## Analog Input Modules

## 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 $8 \mathrm{~ms} / 8$ points or $4 \mathrm{~ms} / 4$ points.

- Dimensions of connector model:
$110 \times 60 \times 65(\mathrm{~W} \times \mathrm{H} \times \mathrm{D})$
Dimensions of terminal block model:
$80 \times 80 \times 65(\mathrm{~W} \times \mathrm{H} \times \mathrm{D})$
■ DIN track mounting.


## Ordering Information

| I/O classification | I/O points | Terminal | Power supply <br> voltage | I/O specification | Model |
| :--- | :--- | :--- | :--- | :--- | :---: |
| Analog input | 8 | Molex connector | 24 VDC | 4 to $20 \mathrm{~mA}, 0$ to 20 mA, <br> 0 to $5 \mathrm{~V}, 1$ to $5 \mathrm{~V}, 0$ to <br> $10 \mathrm{~V},-10$ to 10 V | 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 $5 \mathrm{~V}, 1$ to $5 \mathrm{~V}, 0$ to $10 \mathrm{~V},-10$ to 10 V | 0 to $20 \mathrm{~mA}, 4$ to 20 mA |
| Max. signal input |  | $\pm 15 \mathrm{~V}$ | $\pm 30 \mathrm{~mA}$ |
| Input impedance |  | $1 \mathrm{M} \Omega \mathrm{min}$. | Approx. $250 \Omega$ |
| Resolution |  | 1/6,000 (FS) |  |
| Overall accuracy | $25^{\circ} \mathrm{C}$ | $\pm 0.3 \%$ FS | $\pm 0.4 \%$ FS |
|  | $-10^{\circ} \mathrm{C}$ to $55^{\circ} \mathrm{C}$ | $\pm 0.6 \%$ FS | $\pm 0.8 \%$ FS |
| Conversion speed |  | $8 \mathrm{~ms} / 8$ points, $4 \mathrm{~ms} / 4$ points |  |
| Conversion output data |  | Binary data <br> -10- to 10-V range: F448 to OBB8 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 $26.4 \mathrm{VDC}(24 \mathrm{VDC}+10 \% /-15 \%)$ |
| :--- | :--- |
| Current consumption | $\mathrm{I} / \mathrm{O}$ module interface |
|  | $50 \mathrm{~mA} \mathrm{max}$. |
| Noise immunity | $\pm 1,500 \mathrm{~V} \mathrm{(p-p)}$ with a pulse width of 0.1 to $1 \mu \mathrm{~s}$ |
| Vibration resistance | 10 to $150 \mathrm{~Hz}, 1.0-\mathrm{mm}$ double amplitude or $70 \mathrm{~m} / \mathrm{s}^{2}$ |
| Shock resistance | $200 \mathrm{~m} / \mathrm{S}^{2}$ |
| Dielectric strength | 500 VAC |
| Mounting method | $35-\mathrm{mm}$ DIN track mounting |
| Mounting strength | No damage when 100 N pull load was applied in all directions (10 N min. in the DIN track <br> direction) |
| Terminal strength | No damage when 100 N pull load was applied |
| Ambient temperature | Operating: $\quad-10^{\circ} \mathrm{C}$ to $55^{\circ} \mathrm{C}$ (with no icing or condensation) <br> Storage: $\quad-25^{\circ} \mathrm{C}$ to $65^{\circ} \mathrm{C}$ (with no icing or condensation) |
| Ambient humidity | Operating: $25 \%$ to $85 \%$ |

## - Connector

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

Note: Contact your OMRON representatives for the above connectors.
*Stocked by OMRON.
Nomenclature


GT1-AD04


## 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.


## 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.

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