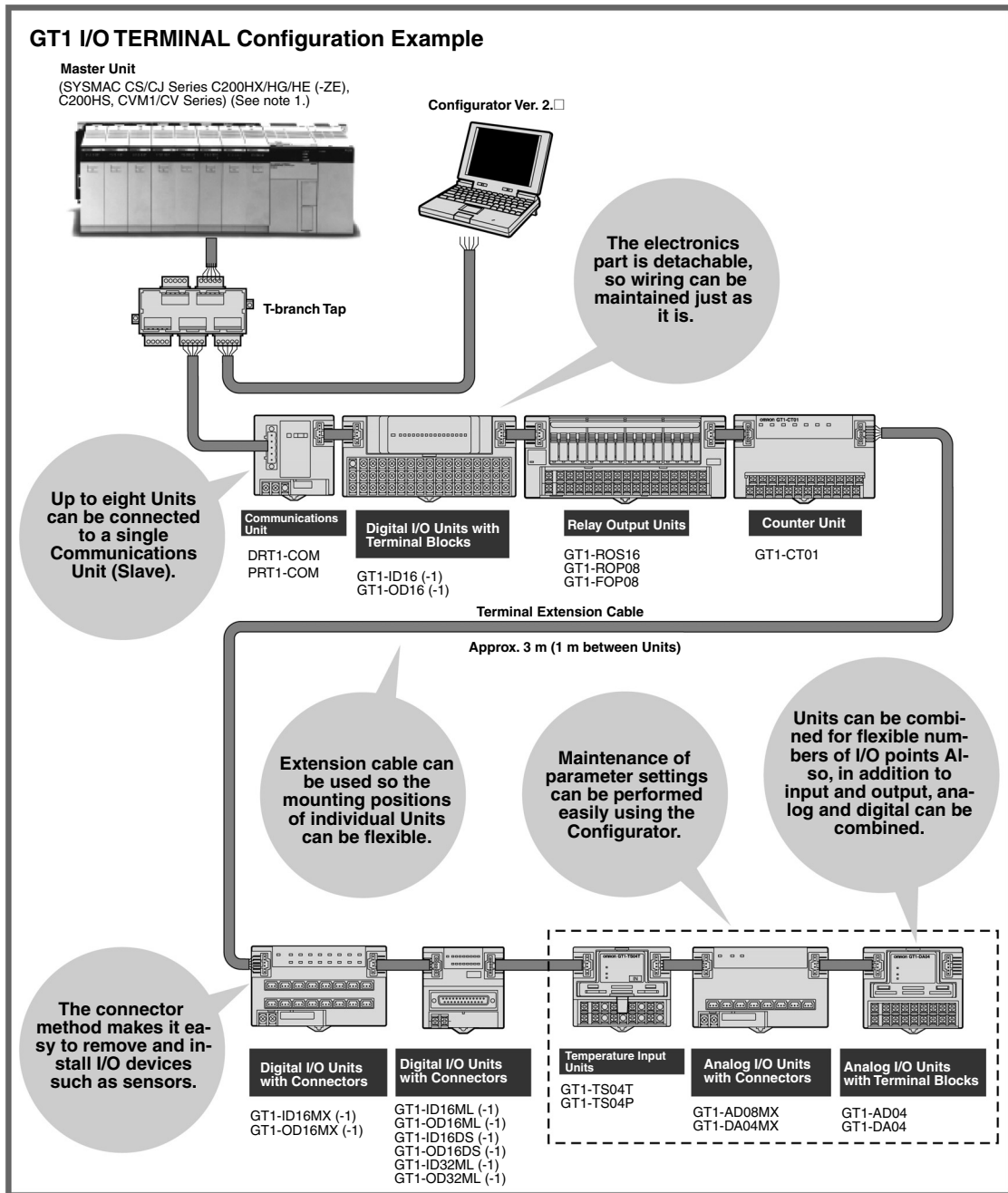


GT1 I/O Series

A GT1 I/O TERMINAL with a flexible combination of numerous versatile I/O Units handles digital I/O, analog I/O, counter inputs, or relay outputs and boosts on-site productivity higher than ever. Using a GT1 I/O TERMINAL, one Slave (Communications Unit) can connect to a maximum of eight I/O Units to achieve control of a maximum of 1,024 I/O points.

Note: The number of I/O points under control may be restricted by the application. Refer to the *DeviceNet MULTIPLE I/O TERMINAL Operation Manual (W348)* and *PRT1-COM manual* for details.



Remote I/O

PRT1-COM

Communication Unit

Connects a maximum of eight I/O units of the GT1 series to PROFIBUS-DP

- PROFIBUS-DP compliant slave unit.
- Allows flexible combinations of I/O points.
- A wide range of I/O-types available.
- DIN rail mounting.
- High/low byte swap mechanism.



Remote I/O

Ordering Information

Product Code	Description
PRT1-COM	PROFIBUS-DP GT1 I/O terminal
W900-E2-1	Operation Manual

Specifications

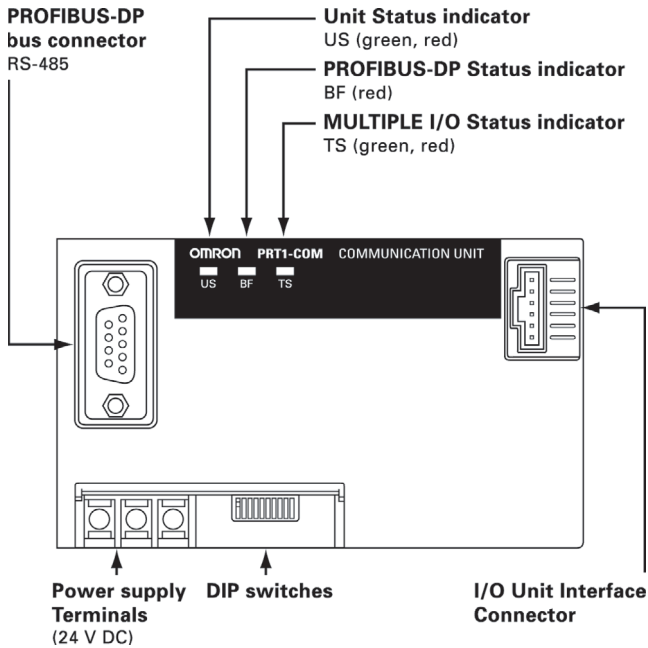
Communication Specification

Applicable standard	EN 50170 vol. 2
Type	PROFIBUS-DP Slave
Bus connector	9-pin sub-D female
Bus termination	External
Baud rate (auto-detect)	9.6 / 19.2 / 45.45 / 93.75 / 187.5 / 500 kbit/s, 1.5 / 3 / 6 / 12 Mbit/s
PROFIBUS address range	0 to 125
Communication cable	Type A (EN 50170 vol. 2)
Minimum slave interval time	0.5 ms
Input data	4 status bytes + max. 128 data bytes
Output data	max. 128 data bytes
Supported DP functions	<ul style="list-style-type: none"> • Data_Exchange • Slave_Diag • Set_Prm • Chk_Cfg • Global_Control (SYNC, FREEZE, CLEAR) • Get_Cfg • RD_Inp • RD_Outp
PROFIBUS-DP GSD file	OC_047D.GSD

