IDEC

INSTRUCTION SHEET

MICROSmart

FC6A Series
Cartridge Base module

This sheet provides brief operating instructions of the MICROSmart programmable controller. For details, see the FC6A Series MICROSmart User's Manual.

Safety Precautions

Special expertise is required to use the MICROSmart.
• Read this instruction sheet and the user's manual to make sure of correct operation before starting installation, wiring, operation, maintenance, and inspection of the MICROSmart. Keep this instruction sheet where it can be accessed by the end user.
• All MICROSmart modules are manufactured under IDEC's rigorous quality control system, but users must add backup or failsafe provisions to control systems use the MICROSmart in applications where heavy damage or personal injury may be caused if the MICROSmart should fail.
• Install the MICROSmart according to the instructions described in this instruction sheet and the user's manual. Improper installation will result in falling, failure, or malfunction of the MICROSmart.
• Make sure that the operating conditions are as described in the user's manual. If you are uncertain about the specifications, contact IDEC before using the MICROSmart.
• In this instruction sheet, safety precautions are categorized in order of importance from Warning and Caution:

⚠ **WARNING**

Warning notices are used to emphasize that improper operation may cause severe personal injury or death.

⚠ **CAUTION**

Caution notices are used where inattention might cause personal injury or damage to equipment.

⚠ **WARNING**

• Turn off the power to the MICROSmart before starting installation, removal, wiring, maintenance, or inspection on the MICROSmart. Failure to turn off the power may cause damage, electrical shocks or fire hazard. .
• Emergency stop and interlocking circuits must be configured outside the MICROSmart. If such a circuit is configured inside the MICROSmart, failure of the MICROSmart may cause disorder of the control system, damage, or accidents.
• SUITABLE FOR USE IN CLASS 1, DIVISION 2, GROUPS A,B,C AND D HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.
• Cet appareil convient uniquement à l'emploi dans des zones dangereuses de classe 1, groupes A,B,C et D; ou dans des zones non dangereuses.
• WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.
• Avertissement: risque d'explosion. Ne pas débrancher l'appareil tant que le circuit est sous tension, ou à moins d'être certain que lieu d'utilisation soit exempt de concentrations inflammables.
• THIS EQUIOMENT IS AN OPEN -TYPE DEVICE MEANT TO BE INSTALLED IN AN ENCLOSURE SUITABLE FOR THE ENVIRONMENT THAT IS ONLY ACCESSIBLE WIHT THE USE OF A TOOL OR KEY.
• Cet appareil doit être installé dans un boîtier qui est adapté à l'environnement d'utilisation et uniquement accessible avec un outil d'ouverture ou une clé.

