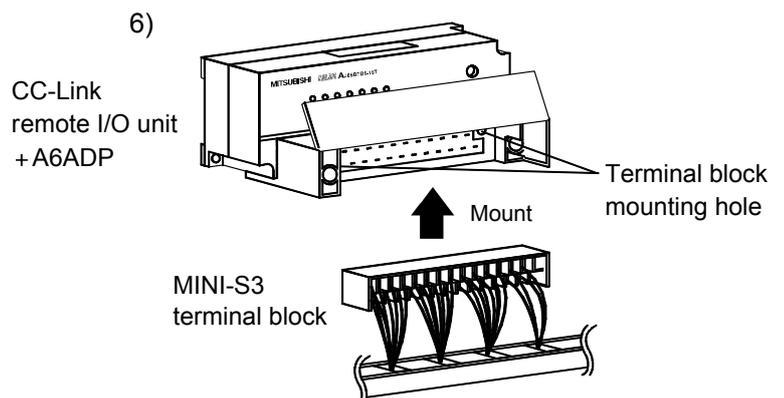
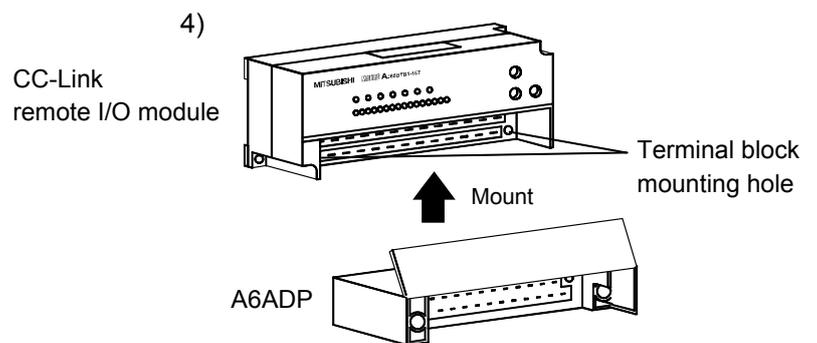
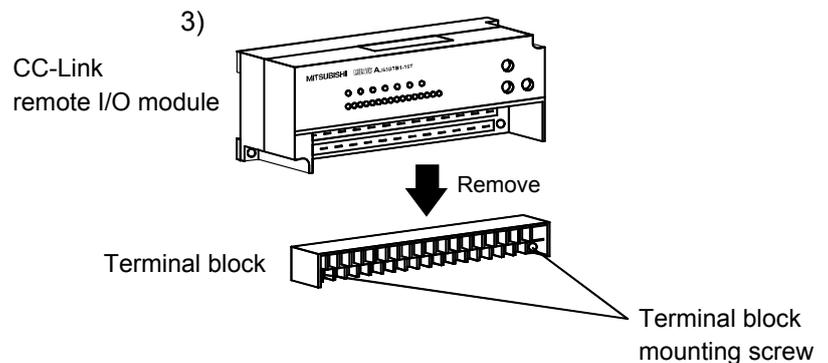
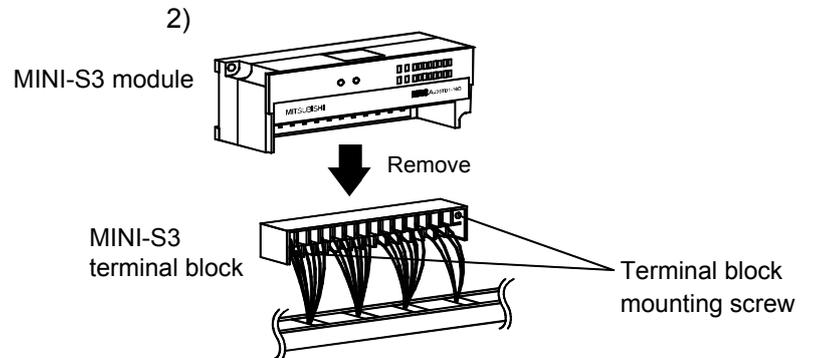
5) Make holes for mounting the CC-Link in the setting place, and mount the CC-Link module.

6) Mount the terminal block of the MINI-S3 to the A6ADP.