Unit Specifications

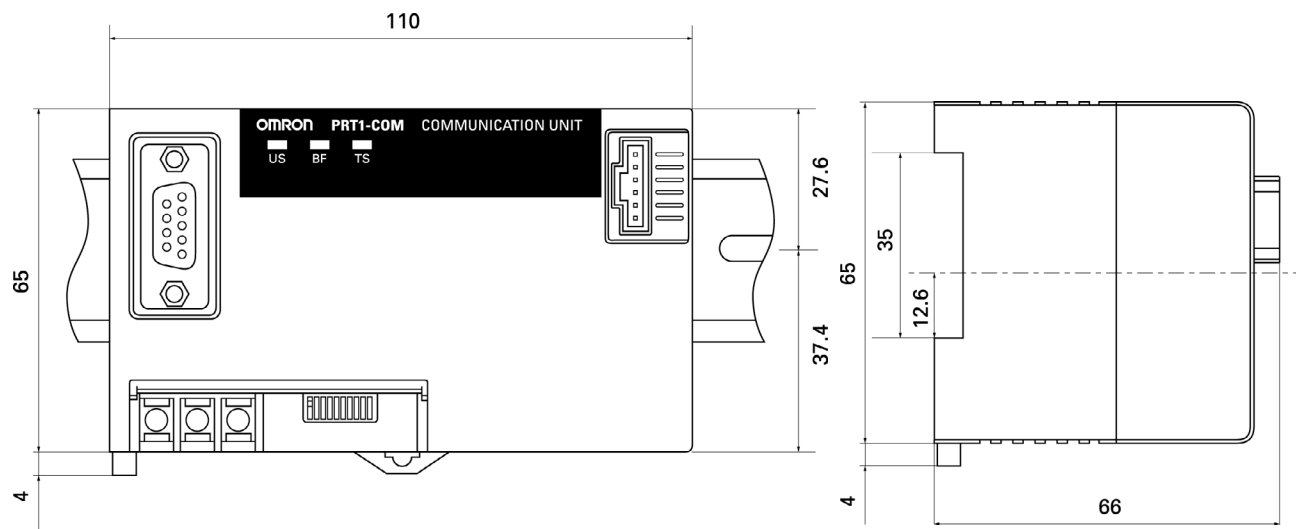
Number of GT1 I/O Units		8 max.
Input data		128 bytes max.
Output data		128 bytes max.
GT1 I/O power supply		0.3 A max.
Indicators	Unit Status LED green / red	OFF: Power not OK Green ON: Unit OK Green BLINK: Initialising Red ON: Unit error
	Bus Failure LED (PROFIBUS-DP) red	OFF: No errors ON: Response monitoring time has elapsed. The master did not address PRT1-COM within the configured watchdog time. PRT1-COM was not parameterised or not properly configured.
	Terminal Status LED (GT1 I/O) green / red	OFF: Power overload Green ON: Communication OK Green BLINK: Special I/O Unit Error Red ON: Bus fault Configuration fault End station fault I/O Unit over Basic I/O Unit Error
Storage temperature		-20 to +65 °C
Ambient temperature		-10 to +55 °C
Ambient humidity		25 to 85% (non-condensing)
EMC compliance		EN 50081-2, EN 61131-2
Dielectric strength		500 V AC for 1 min.
Power supply		20.4 to 26.4 V DC
Current consumption on 24 V DC power supply		GT1 I/O current consumption + 0.15 [A]
Inrush current		30 A max.
Weight		165 g (typical)

Nomenclature



Dimensions

Note: All units are in millimeters unless otherwise indicated.



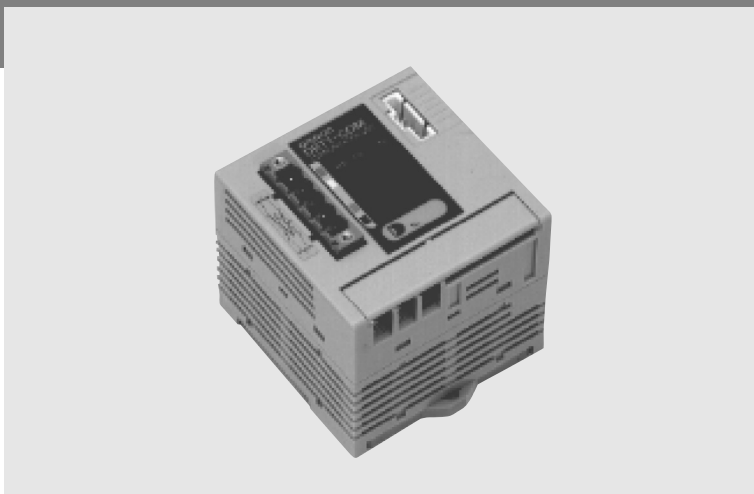
Remote I/O

DRT1-COM

Communication Unit

Connects a maximum of eight I/O units of the GT1 series to DeviceNet

- Allows flexible combinations of I/O points.
- Covering a total cable length of 3 m.
- Dimensions: 65 x 64 x 65 (W x H x D)
- DIN rail mounting.



Ordering Information

Power supply voltage	Model
24 V DC	DRT1-COM

Specifications

Ratings

Connectable Units	8
I/O points	1,024 max. (including inputs and outputs)
Communications distance	Total extension: 3 m max. Between Units: 1 m max. (40 mm max. with the standard cable provided with the Unit.) (See note 1.)
Dielectric strength	500 V AC for 1 min.
Mounting method	35-mm DIN rail mounting
Unit output power supply	0.4 A max. (See note 2.)

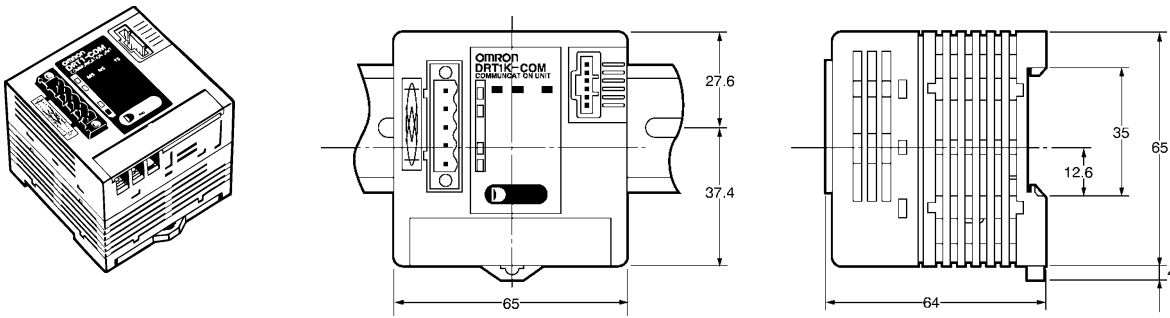
- Note:** 1. One cable is provided with each I/O Unit.
2. The total current consumption for I/O Unit interfaces must not exceed 0.4 A.

Characteristics

Communications power supply voltage	11 to 25 V DC (supplied from the communications connector)
Internal power supply voltage	24 V DC +10%/–15%
I/O power supply voltage	
Current consumption	Communications: 30 mA max. at 24 V DC Internal circuit: 0.6 A at 24 V DC (with max. I/O load)
Dielectric strength	500 V AC
Noise immunity	Conforms to IEC61000-4-4, 2 kV (Power line)
Vibration resistance	10 to 150 Hz, 1.0-mm double amplitude or 70 m/s ²
Shock resistance	200 m/s ²
Mounting strength	No damage when 100 N pull load was applied in all directions (10 N min. in the DIN rail direction)
Terminal strength	No damage when 100 N pull load was applied
Screw tightening torque	0.3 to 0.5 Nm Phoenix connector: 0.25 to 0.3 Nm
Ambient temperature	Operating: –10° C to 55° C (with no icing or condensation) Storage: –25° C to 65° C (with no icing or condensation)
Ambient humidity	Operating: 25% to 85%

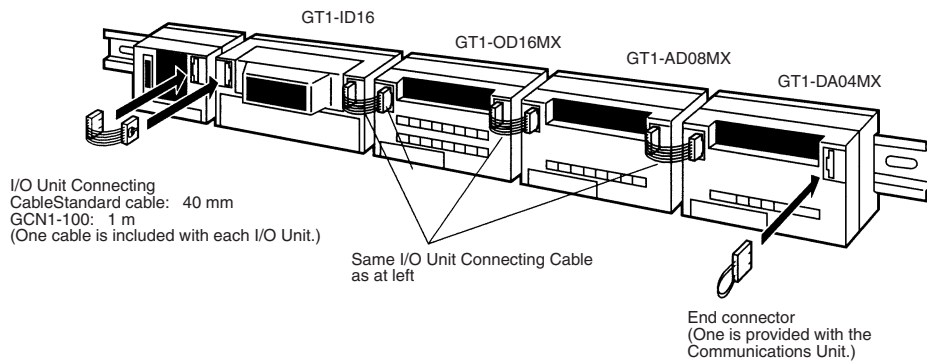
Dimensions

Note: All units are in millimeters unless otherwise indicated.



