

INSTRUCTION SHEET

MICROSmart

FC6A Series
Communication cartridge

This sheet provides brief operating instructions of the MicroSmart programmable controller. For details, see the 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 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.
- Use minimum 60°C wire copper conductor only.

CAUTION

The MicroSmart is designed for installation in equipment. Do not install the MicroSmart outside of equipment.

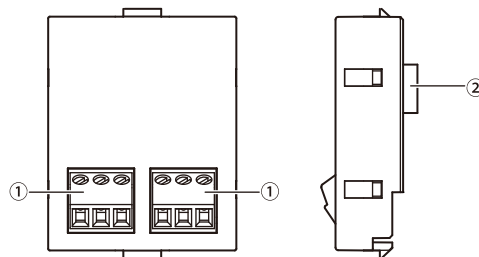
- Install the MicroSmart in environments as described in the user's manual. If the MicroSmart is used in places where it is subjected to high-temperature, high-humidity, condensation, corrosive gases, excessive vibrations, or excessive shocks it will result in electrical shocks, fire hazard, or malfunction.
- 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.
- Use wires of a proper size to meet voltage and current requirements. Tighten terminal screws to the proper tightening torque of 0.2N·m.
- Do not disassemble, repair, or modify MicroSmart modules.

1 TYPE

RS232C : FC6A-PC1
RS485 : FC6A-PC3

Applicable model
FC6A Series MicroSmart CPU module

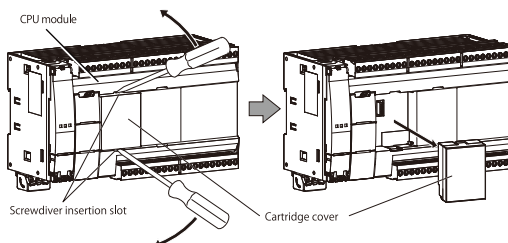
2 Parts Description



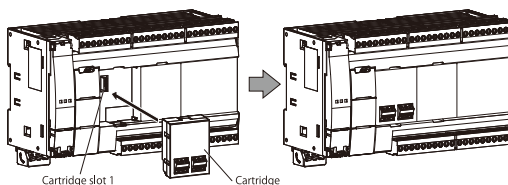
- ① Terminal
RS232C or RS485 communication port
- ② Connector
Connects to the cartridge slot 1 or 2 connector on the CPU module.

3 Connecting Cartridge

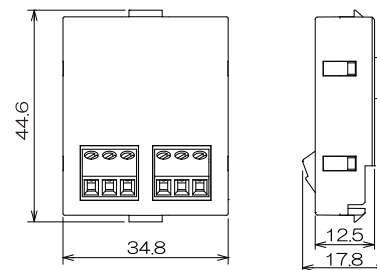
- Insert flat head screwdrivers into the screwdriver insertion slots in both locations of the unit, and while pushing the tabs of the cartridge cover, pull the cartridge cover directly upward to remove it.



- Pay careful attention to the direction of the cartridge and attach it directly onto the unit.



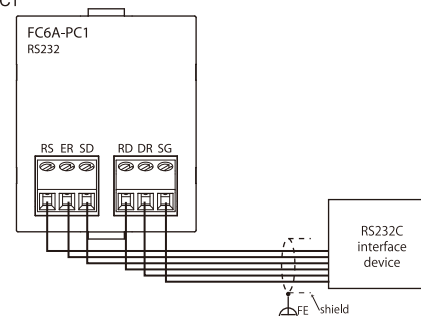
4 Dimensions



All dimensions in mm.

5 Wiring

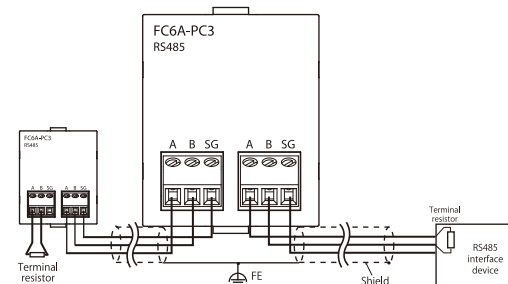
FC6A-PC1



Terminal	I/O	Description
RS (RTS) *1	OUTPUT	Request to Send
ER (DTR)	OUTPUT	Data Terminal Ready
SD (TxD)	OUTPUT	Transmit Data
RD (RxD)	INPUT	Receive Data
DR (DSR)	INPUT	Data Set Ready
SG (SG)	-	Signal Ground

*1 constant voltage terminal

FC6A-PC3



Terminal	I/O	Description
A *2	Input and output	Data A
B *3	Input and output	Data B
SG *4	-	Signal ground

- *2 Two A terminals are interconnected.
- *3 Two B terminals are interconnected.
- *4 Two SG terminals are interconnected.

For details about wiring of the cartridge, see the user's manual. Use a proper cable for wiring the terminals. Crimp the ferrules to the wire cable. Before wiring, read the user's manual for the remote device connected to the cartridge. Use the shielded cable and connect the shields of the cable to ground to suppress the influence of noises. If the communication quality is unstable, insert appropriate termination resistors matched to the characteristic impedance of the cable. Over 1/2W resistors are recommended for the terminal resistor.

6 Applicable Ferrule

The recommended ferrule is made by Phoenix Contact. To crimp the ferrules shown below, use a special crimping tool (CRIMPFOX 6 (1212034))

AI 0,25-6 (3203040)
AI 0,34-6 (3203053)
AI 0,5-6 (3200687)

() indicates the Type No. of PHOENIX CONTACT GmbH & Co. KG

7 Recommended Screwdriver / Tighting torque

To wire the terminal block, use the recommended screwdriver made by Phoenix Contact and tighten terminal screws to the proper tightening torque.

Screwdriver : SZS 0,4x2,5 (1205037)
Tighten torque : 0.2 N · m

() indicates the Type No. of PHOENIX CONTACT GmbH & Co. KG

MicroSmart User's manual can be downloaded from <http://www.idec.com/download>

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IDEC CORPORATION