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-B(1112)MEE	

● 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: "⚠ WARNING" and "⚠ CAUTION".

⚠WARNING	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
⚠CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "⚠ CAUTION" may lead to serious consequences.
Observe the precautions of both levels because they are important for personal and system safety.
Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

[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.
- 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]

⚠ WARNING

- 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.

[WIRING PRECAUTIONS]

⚠ 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]

⚠ WARNING

- 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.

[STARTUP AND MAINTENANCE PRECAUTIONS]

⚠WARNING
● 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.

● 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 manual number is given on the bottom right of the cover.

Print Date	*Manual Number	Revision
Mar., 2007	IB(NA)-0800373-A	First printing
Dec., 2011	IB(NA)-0800373-B	Correction COMPLIANCE WITH EMC AND LOW VOLTAGE DIRECTIVES Addition SAFETY PRECAUTIONS(Chinese), CONDITIONS OF USE FOR THE PRODUCT

CONTENTS

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 Number (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 EMC AND LOW VOLTAGE DIRECTIVES

(1) Method of ensuring compliance
To ensure that Mitsubishi programmable controllers maintain EMC and Low Voltage Directives when incorporated into other machinery or equipment, certain measures may be necessary. Please refer to one of the following manuals.
- User's manual for the CPU module or head module used
- Safety Guidelines
  (This manual is included with the CPU module, base unit, or head module.)

The CE mark on the side of the programmable controller indicates compliance with EMC and Low Voltage Directives.

(2) Additional measures
To ensure that this product maintains EMC and Low Voltage Directives, please refer to one of the manuals listed under (1).

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

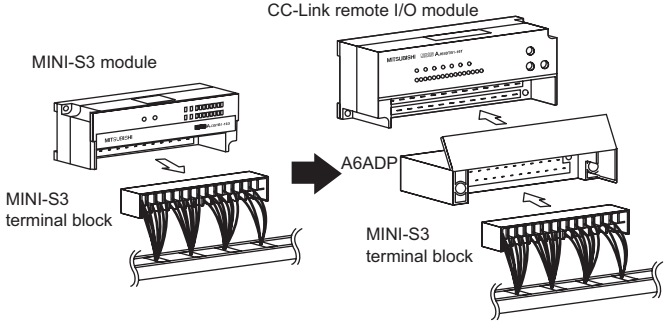


Figure 1.1 Schematic diagram for MINI-S3 - CC-Link module replacement

2. Performance Specification

2.1 Performance specifications

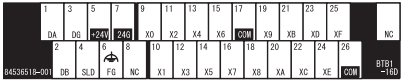
The following describes the performance specifications of the A6ADP.

Item \ 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

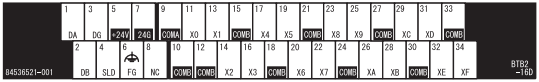
*1 Mounting one terminal only

2.2 Specifications of terminal number sheet

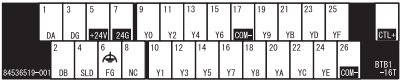
(1) A6ADP-1MC16D



(2) A6ADP-2MC16D

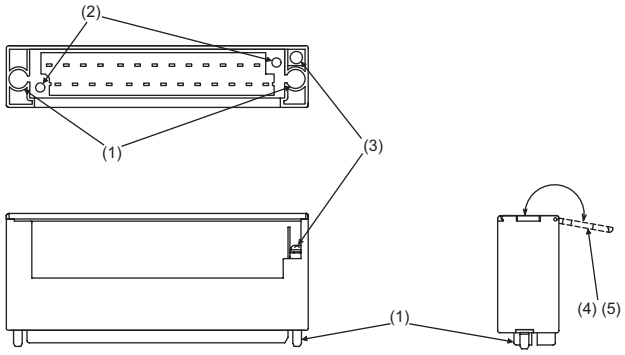


(3) A6ADP-1MC16T



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.