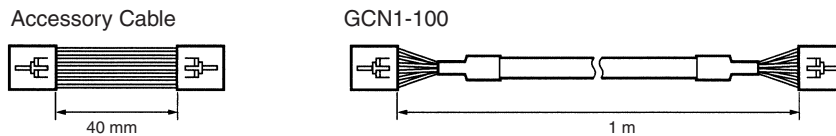
Note: In the above diagram the unit is shown with the end connector not mounted.

Connecting I/O Unit Connecting Cable



To connect the units to each other, use the with the I/O unit supplied connecting cable. Insert the end connector, which is delivered with the communication unit in the second communications connector of the last I/O unit as bus terminator.

Note: The connecting cable for the I/O Unit is shown below.



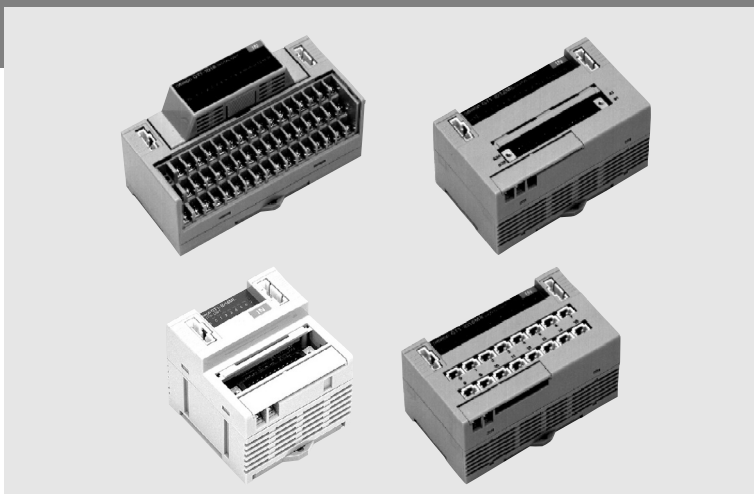
Remote I/O

GT1-ID/OD

Digital I/O Units

Digital I/O units

- Several connectivity methods are available:
 - screw terminal
 - sensor connector
 - high-density connector
- The screw terminal models have a detachable I/O electronic circuits block that can be removed for maintenance purposes.
- DIN rail mounting



Ordering Information

Unit	I/O classification	Internal I/O circuit common	I/O points	Terminal	Power supply voltage	I/O specification	Model	
Terminal block model	Digital input	NPN (+ common)	16	M3 terminal board	24 V DC	DC/transistor	GT1-ID16	
		PNP (- common)				0.5 A, DC/transistor	GT1-ID16-1	
	Digital output	NPN (- common)				GT1-OD16		
		PNP (+ common)				GT1-OD16-1		
Connector model	Digital input	NPN (+ common)		Molex connector		DC/transistor	GT1-ID16MX	
		PNP (- common)					GT1-ID16MX-1	
	Digital output	NPN (- common)					0.5 A, DC/transistor	GT1-OD16MX
		PNP (+ common)					GT1-OD16MX-1	
	Digital input	NPN (+ common)	Fujitsu connector		DC/transistor		GT1-ID16ML	
		PNP (- common)					GT1-ID16ML-1	
	Digital output	NPN (- common)		0.5 A, DC/transistor		GT1-OD16ML		
		PNP (+ common)		GT1-OD16ML-1				
	Digital input	NPN (+ common)		D-sub 25-pin connector		DC/transistor	GT1-ID16DS	
		PNP (- common)					GT1-ID16DS-1	
	Digital output	NPN (- common)	0.5 A, DC/transistor		GT1-OD16DS			
		PNP (+ common)	GT1-OD16DS-1					
High-density connector model	Digital input	NPN (+ common)	32		Fujitsu connector		DC/transistor	GT1-ID32ML
		PNP (- common)						GT1-ID32ML-1
	Digital output	NPN (- common)		0.5 A, DC/transistor		GT1-OD32ML		
		PNP (+ common)		GT1-OD32ML-1				

Specifications

Ratings

Input

Item	GT1-ID□□
ON delay time	1.5 ms max.
OFF delay time	1.5 ms max.
ON voltage	15 V min. between each input terminal and V or G
OFF voltage	5 V max. between each input terminal and V or G
OFF current	1 mA max.
Insulation method	Photocoupler
Input indicators	LED (yellow)

Output

Item	GT1-OD□□
Rated output current	0.5 A/point (See note.)
ON delay time	0.5 ms max.
OFF delay time	1.0 ms max.
Residual voltage	1.2 V max.
Leakage current	0.1 mA max.
Insulation method	Photocoupler
Output indicators	LED (yellow)

Note: Ensure that the total external load current does not exceed the values given in the following table.

Model	Total external load current
GT1-OD16/16MX/32ML (-1)	4 A
GT1-OD16ML/16DS (-1)	2.5 A

Characteristics

I/O power supply voltage	20.4 to 26.4 V DC (24 V DC +10%/−15%)		
Current consumption (See note.)	Model	I/O Interface	Internal circuit
	GT1-ID16 (-1)	35 mA max.	---
	GT1-OD16 (-1)	35 mA max.	9 mA max.
	GT1-ID16MX (-1)	35 mA max.	---
	GT1-OD16MX (-1)	35 mA max.	9 mA max.
	GT1-ID16ML (-1)	35 mA max.	---
	GT1-OD16ML (-1)	35 mA max.	9 mA max.
	GT1-ID16DS (-1)	35 mA max.	---
	GT1-OD16DS (-1)	35 mA max.	9 mA max.
	GT1-ID32ML (-1)	55 mA max.	---
GT1-OD32ML (-1)	65 mA max.	11 mA max.	
Dielectric strength	500 V AC		
Noise immunity	Conforms to IEC61000-4-4 2 kV (power line)		
Vibration resistance	10 to 150 Hz, 1.0-mm double amplitude or 70 m/s ²		
Shock resistance	200 m/s ²		
Mounting method	35-mm DIN rail mounting		
Mounting strength	No damage when 100 N pull load was applied in all directions (10 N min. in the DIN rail direction)		
Terminal strength	No damage when 100 N pull load was applied		
Screw tightening torque	0.3 to 0.5 N • m		
Ambient temperature	Operating:−10° C to 55° C (with no icing or condensation) Storage:−25° C to 65° C (with no icing or condensation)		
Ambient humidity	Operating: 25% to 85%		
Accessories	I/O Unit Connecting Cable (40 mm)		

Note: The above current consumption is a value with all 16 and 32 points turned ON excluding the current consumption of the external sensor connected to the Input Unit and the current consumption of the load connected to the Output Unit.

Connectors

Type			Model	Remarks
Molex connector	Press-fit terminal	Housing	52109-0390	Corresponding to 24 AWG
		Solderless terminal	Housing	51030-0330
	Solderless terminal	Chain terminal	50083-8014	Corresponding to 24 to 30 AWG
		Loose terminal	50083-8114	Corresponding to 24 to 30 AWG
			50084-8014	Corresponding to 22 to 24 AWG
			50084-8114	Corresponding to 24 to 30 AWG
	Press-fit tool	57037-5000		
Fujitsu connector (16 points)	Solder terminal		FCN361J024-AU	---
	Press-fit terminal		FCN367J024-AU/F	---
	Solderless terminal		FCN363J024-AU	---
Fujitsu connector (32 points)	Solder terminal		FCN361J040-AU	---
	Press-fit terminal		FCN367J040-AU/F	---
	Solderless terminal		FCN363J040-AU	---
OMRON D-sub Connector	Plug		XM2A-2501	---
	Hood		XM2S-2513	#4-40UNC inch screws

Cables with High-density Connectors (Fujitsu-compatible Connectors)

I/O type	Model
Digital input (16 points)	XW2Z-□□□A
	G79-□C
Digital output (16 points)	XW2Z-□□□A
	G79-□C
Digital input (32 points)	XW2Z-□□□B
	G79-□□C□
Digital output (32 points)	XW2Z-□□□B
	G79-□□C-□

Cables for I/O Connector

Cables for Connector Terminal Conversion Units (16 Points)

I/O classification	Model (Digital I/O Unit)	Applicable cable	Connected product	Remarks
For digital input (16 points)	GT1-ID16ML (-1)	XW2Z-□□□A	XW2D-20G6	Slim-type Connector Terminal Conversion Unit
			XW2E-20G5-IN16	Common terminal (3-tier input type)
For digital output (16 points)	GT1-OD16ML (-1)		XW2D-20G6	Slim-type Connector Terminal Conversion Unit

