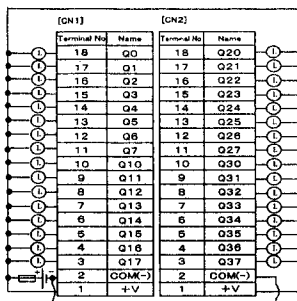


**32-point Transistor Sink Output Module**

**FC3A-T32K4**

Terminal No. are indicated on the female connector at the cable end.

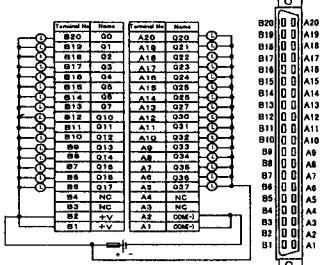


**FC3A-T32K5**

Terminal No. represent the pin arrangement of the male connector on the module as shown in the diagram.

Note: Be sure to connect two COM(-) terminals and two +V terminals, respectively.

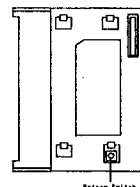
Note: Do not connect any wiring to NC (no connection) terminals.



**2-channel Analog Output Module**

**FC3A-DA1221**

Analog output module can select an output signal range using the rotary switch on the side of the module.



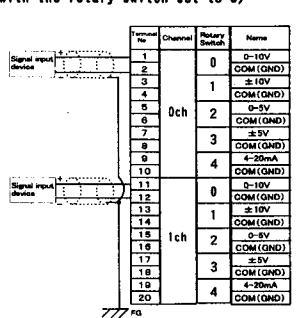
Rotary Switch Position	Output Signal Range
0	0 to 18V DC
1	±10V DC
2	0 to 5V DC
3	±5V DC
4	4 to 20mA DC

Note: After changing the rotary switch setting while the CPU module is powered up, press the communication enable button on the CPU module for more than 4 seconds until the ERROR LED blinks once; then the new output signal range takes effect.

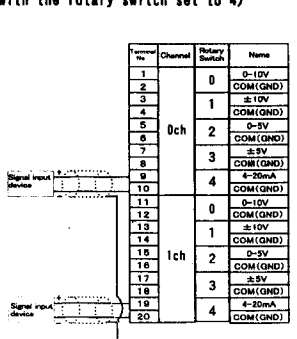
**Terminal Arrangement**

Terminal No. are indicated on the terminal label on the screw terminal block. Use a two-core twisted pair shielded cable with a minimum core diameter of 0.5mm. Connect the shield wire to a proper frame ground (FG). Ten COM (GND) terminals are connected together internally.

When using voltage output (with the rotary switch set to 0)



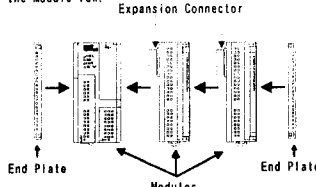
When using current output (with the rotary switch set to 4)



**Assembling and Disassembling Modules**

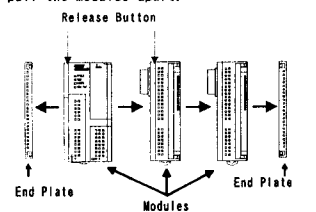
**Assembling Modules**

Place the expansion connectors of two modules together and press the modules together until the latch clicks to combine the modules securely. Improper connection between modules will cause malfunction or damage when power is turned on. Attach end plates to both sides of the module row.



**Disassembling Modules**

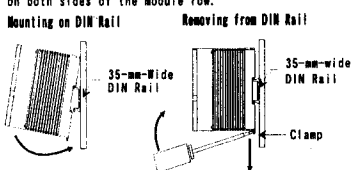
Keep the blue release button on top of the module depressed to disengage the latch, and pull the modules apart.



Note: Turn power off to the OpenNet Controller before assembling or disassembling, otherwise modules may be damaged.

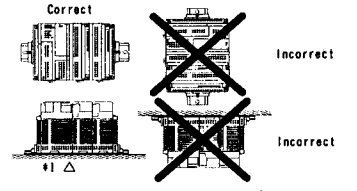
**Mounting Modules**

For details about mounting and removing modules, see the OpenNet Controller user's manual. Use the 35-mm-wide DIN rail for mounting the modules, and secure the modules using the BNL6 mounting clips on both sides of the module row.



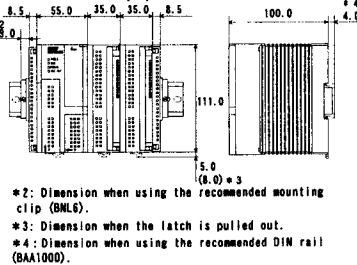
**Mounting Direction**

Mount the OpenNet Controller modules horizontally on a vertical plane as shown below. Do not mount the modules vertically or upside down.



\*1: When the ambient temperature is 40°C or below, the modules can also be mounted upright.