⚠ **CAUTION**

• The MICROSmart is designed for installation in equipment. Do not install the MICROSmart outside of equipment.
• Install the MICROSmart in environments as described in the user's manual. If the MICROSmart is used in places where it is subjected to high-temperature, high-humidity, condensation, corrosive gases, excessive vibrations, or excessiv shocks itwill result in electrical shocks, fire hazard, or malfunction.
• The environment rating for using the MICROSmart is "Pollution degree 2."
• Prevent metal fragments and pieces of wire from dropping inside the MICROSmart housing. Ingress of such fragments and chips may cause fire hazard, damage, or malfunction.
• Do not disassemble, repair, or modify MICROSmart modules.
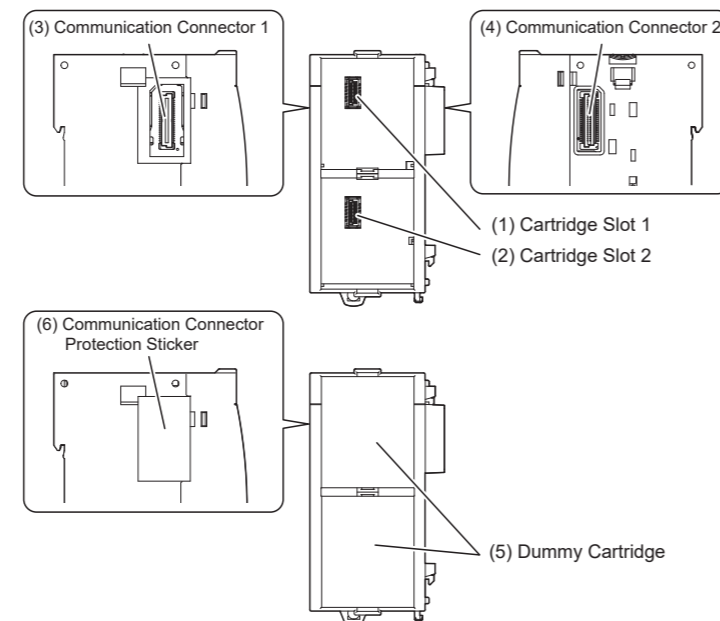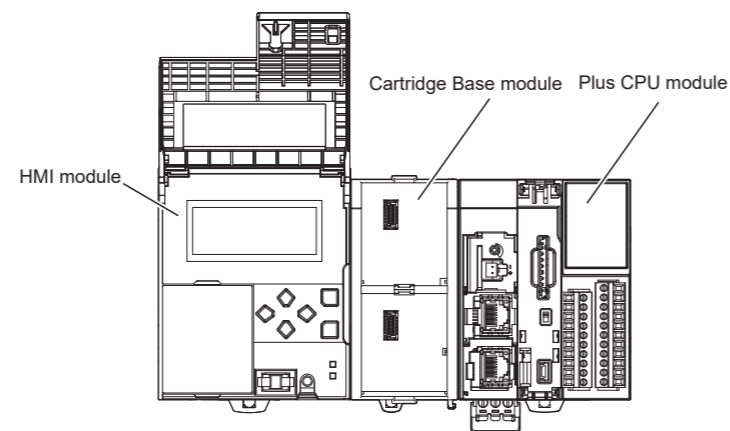
1 TYPE

Cartridge Base module: FC6A-HPH1

Applicable model
FC6A Series MICROSmart Plus CPU module

2 Specification

Operating Temperature: -10 to +55°C (no freezing)
Storage Temperature: -25 to +70°C (no freezing)
Relative/Storage Humidity: 10 to 95%RH (no condensation),
Altitude or Air Pressure: 1,013 to 795hPa (0 to 2,000 m) during operation
　　　　　　　　　　1,013 to 701hPa (0 to 3,000 m) during transport,
Vibration Resistance: 5 to 8.4 Hz half amplitude 3.5 mm, 8.4 to 150 Hz,
　　　　　　acceleration 9.8 m/s^2 (1 G), X, Y, Z directions, 2 hours,
Shock Resistance: 147 m/s^2 (15 G), 11 ms, X, Y, Z, 3 axes, 6 directions, 3 times each
Installation Location: Inside cabinet (indoor use)
Temperature Code: T4
Maximum Surrounding Air Temperature: 55°C
*See the user's manual for more details on the product specifications.
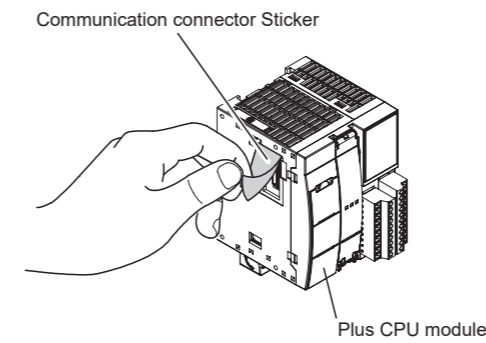
3 Parts Description

The Cartridge Base module allows up to two cartridges to be connected when a Plus CPU module is attached to communication connector 2.
An HMI module can also be connected to communication connector 1.
One Cartridge Base module can be connected to one Plus CPU module.
Please note that the All-in-one CPU module is not compatible with the Cartridge Base module.
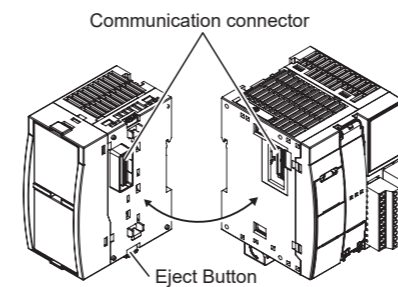