Cables for Connector Terminal Conversion Units (32 Points)

I/O classification	Model (Digital I/O Unit)	Applicable cable	Connected product	Remarks
For digital input (32 points)	GT1-ID32ML (-1)	XW2Z-□□□B	XW2D-40G6	Slim-type Connector Terminal Conversion Unit
For digital output (32 points)	GT1-OD32ML (-1)			

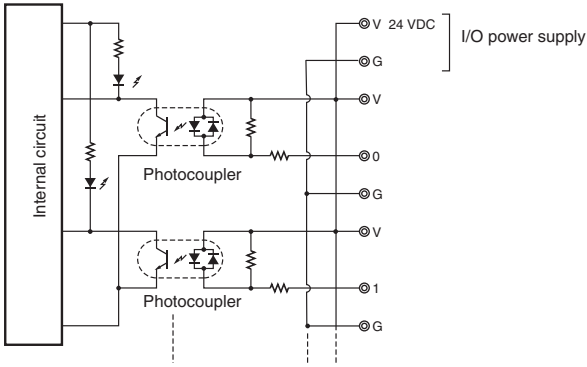
Cables for I/O Blocks (16 Points)

I/O classification	Model (Digital I/O Unit)	Applicable cable	Connected product	Remarks
For digital input (16 points) NPN	GT1-ID16ML	G79-□C	G7TC-ID16	For I/O Block input
			G7TC-IA16	
For digital input (16 points) PNP	GT1-ID16ML-1		G7TC-ID16-1	For I/O Block output
			G7TC-IA16-1	
For digital output (16 points) NPN	GT1-OD16ML		G7TC-OC16	For I/O Block output
			G7TC-OC08	
			G70D-SOC16	
			G70D-FOM16	
			G70D-VSOC16	
			G70D-VFOM16	
			G70A-ZOC16-3	
M7E Series	Digital Display Unit			
For digital output (16 points) PNP	GT1-OD16ML-1		G7TC-OC16-1	For I/O Block output
			G70D-SOC16-1	
			G70A-ZOC16-4	
			M7E-01MB□-□□	Digital Display Unit
			M7F-□P□□□	

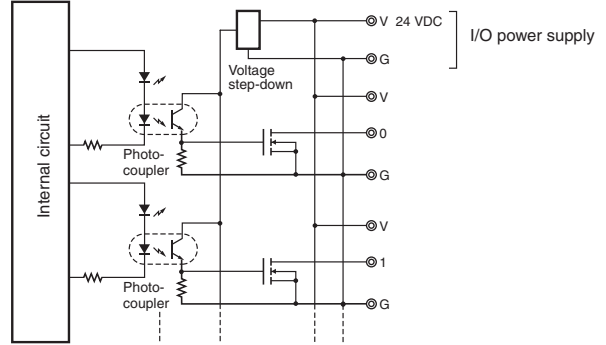
Cables for I/O Blocks (32 Points)

I/O classification	Model (Digital I/O Unit)	Applicable cable	Connected product	Remarks
For digital input (32 points) NPN	GT1-ID32ML	G79-□□C-□	G7TC-ID16	For I/O Block input
			G7TC-IA16	
For digital input (32 points) PNP	GT1-ID32ML-1		G7TC-ID16-1	For I/O Block input
			G7TC-IA16-1	
For digital output (32 points) NPN	GT1-OD32ML	G79-□□C-□	G7TC-OC16	For I/O Block output
			G7TC-OC08	
			G70D-SOC16	
			G70D-FOM16	
			G70D-VSOC16	
			G70D-VFOM16	
			G70A-ZOC16-3	
For digital output (32 points) PNP	GT1-OD32ML-1		G7TC-OC16-1	For I/O Block output
			G70D-SOC16-1	
			G70D-FOM16-1	
			G70A-ZOC16-4	

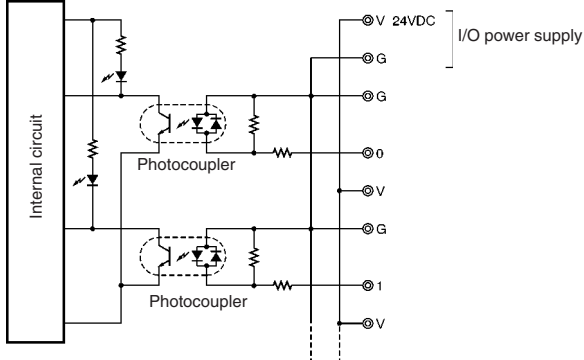
GT1-ID16



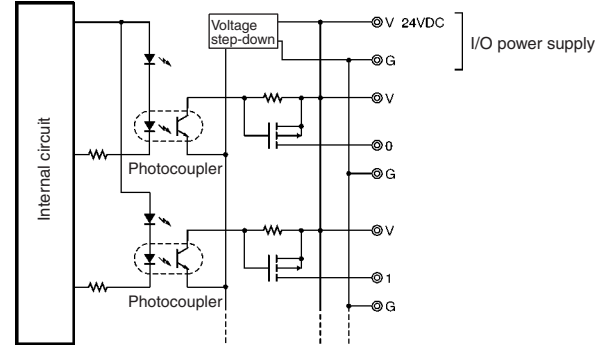
GT1-OD16



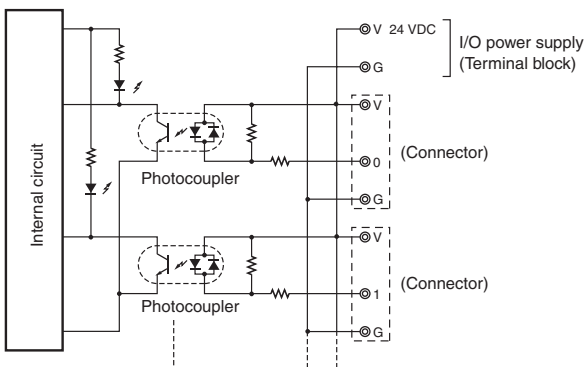
GT1-ID16-1



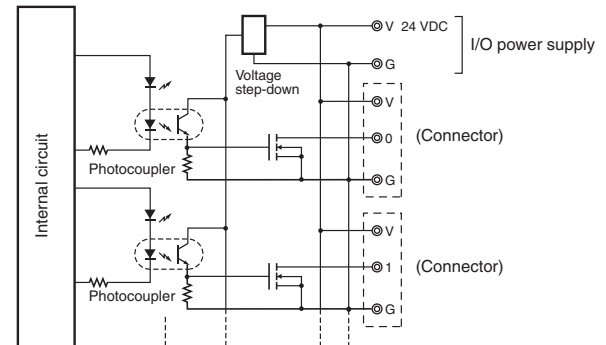
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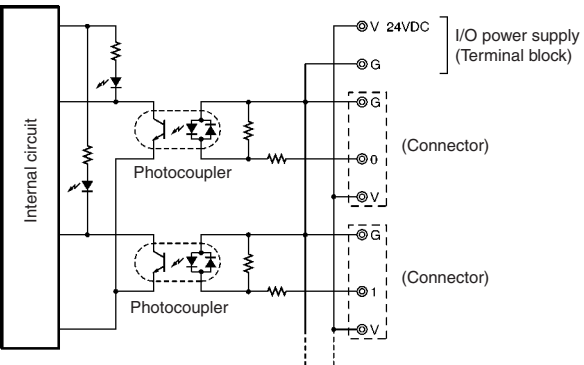
GT1-ID16MX