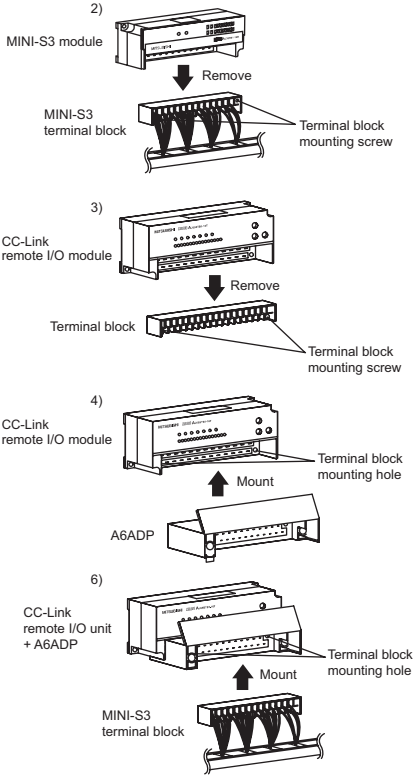
5) Make holes for mounting the CC-Link in the setting place, and mount the CC-Link module.

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.

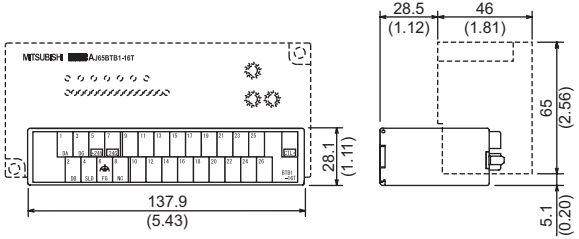
Completed



5. Precautions

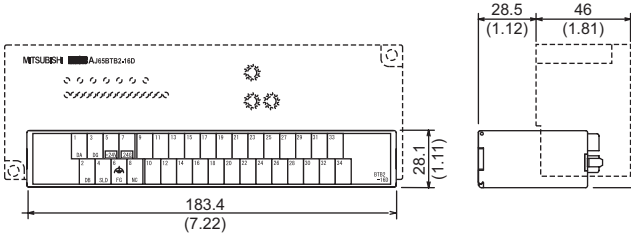
(1) When adding the A6ADP to a CC-Link remote I/O module, external dimensions are increased in width (5.1 mm (0.20 inch)) and depth (28.5 mm (1.12 inch)).
The following describes the full view of the CC-Link remote I/O module (describes in dotted line) which mounts the A6ADP (describes in full line).

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



Unit: mm (inch)

(b) A6ADP-2MC16D



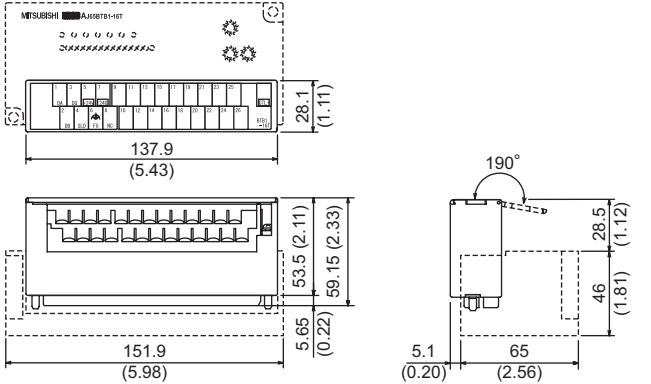
Unit: mm (inch)

(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

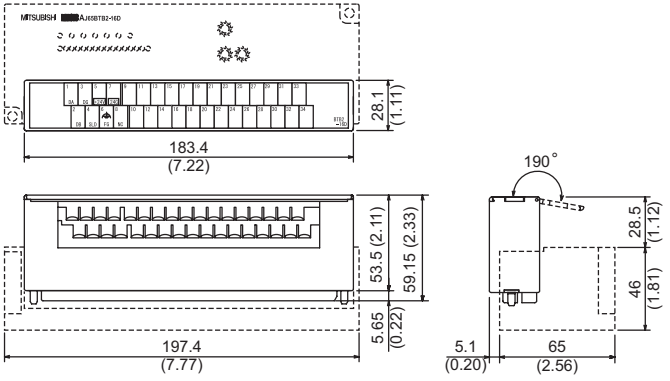
This chapter describes the external dimension diagram of the A6ADP. The dotted line part is a full view of the CC-Link remote I/O module which mounts the A6ADP.