7) Change a cable into a CC-Link dedicated cable and rewire for communication and power supply parts.

8) (When the A6ADP-1MC16T is used)
Wire a cable to CTL + terminal.

Completed

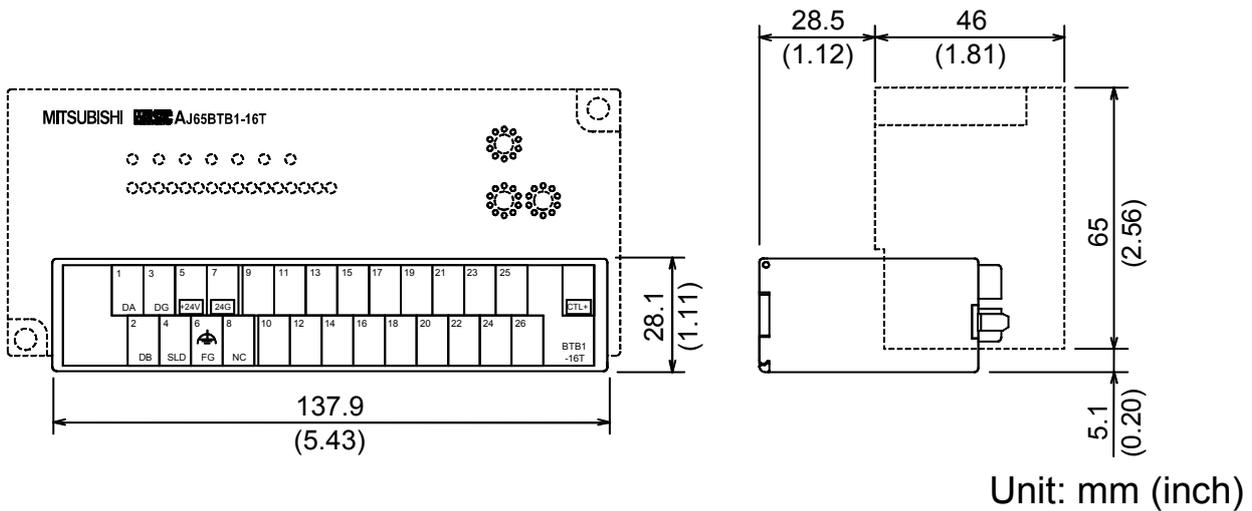


5. Precautions

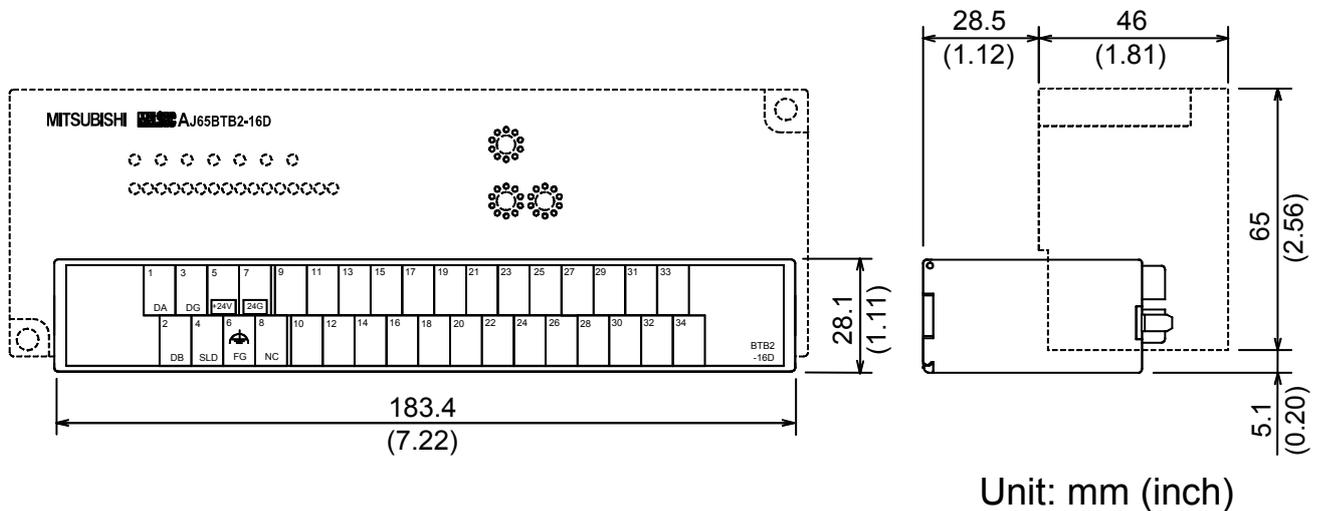
- (1) When adding the A6ADP to a CC-Link remote I/O module, external dimensions are increased in width (5.1 mm (0.20 inch)) and depth (28.5 mm (1.12 inch)).

