B-1329 (0)

IDEC

INSTRUCTION SHEET

MICROSmart

FC4A Series Analog Module

This sheet provides brief operating instructions of the MicroSmart Analog module. For details, see the 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 at the end user.
- All MicroSmart modules are manufactured under IDEC's rigorous quality control system, but users must add a backup or failsafe provision to the control system using the MicroSmart in applications where heavy damage or personal injury may be caused in case the MicroSmart should fail.
- Install the MicroSmart according to 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 in advance.

In this operation instruction sheet, safety precautions are categorized in order of importance to 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, and inspection on the MicroSmart. Failure to turn power off 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.

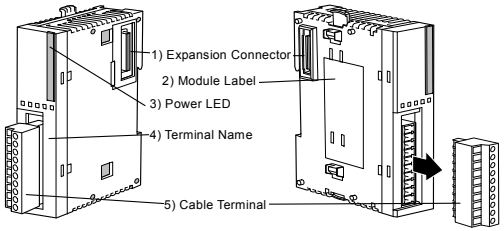
⚠ CAUTION

- The Analog module is designed for installation in equipment. Do not install the Analog module outside equipment.
- Install the Analog module in environments described in the user's manual. If the Analog module is used in places where the Analog module is subjected to high-temperature, high-humidity, condensation, corrosive gases, excessive vibrations, and excessive shocks, then electrical shocks, fire hazard, or malfunction will result.
- The environment for using the Analog module is "Pollution degree 2."
- Prevent metal fragments and pieces of wire from dropping inside the Analog module 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 a proper tightening torque of 0.22 to 0.25 N·m.
- Do not disassemble, repair, or modify the Analog module.
- Users must add a backup or failsafe provision to the control system using the Analog module in applications where heavy damage or personal injury may be caused in case the Analog module should fail.

1 Type

FC4A-K4A1

2 Parts Description



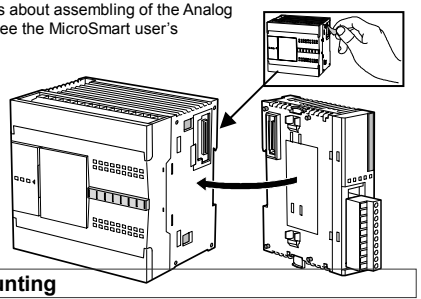
1)	Expansion Connector	Connects to the CPU and other I/O modules. (The expansion connector seal is attached on one side)
2)	Module Label	Indicates the Analog module Type No. and specifications.
3)	Power LED	Turns on when this module is powered up. *1
4)	Terminal Name	Indicates terminal names.
5)	Cable Terminal	Screw terminals for wiring.

*1

Power LED	Operating Status
OFF	Analog I/O module is stopped
ON	Normal operation
Flash	External power supply error

3 Assembling

- When assembling an analog module, remove the expansion connector seal from the CPU module. The following example demonstrates the procedure for assembling the all-in-one 24-I/O type CPU module. When assembling slim type CPU modules, take the same procedure.
- The Analog module cannot be connected to the right of the expansion interface module (FC5A-EXM2, FC5A-EXM 1M/EXM1S).
- For details about assembling of the Analog module, see the MicroSmart user's manual.

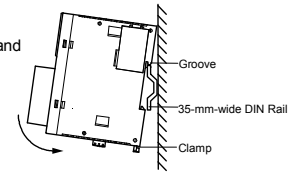


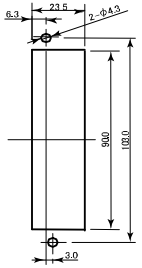
4 Mounting

Modules

- For details about mounting and removing of the Analog module, see the MicroSmart user's manual.

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



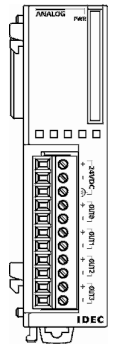


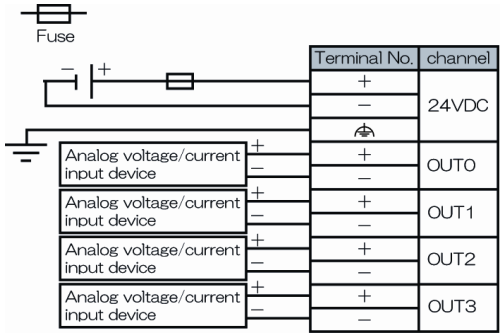
[Direct Mounting]
Use M4 mounting screws (6 mm or 8 mm long). When mounting the Analog module, use optional direct mounting strip FC4A-PSP1P.

5 Terminal Arrangement

- For details about wiring of the Analog module, see the user's manual.
- Connect a fuse appropriate for applied voltage and current draw, at the position shown in the following diagram.
- Use an IEC 60127-approved fuse on the output circuit to meet voltage and current requirements.
- Use the twisted pair shielded cable and connect the shields of both sides of the cable to FG to suppress the influence of noises.

FC4A-K4A1

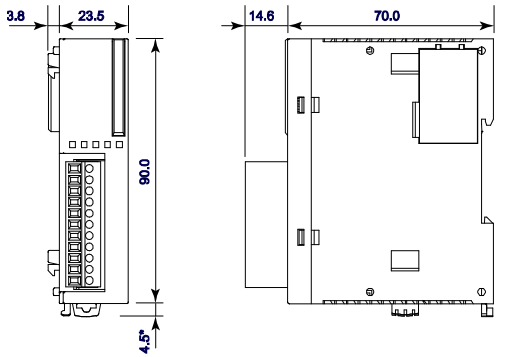




• Do not connect any wiring to unused terminals.
• – terminals of output channels OUT0 to OUT3 are interconnected.

6 Dimensions

FC4A-K4A1



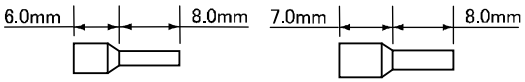
*8.5 mm when the clamp is pulled out.

All dimensions in mm.

7 Applicable Ferrule Dimensions (mm)

To crimp the ferrules shown below, use a special crimping tool (CRIMPFOX ZA 3).

For 1-cable connection **For 2-cable connection**



For 1-cable connection

Type	Cable Size
AI 1,5-8 BK	UL1007 AWG16
AI 1-8 RD	UL1007 AWG18
AI 0,5-8 WH	UL1015 AWG22

For 2-cable connection

Type	Cable Size
AI-TWIN 2x0,75-8 GY	UL1007 AWG18
AI-TWIN 2x0,5-8 WH	UL1015 AWG22

Type indicates the Type No. of Phoenix Contact.

8 Recommended Screwdriver

When wiring the Phoenix Contact terminal block, use the recommended screwdriver.(Phoenix Contact Type No.: SZS 0.4×2.5)

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