<u>OMRON</u>

Analog Input Modules

GT1-AD

Analog Input Module Compatible with MULTIPLE I/O TERMINAL

- Input block incorporates connectors that can be easily mounted or dismounted.
- 8 inputs
- High resolution of 1/6,000
- High conversion speed of 8 ms/8 points or 4 ms/4 points.
- Dimensions of connector model:

 110 × 60 × 65 (W × H × D)

 Dimensions of terminal block model:

 80 × 80 × 65 (W × H × D)
- DIN track mounting.





Ordering Information

| I/O classification | I/O points | Terminal | Power supply voltage | I/O specification | Model |
|--------------------|------------|-----------------|----------------------|---|------------|
| Analog input | 8 | Molex connector | 24 VDC | 4 to 20 mA, 0 to 20 mA, 0 to 5 V. 1 to 5 V. 0 to | GT1-AD08MX |
| | 4 | Terminal block | | | GT1-AD04 |

Note: A connector cable, GCN1-004, is included with each module.

Specifications

■ Input

| | Item | Voltage input | Current input | |
|------------------------|---------------|--|------------------------|--|
| Input points | | 8 | | |
| Input type | | 0 to 5 V, 1 to 5 V, 0 to 10 V, -10 to 10 V | 0 to 20 mA, 4 to 20 mA | |
| Max. signal input | | ±15 V | ±30 mA | |
| Input impedance | | 1 MΩ min. | Approx. 250 Ω | |
| Resolution | | 1/6,000 (FS) | | |
| Overall accuracy | 25°C | ±0.3% FS | ±0.4% FS | |
| | -10°C to 55°C | ±0.6% FS | ±0.8% FS | |
| Conversion speed | | 8 ms/8 points, 4 ms/4 points | | |
| Conversion output data | | Binary data -10- to 10-V range: F448 to 0BB8 full scale Other signal ranges: 0000 to 1770 full scale | | |
| Insulation method | | Transistor or photocoupler insulation between inputs and power lines. | | |

■ Characteristics

| I/O power supply voltage | 20.4 to 26.4 VDC (24 VDC +10%/-15%) | 20.4 to 26.4 VDC (24 VDC +10%/-15%) | | |
|--------------------------|---|---|--|--|
| Current consumption | I/O module interface | Internal circuitry power supply | | |
| | 50 mA max. | 100 mA max. | | |
| Noise immunity | ±1,500 V (p-p) with a pulse width of 0.1 t | ±1,500 V (p-p) with a pulse width of 0.1 to 1 μs | | |
| Vibration resistance | 10 to 150 Hz, 1.0-mm double amplitude | 10 to 150 Hz, 1.0-mm double amplitude or 70 m/s ² | | |
| Shock resistance | 200 m/S ² | 200 m/S ² | | |
| Dielectric strength | 500 VAC | 500 VAC | | |
| Mounting method | 35-mm DIN track mounting | 35-mm DIN track mounting | | |
| Mounting strength | No damage when 100 N pull load was a direction) | No damage when 100 N pull load was applied in all directions (10 N min. in the DIN track direction) | | |
| Terminal strength | No damage when 100 N pull load was a | No damage when 100 N pull load was applied | | |
| Ambient temperature | Operating: -10°C to 55°C (with no ici Storage: -25°C to 65°C (with no ici | \ | | |
| Ambient humidity | Operating: 25% to 85% | Operating: 25% to 85% | | |

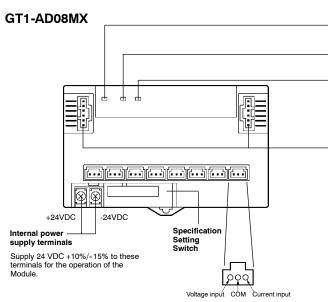
■ Connector

| Туре | | | Model | Remarks |
|-----------------|---------------------------|----------------|--------------|-------------------------------------|
| Molex connector | IDC (Use Press-fit tool.) | Housing | GCN1-MX25-B* | (25 piece bag from OMRON) 22 AWG |
| | Solderless terminal | Housing | 50-57-9403 | |
| | | Chain terminal | 16-02-0069 | 24 to 30 AWG |
| | | | 16-02-0086 | 22 to 24 AWG |
| | | Loose terminal | 16-02-0096 | 24 to 30 AWG |
| | | Press-fit tool | 11-01-0209 | (See Note.) |

Note: Contact your OMRON representatives for the above connectors.

*Stocked by OMRON.