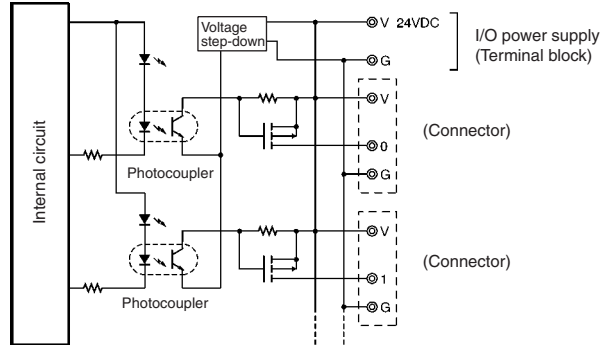
GT1-OD16MX



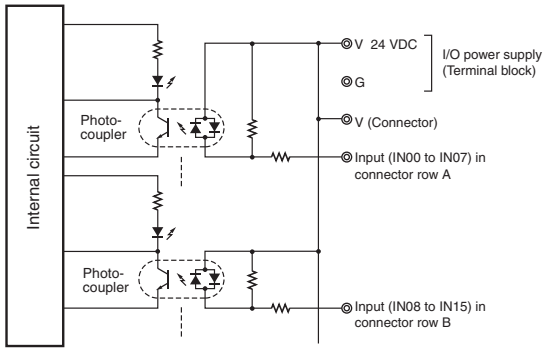
GT1-ID16MX-1



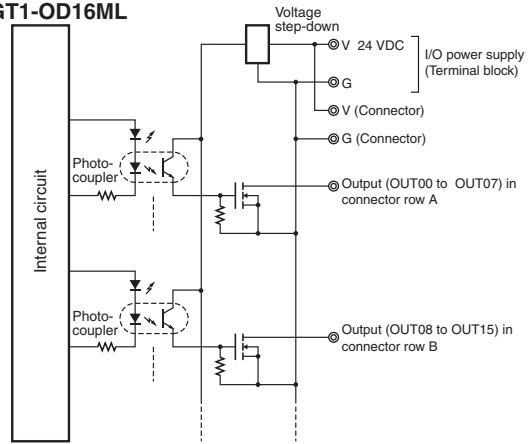
GT1-OD16MX-1



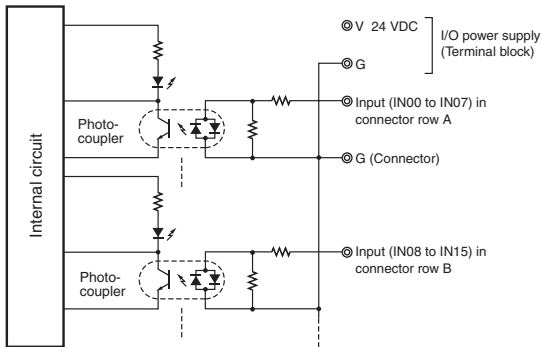
GT1-ID16ML



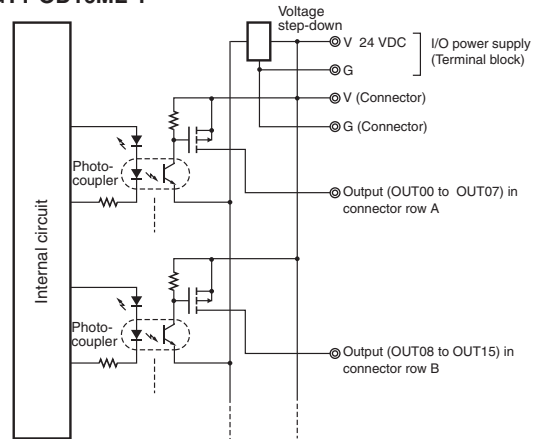
GT1-OD16ML



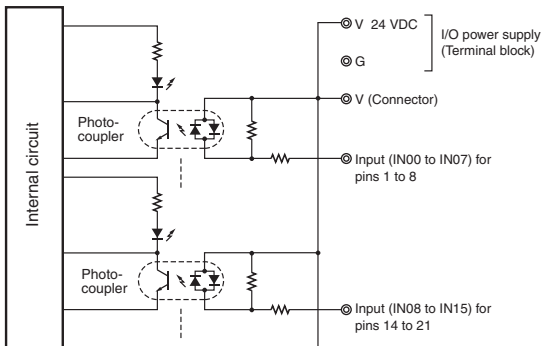
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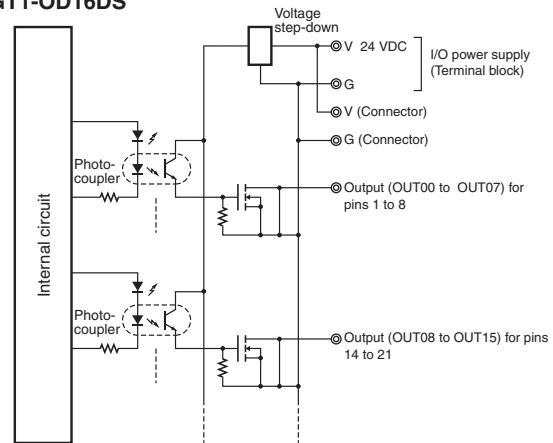
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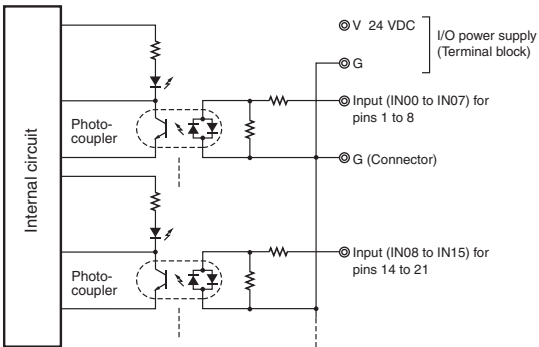
GT1-ID16DS



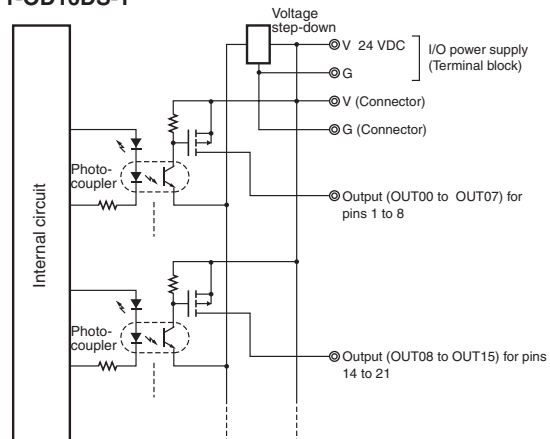
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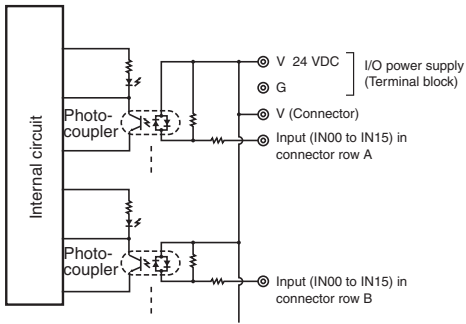
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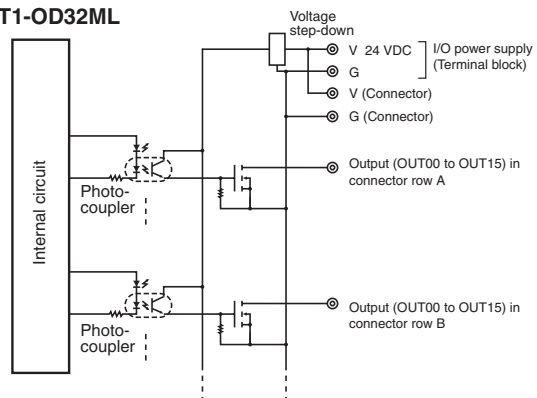
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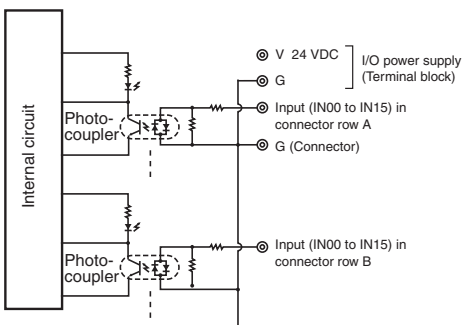
GT1-ID32ML



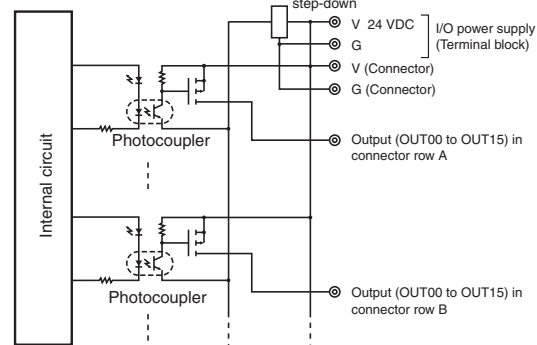
GT1-OD32ML



GT1-ID32ML-1



GT1-OD32ML-1

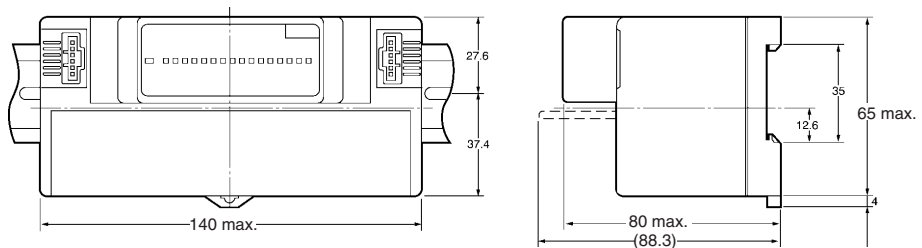


Dimensions

Note: All units are in millimeters unless otherwise indicated.