The following describes the full view of the CC-Link remote I/O module (describes in dotted line) which mounts the A6ADP (describes in full line).

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



(b) A6ADP-2MC16D

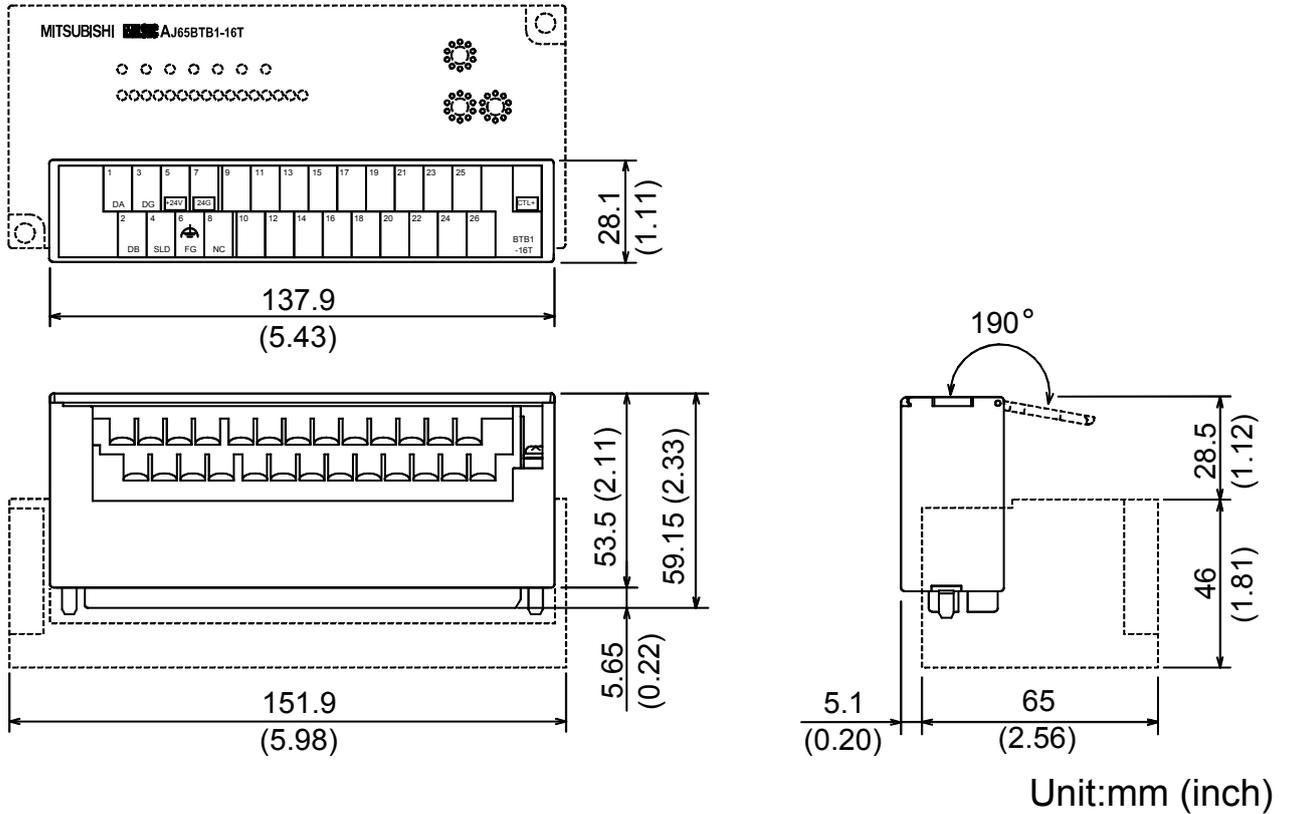


- (2) When using a CC-Link dedicated cable compatible with CC-Link Ver. 1.10, up to 32 remote I/O modules can be connected. (When using CC-Link dedicated cables not compatible with CC-Link Ver. 1.10, there is no restriction on the number of the remote I/O modules to be connected.)