Nomenclature -



Analog input connectors 0 to 7

These connectors are for analog input use. Each input connector has three pins (i.e., a pin for voltage input, COM, and current input from left to right)

TS indicator (status indicator of I/O Module interface)

Indicates the status of the I/O Module Interface.

PWR indicator (internal power supply indicator)
The green indicator is lit when internal circuitry power supply is provided.

U.ERR indicator (module error indicator)

The red indicator is lit if the Module malfunctions or no internal circuitry power supply is provided.

Connectors for I/O module interface

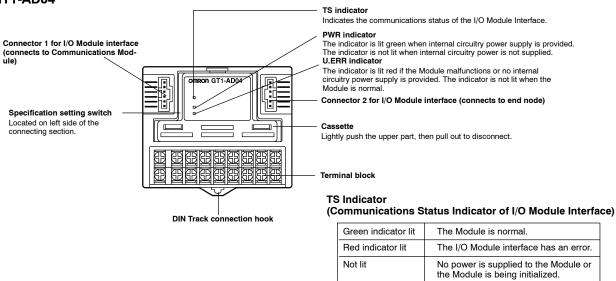
Connects to the Communications Units or other I/O Mod-

- Connect the Communications Module to connector 1.
- When connecting I/O Modules to the GT1-AD, connector 2 of the GT1-AD must be connected to connector 1 of the first I/O Module and connector 2 of the first I/O Module must be connected to connector 1 of the next I/O Module. Connect all the I/O Modules in the same way.
- Be sure to connect the end connector to connector 2 of the last I/O Module.

TS Indicator (Status Indicator of I/O Module Interface)

| Green indicator lit | The Module is normal. |
|---------------------|--|
| Red indicator lit | The I/O Module interface has an error. |
| OFF | No power is supplied to the Module or the Module is being initialized. |

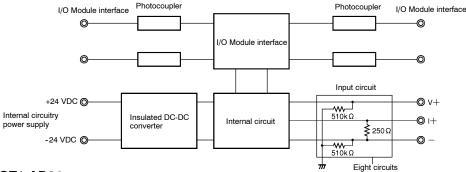




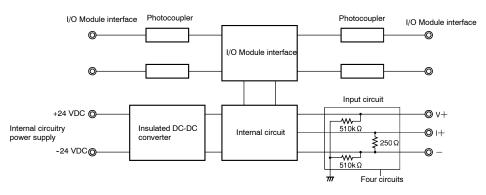
Operation

■ Internal Circuit Configuration

GT1-AD08MX



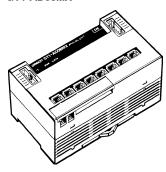
GT1-AD04

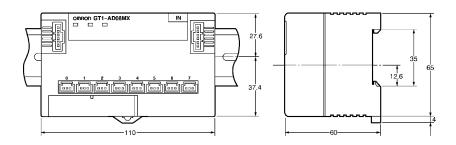


Dimensions

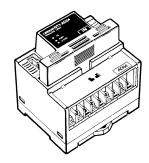
Note: All units are in millimeters unless otherwise indicated.

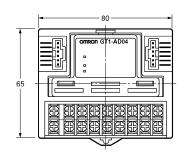
GT1-AD08MX

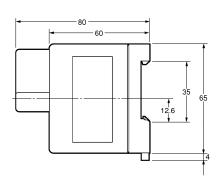




GT1-AD04





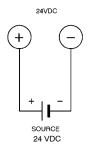


Installation

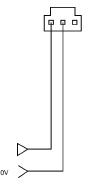
■ Wiring

Be sure to connect Molex-made connectors for analog input wires and connect the wires as shown below.

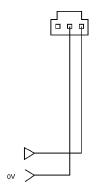
Internal Circuitry Power Supply







Current Input



Precautions

Refer to the *DeviceNet Operation Manual (W267)* before using the Module.

Wiring

- To prevent inductive noise, do not wire power lines or high-tension lines along with or near the cables. Other noise-prevention techniques, such as using shielding or separate conduit/ducting, are also effective.
- Install the Module as far as possible from equipment that generates strong high-frequency signals (such as high-frequency welders) and equipment that generates surges. Such equipment can cause the Module to malfunction.
- Install surge absorbers or noise filters on nearby equipment that generates noise, particularly equipment that has inductive components such as motors, transformers, solenoids, or magnetic coils.
- When using a noise filter in the power supply, check the voltage and current and install the noise filter as close as possible to the Module.

NOTE: DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

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GT1-AD04 GT1-AD04CST GT1-AD08MX