• Terminal Block Model

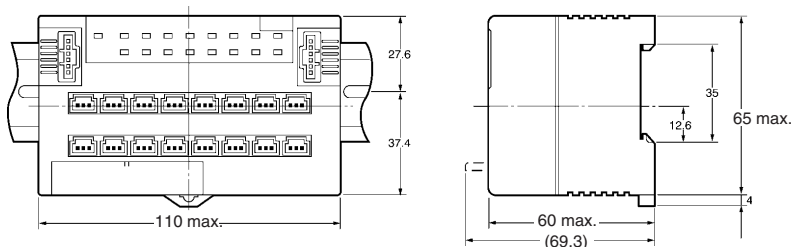
- GT1-ID16
- GT1-ID16-1
- GT1-OD16
- GT1-OD16-1



Note: Accessory cable included.

• Connector Model

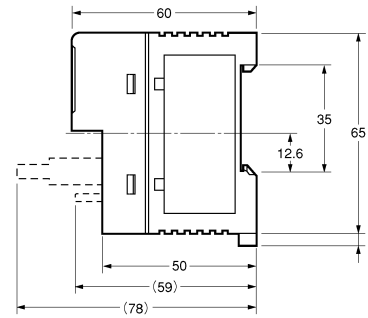
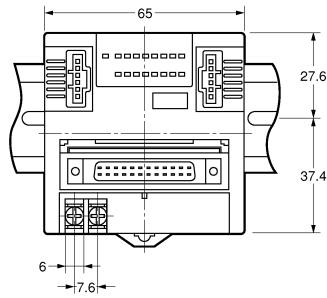
- GT1-ID16MX
- GT1-ID16MX-1
- GT1-OD16MX
- GT1-OD16MX-1



Note: Accessory cable included.

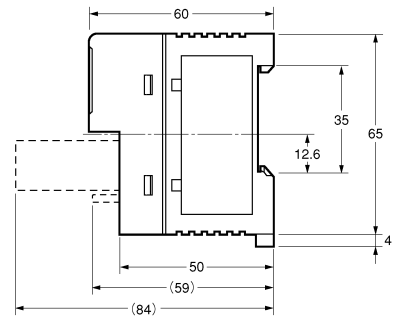
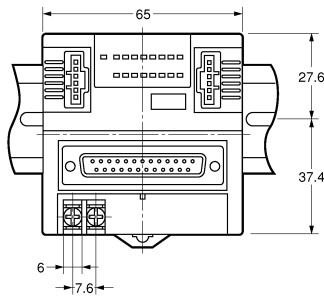
Remote I/O

- Connector Model
GT1-ID16ML
GT1-ID16ML-1
GT1-OD16ML
GT1-OD16ML-1



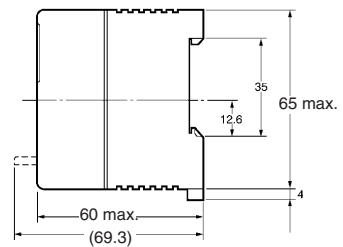
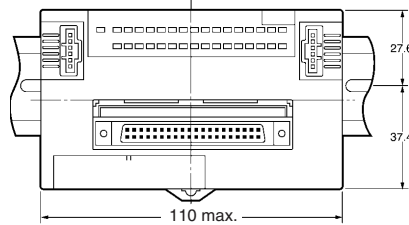
Note: Accessory cable included.

- Connector Model
GT1-ID16DS
GT1-ID16DS-1
GT1-OD16DS
GT1-OD16DS-1



Note: Accessory cable included.

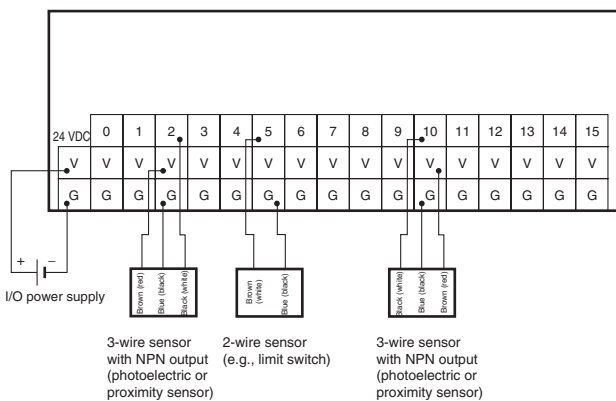
- High-density Connector Model
GT1-ID32ML
GT1-ID32ML-1
GT1-OD32ML
GT1-OD32ML-1



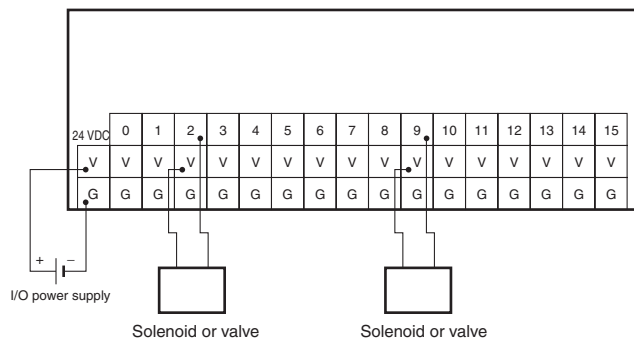
Note: Accessory cable included.