**Dimensions (mm)**



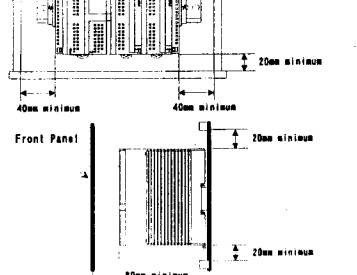
\*2: Dimension when using the recommended mounting clip (BNL6).

\*3: Dimension when the latch is pulled out.

\*4: Dimension when using the recommended DIN rail (BAA1000).

**Installation in Control Panel**

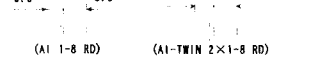
When installing the OpenNet Controller modules in a control panel, take the convenience of operation and maintenance, and resistance against environments into consideration.



**Applicable Ferrule Dimensions (mm)**

To crimp the ferrules shown below, use special crimping tool (CRIMPFOX UDG).

For 1-cable connection For 2-cable connection



( ) indicates the Type No. of Phoenix Contact.

**Recommended Screwdriver**

When wiring the terminal block, use the recommended screwdriver. (Phoenix Contact's Type No.: SZ50, 6x3, 5)

**Safety Precautions**

**Special expertise is required to use the OpenNet Controller.**

- 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 OpenNet Controller. Keep this instruction sheet at the end user.
- All OpenNet Controller 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 OpenNet Controller in applications where heavy damage or personal injury may be caused in case the OpenNet Controller should fail.
- Install the OpenNet Controller according to instructions described in this instruction sheet and the user's manual. Improper installation will result in falling, failure, or malfunction of the OpenNet Controller.
- 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 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 power off to the OpenNet Controller before starting installation, removal, wiring, maintenance, and inspection on the OpenNet Controller. Failure to turn power off may cause electrical shocks or fire hazard.
- Emergency stop and interlocking circuits must be configured outside the OpenNet Controller. If such a circuit is configured inside the OpenNet Controller, failure of the OpenNet Controller may cause disorder of the control system, damage, or accidents.

**Caution**

The OpenNet Controller is designed for installation in equipment. Do not install the OpenNet Controller outside equipment.

Install the OpenNet Controller in environments described in the user's manual. If the OpenNet Controller is used in places where the OpenNet Controller 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 OpenNet Controller is "Pollution degree 2." The pollution degree refers to a degree of pollution in the micro-environment which determines the effect of pollution on the insulation. Pollution degree 2 defines "Only non-conductive pollution occurs except that occasionally a temporary conductivity caused by condensation is to be expected. Do not use the OpenNet Controller in environments inferior to the state specified in IEC60529-1.

The DC power applicable to the OpenNet Controller is "PS2." PS2 refers to a power supply that has a momentary power failure duration of 10 msec at the maximum and an interval between power failures of 1 second at the minimum.

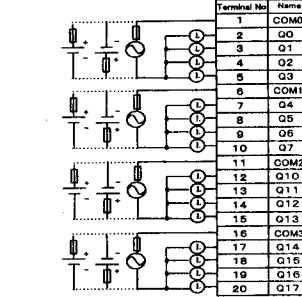
Prevent metal fragments and pieces of wire from dropping inside the OpenNet Controller housing. Ingress of such fragments and chips may cause fire hazard, damage, or malfunction.

Use wires of a proper size to meet voltage and current requirements. Tighten terminal screws to a proper tightening torque of 0.5 to 0.6 N·m. Use an IEC60127-approved fuse on the power line and output circuit to meet voltage and current requirements. (Recommended fuse: Littelfuse 5x20mm slow-blow type 218000 series/Type T) This is required when exporting equipment containing OpenNet Controller to Europe.

Use an EU-approved circuit breaker. This is required when exporting equipment containing OpenNet Controller to Europe.

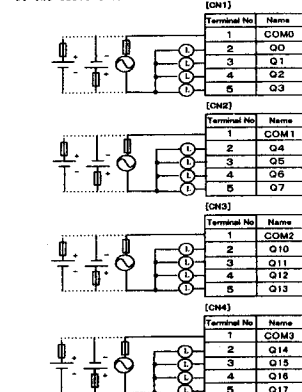
If relays or transistors in the OpenNet Controller output modules should fail, outputs may remain on or off. For output signals which may cause heavy accidents, provide a monitor circuit outside of the OpenNet Controller.

Do not disassemble, repair, or modify the OpenNet Controller modules.



**FC3A-R162**

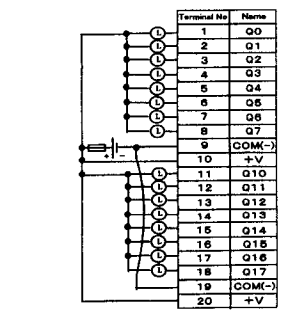
Terminal No. are indicated on the female connector at the cable end.



**16-point Transistor Sink Output Module**

**FC3A-T16K1**

Terminal No. are indicated on the terminal label on the screw terminal block.



**FC3A-T16K3**

Terminal No. are indicated on the female connector at the cable end.

