# <u>OMRON</u>

# **Analog Output Module**

GT1-DA

# Analog Output Modules Compatible with MULTIPLE I/O TERMINAL

- Output block incorporates connectors that can be easily mounted or dismounted.
- 4 inputs
- High resolution of 1/6,000.
- High conversion speed of 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 output	4	Connector	24 VDC	0 to 5 V, 1 to 5 V, 0 to 10 V, -10 to 10 V	GT1-DA04MX
		Terminal block		0 to 5 V, 1 to 5 V, 0 to 10 V, -10 to 10 V, 4 to 20 mA	GT1-DA04

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

## Specifications -

#### **■** Output

Item		Voltage output Current output		
Output points		4	•	
Output type		0 to 5 V, 1 to 5 V, 0 to 10 V, -10 to 4 to 20 mA 10 V		
Output permissible load resistance		5 k $\Omega$ min.	600 Ω max.	
Output impedance		0.5 Ω max.		
Resolution		1/6,000 (full scale)		
Overall accuracy	25°C	±0.4% full scale		
	-10°C to 55°C	±0.8% full scale		
Conversion speed		4 ms/4 points		
DA 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 outputs 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.	GT1-DA04MX: 100 mA max. GT1-DA04: 150 mA max.		
Noise immunity	±1,500 V (p-p) with a pulse width of 0.1	±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 <sup>2</sup>		
Shock resistance	200 m/s <sup>2</sup>	200 m/s <sup>2</sup>		
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 Storage: -25°C to 65°C	1 1 3		
Ambient humidity	Operating: 25% to 85% RH (with no	Operating: 25% to 85% RH (with no condensation)		

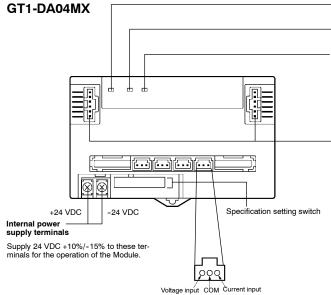
#### ■ Connectors

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 output use. Each output connector has three pins (i.e., a voltage, COM, and NC pins 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 if internal circuitry power supply is provided.

U.ERR indicator (Unit error indicator)

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

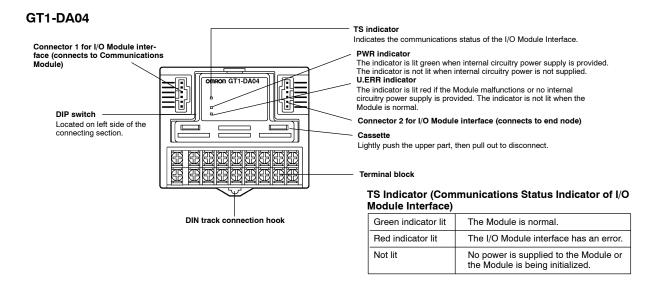
#### Connectors for I/O Module interface

Connects to the Communications Modules or other I/O Modules.

- 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)

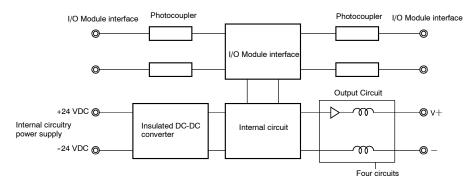
Green indicator lit	The Module is normal.
Red indicator lit	The I/O Module interface has an error.
Not lit	No power is supplied to the Module or the Module is being initialized.



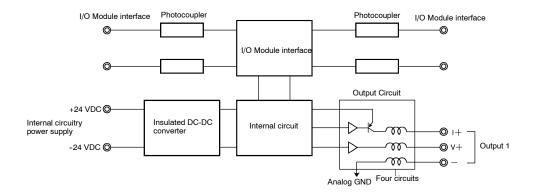
## Operation -

### ■ Internal Circuit Configuration

#### GT1-DA04MX



#### **GT1-DA04**

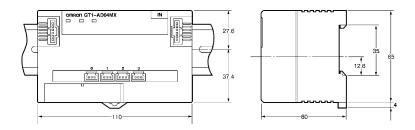


### Dimensions

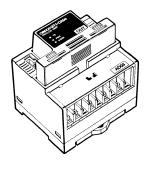
Note: All units are in millimeters unless otherwise indicated.

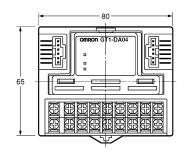
#### GT1-DA04MX

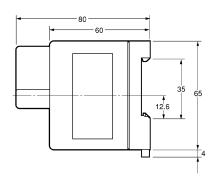




GT1-DA04



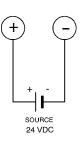


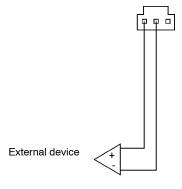


# Installation

### **■** Wiring

Be sure to connect Molex-made connectors for analog output 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.

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

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