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



Unit:mm (inch)

(2) A6ADP-2MC16D



Unit:mm (inch)

MEMO

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.

Country/Region	Sales office/Tel
U.S.A	Mitsubishi Electric Automation Inc. 500 Corporate Woods Parkway Vernon Hills, IL 60061, U.S.A. Tel : +1-847-478-2100
Brazil	MELCO-TEC Rep. Com.e Assessoria Tecnica Ltda. Rua Correia Dias, 184, Edificio Paraiso Trade Center-8 andar Paraiso, Sao Paulo, SP Brazil Tel : +55-11-5908-8331
Germany	Mitsubishi Electric Europe B.V. German Branch Gothaer Strasse 8 D-40880 Ratingen, GERMANY Tel : +49-2102-486-0
U.K	Mitsubishi Electric Europe B.V. UK Branch Travellers Lane, Hatfield, Hertfordshire., AL10 8XB, U.K. Tel : +44-1707-276100
Italy	Mitsubishi Electric Europe B.V. Italian Branch Centro Dir. Colleoni, Pal. Perseo-Ingr.2 Via Paracelso 12, I-20041 Agrate Brianza., Milano, Italy Tel : +39-039-60531
Spain	Mitsubishi Electric Europe B.V. Spanish Branch Carretera de Rubi 76-80, E-08190 Sant Cugat del Valles, Barcelona, Spain Tel : +34-93-565-3131
France	Mitsubishi Electric Europe B.V. French Branch 25, Boulevard des Bouvets, F-92741 Nanterre Cedex, France Tel : +33-1-5568-5568
South Africa	Circuit Breaker Industries Ltd. Private Bag 2016, ZA-1600 Isando, South Africa Tel : +27-11-928-2000

Country/Region	Sales office/Tel
China	Mitsubishi Electric Automation (China) Ltd. 4/F Zhi Fu Plazz, No.80 Xin Chang Road, Shanghai 200003, China Tel : +86-21-6120-0808
Taiwan	Setsuyo Enterprise Co., Ltd. 6F No.105 Wu-Kung 3rd.Rd, Wu-Ku Hsiang, Taipei Hsine, Taiwan Tel : +886-2-2299-2499
Korea	Mitsubishi Electric Automation Korea Co., Ltd. 1480-6, Gayang-dong, Gangseo-ku Seoul 157-200, Korea Tel : +82-2-3660-9552
Singapore	Mitsubishi Electric Asia Pte, Ltd. 307 Alexandra Road #05-01/02, Mitsubishi Electric Building, Singapore 159943 Tel : +65-6470-2480
Thailand	Mitsubishi Electric Automation (Thailand) Co., Ltd. Bang-Chan Industrial Estate No.111 Moo 4, Serithai Rd, T.Kannayao, A.Kannayao, Bangkok 10230 Thailand Tel : +66-2-517-1326
Indonesia	P.T. Autoteknindo Sumber Makmur Muara Karang Selatan, Block A/Utara No.1 Kav. No.11 Kawasan Industri Pergudangan Jakarta - Utara 14440, P.O.Box 5045 Jakarta, 11050 Indonesia Tel : +62-21-6630833
India	Messung Systems Pvt, Ltd. Electronic Sadan NO:III Unit No15, M.I.D.C Bhosari, Pune-411026, India Tel : +91-20-2712-3130
Australia	Mitsubishi Electric Australia Pty. Ltd. 348 Victoria Road, Rydalmere, N.S.W 2116, Australia Tel : +61-2-9684-7777

MITSUBISHI ELECTRIC CORPORATION

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

When exported from Japan, this manual does not require application to the Ministry of Economy, Trade and Industry for service transaction permission.