HMI module / Cartridge Base module / Plus CPU module

(3) Communication Connector 1
(4) Communication Connector 2
(1) Cartridge Slot 1
(2) Cartridge Slot 2
(6) Communication Connector Protection Sticker
(5) Dummy Cartridge

(1) Cartridge Slot 1
　Connect to Cartridge.
(2) Cartridge Slot 2
　Connect to Cartridge.
(3) Communication Connector 1
　Connect to HMI module.
(4) Communication Connector 2
　Connect to Plus CPU module.
(5) Dummy Cartridge
　Remove the Dummy Cartridge when using the cartridge.
(6) Communication Connector Protection Sticker
　This Sticker when the HMI module is removed.

4 Connecting Modules

1. Peel off the protection sticker applied to the communication on the Plus CPU module.

Communication connector Sticker
Plus CPU module

2. Line up the Cartridge Base module alongside the Plus CPU module.

3. Confirm that the Cartridge Base module eject button is depressed and push the Cartridge Base module until it checks while taking care with the position of the communication connector.
If eject button is not depressed, push in the eject button until it clicks after the Cartridge Base module has been pushed onto the Plus CPU module.
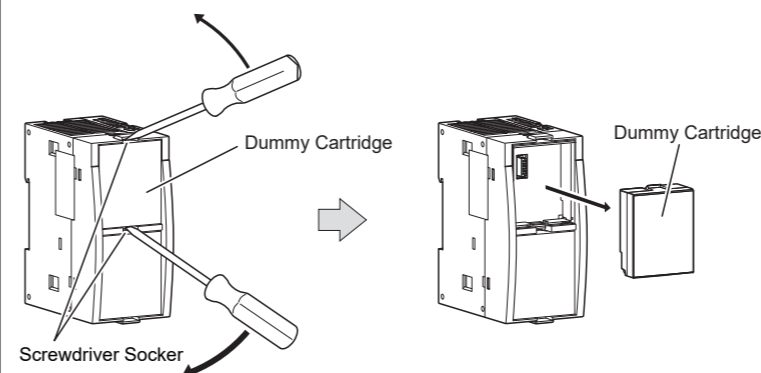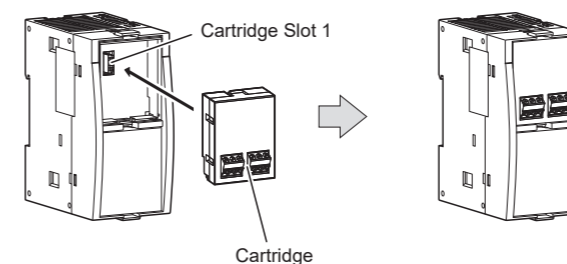

Communication connector
Eject Button

⚠ **CAUTION**

When an HMI module is not connected next, don't peel off the protection sticker.

5 Connecting Cartridges

1. Insert a flathead screwdriver into each of the screwdriver slots (two locations) on the Cartridge Base module and remove the dummy cartridge straight off the HMI module by pushing in the dummy cartridge tabs.
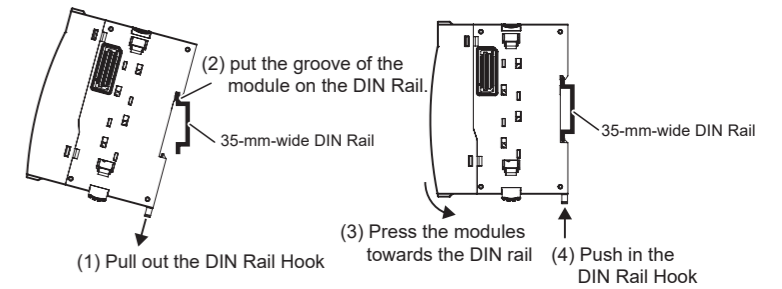

Dummy Cartridge
Dummy Cartridge
Screwdriver Socker

2. Take care with the vertical orientation of thecartridge and filmly push the carteidge connector onto cartridge slot 1 on the Cartridge Base module.