Wiring

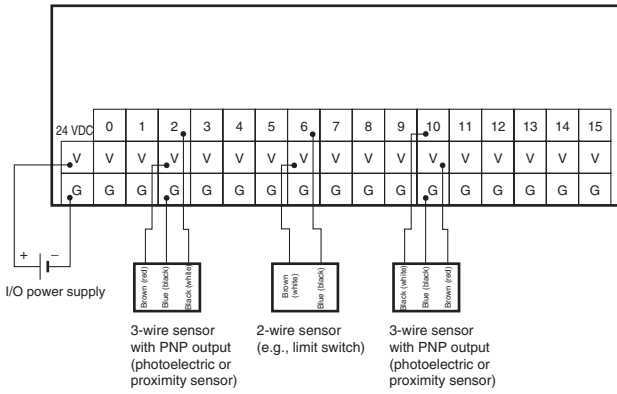
GT1-ID16



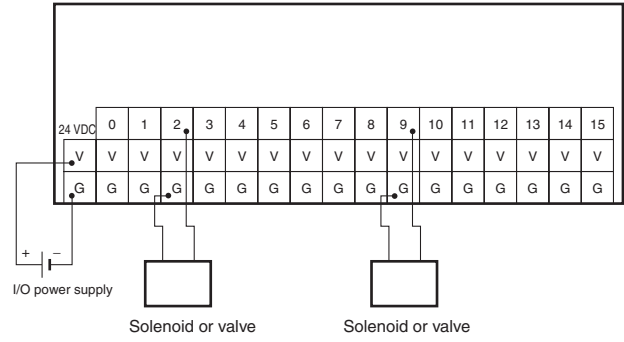
GT1-OD16



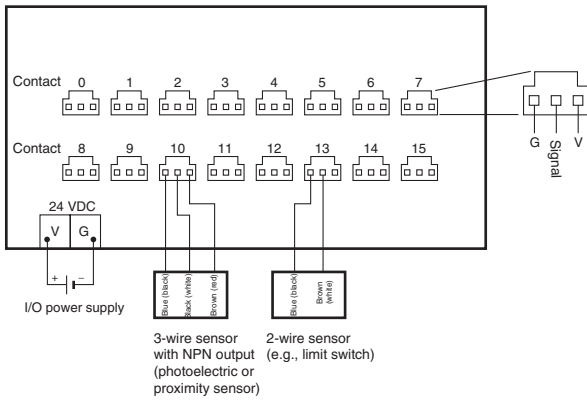
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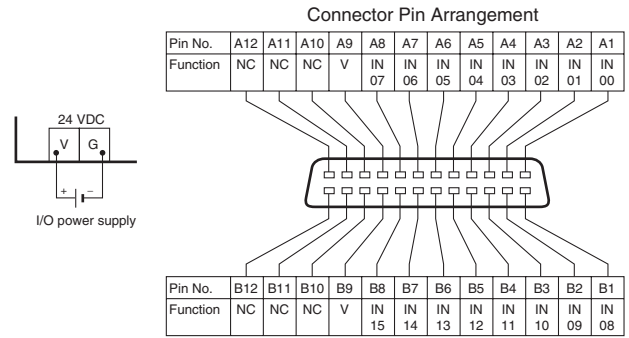
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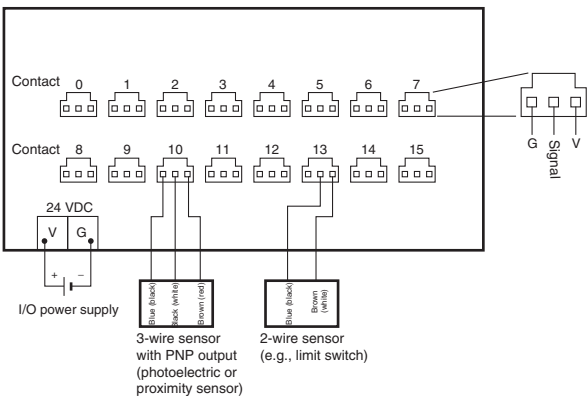
GT1-ID16MX



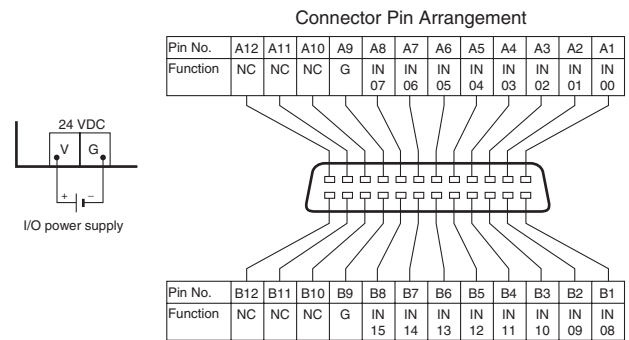
GT1-ID16ML



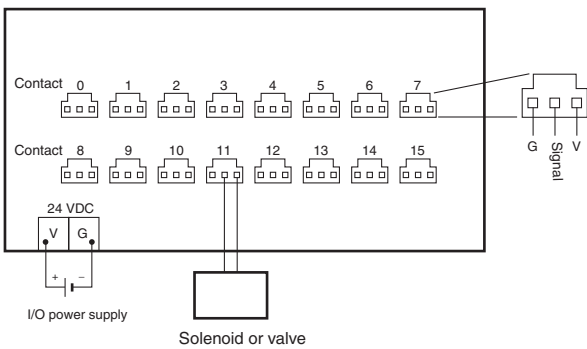
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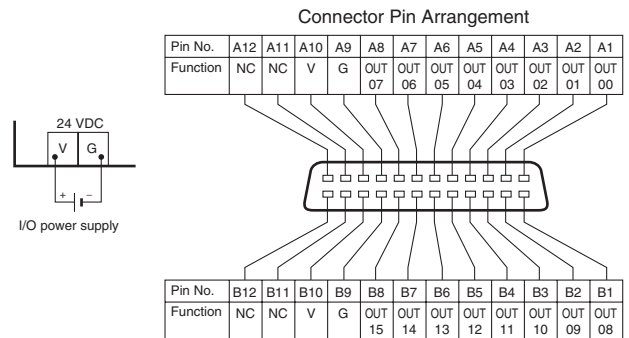
GT1-ID16ML-1