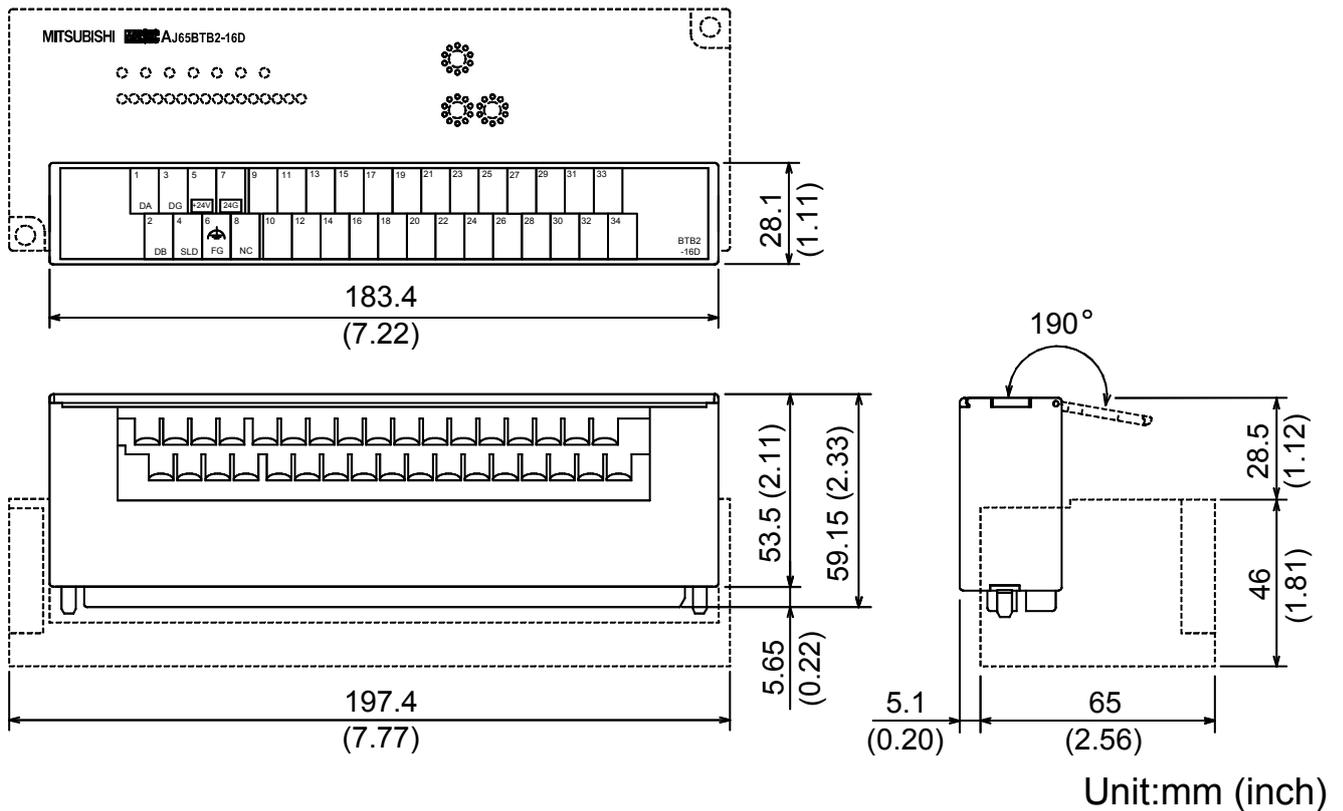
6. External Dimensions

This chapter describes the external dimension diagram of the A6ADP. The dotted line part is a full view of the CC-Link remote I/O module which mounts the A6ADP.

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



(2) A6ADP-2MC16D



Warranty

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

⚠ For safe use

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- This product has been manufactured under strict quality control. However, when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

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