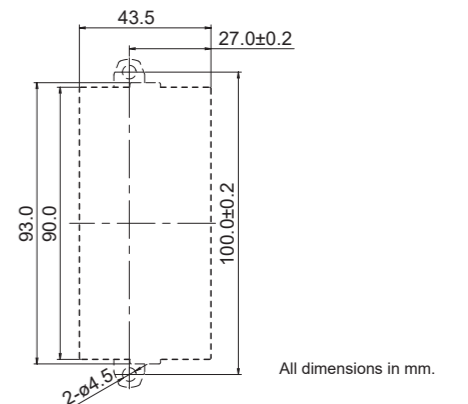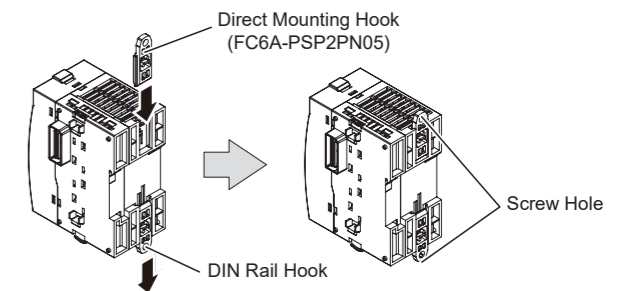Cartridge Slot 1
Cartridge

6 Mounting Modules

For details about mounting and removing modules, see the user's manual.

[Mounting on DIN Rail]
Use a 35-mm-wide DIN Rail and BNL6 mounting hooks to secure the modules.

(2) put the groove of the module on the DIN Rail.
35-mm-wide DIN Rail
35-mm-wide DIN Rail
(1) Pull out the DIN Rail Hook
(3) Press the modules towards the DIN rail
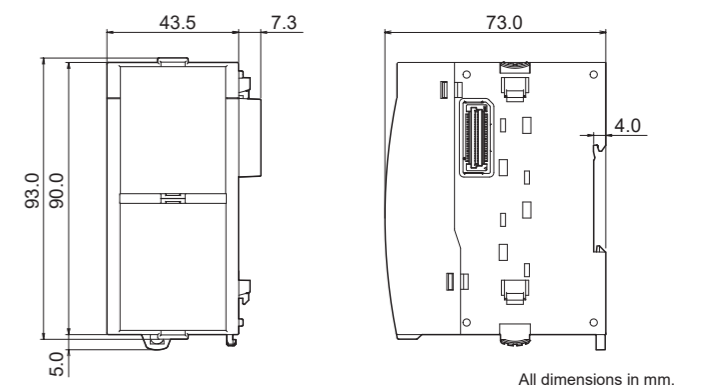(4) Push in the DIN Rail Hook

[Direct Mounting on Panel Surface]
Pull out the DIN Rail hook on the back of the module and insert the direct mounting hook (FC6A-PSP2PN05) into the slot. Attach the module to the mounting plate using the screw holes.
Attach the module to the mounting plate using M4 tapping screws, as shown below, or make 5 to 6mm mounting holes and secure the module using M4 pan head screws. Always give sufficient consideration to operability, ease-of-maintenance, and environmental resistance when deciding on the mounting position.

Direct Mounting Hook (FC6A-PSP2PN05)
Screw Hole
DIN Rail Hook

43.5
27.0±0.2
93.0
90.0
100.0±0.2
2-⌀4.5
All dimensions in mm.

⚠ **CAUTION**
• Use copper conductor only.
• For UL/cUL, Horizontal mounting only.

7 Dimensions

43.5
7.3
73.0
93.0
90.0
5.0
4.0
All dimensions in mm.

8 Precaution for Disposal

• Dispose of the FC6A Series MICROSmart as an industrial waste.

MICROSmart User's manual can be downloaded from http://www.idec.com/FC6Amanuals

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