GT1-OD16MX

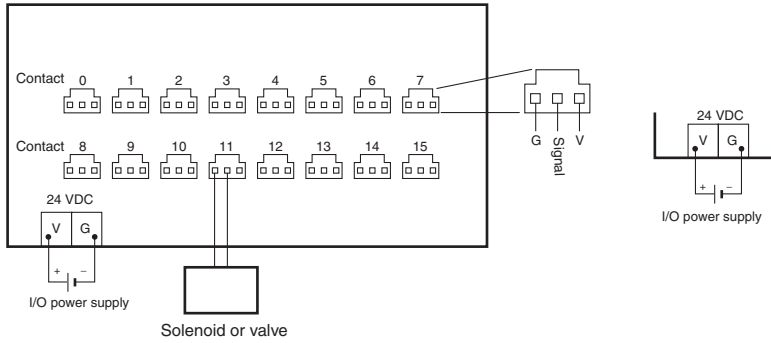


GT1-OD16ML

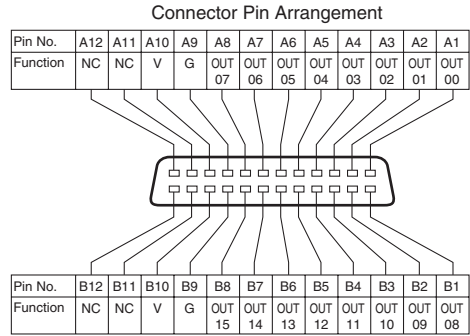


Remote I/O

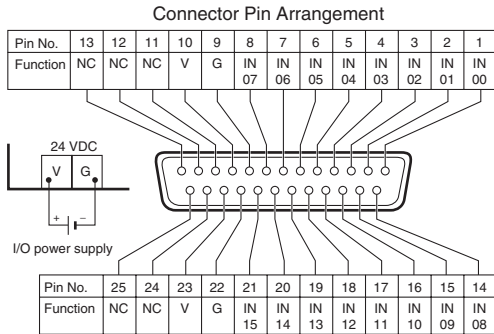
GT1-OD16MX-1



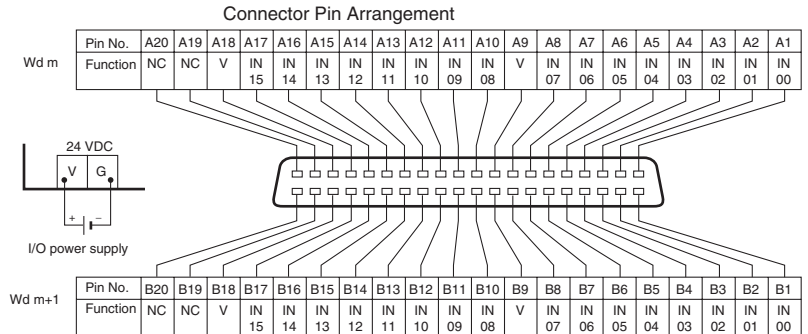
GT1-OD16ML-1



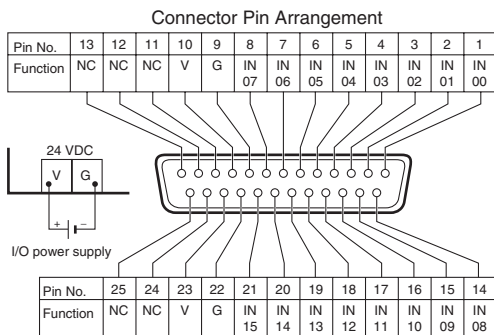
GT1-ID16DS



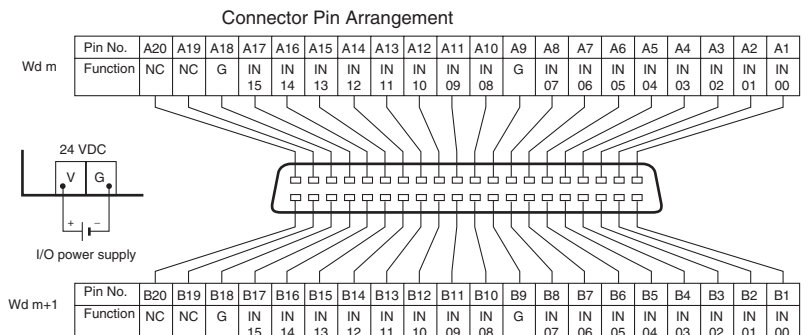
GT1-ID32ML



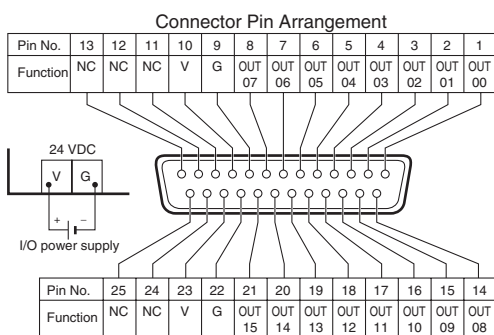
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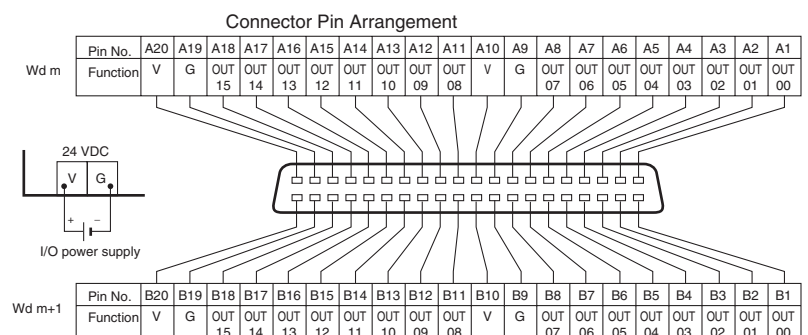
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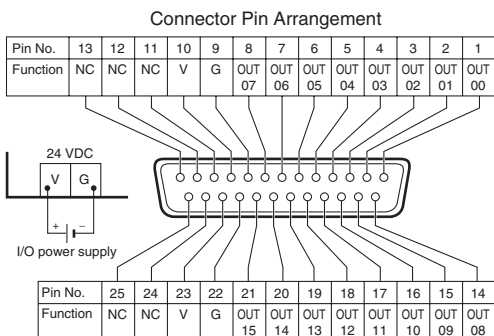
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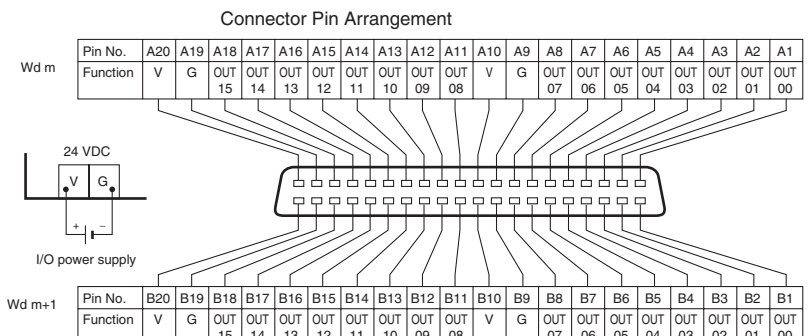
GT1-OD32ML



GT1-OD16DS-1



GT1-OD32ML-1

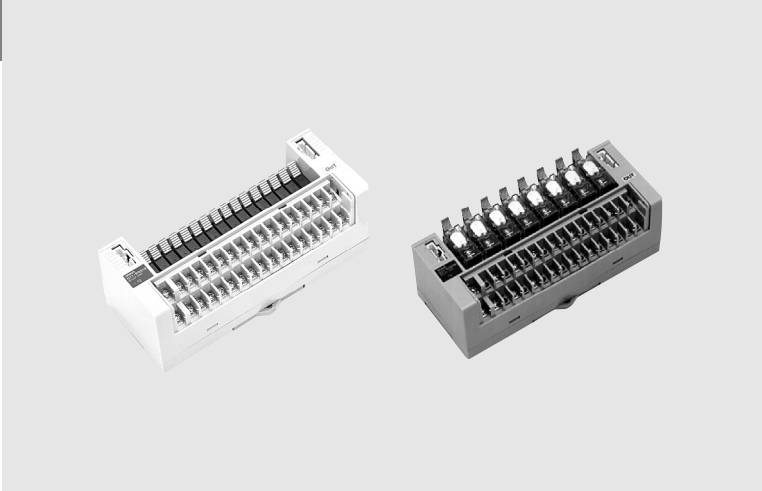


GT1-ROS16/-ROP08/-FOP08

Relay Output Units

Relay output units

- 8- and 16-point relay output models are available.
- Either 2, or 5 Amp maximum
- DIN rail mounting.



Remote I/O

Ordering Information

I/O classification	Relay model	I/O points	Terminal	Power supply voltage	I/O specification	Model
Relay output	G6D-1A (24 V DC)	16	M3 terminal block	24 V DC	2 A, SPST-NO	GT1-ROS16
	G2R-1-SN (24 V DC)	8			5 A, SPST-NO	GT1-ROP08
SSR	G3RD-X02SN-US-E	8			---	GT1-FOP08

Specifications

Characteristics

I/O power supply voltage	20.4 to 26.4 V DC (24 V DC +10%/−15%)			
Current consumption (See note.)	I/O Unit interface		I/O power supply	
	GT1-ROP08	40 mA max.	GT1-ROP08	350 mA max.
	GT1-FOP08		GT1-FOP08	
	GT1-ROS16	50 mA max.	GT1-ROS16	250 mA max.
Connectable Units	8			
Dielectric strength	500 V AC (between isolated circuits)			
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power line)			
Vibration resistance	10 to 55 Hz, 1.0-mm double amplitude or 70 m/s ²			
Shock resistance	200 m/s ²			
Mounting method	35-mm DIN rail mounting			
Mounting strength	No damage when 100 N pull load was applied in all directions			
Terminal strength	No damage when 100 N pull load was applied			
Screw tightening torque	0.3 to 0.5 N • m			
Ambient temperature	Operating:−10° C to 55° C (with no icing or condensation) Storage:−25° C to 65° C (with no icing or condensation)			
Ambient humidity	Operating:25% to 85%			
Accessories	I/O Unit Connecting Cable (40 mm)			

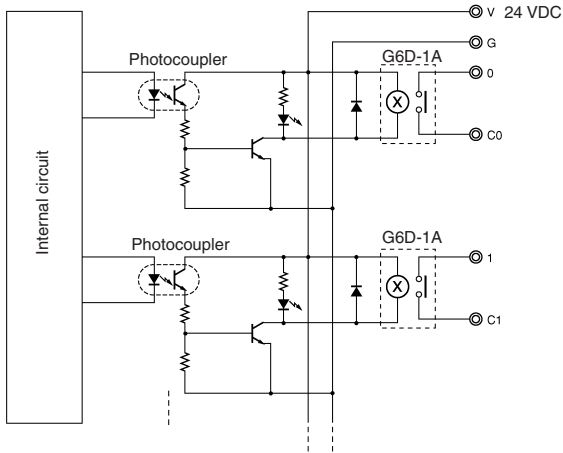
Note: The above current consumption is a value with all the points turned ON including the current consumption of the relay coils.

Relay Output Specifications

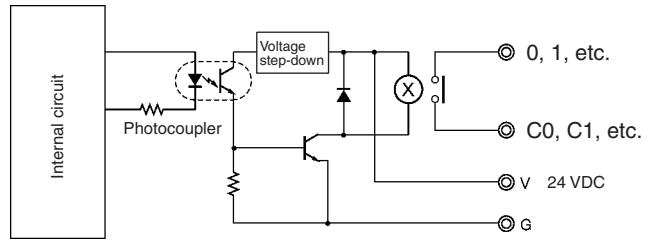
Item	G6D-1A	G2R-1-SN	G3RD-X02SN-US-E
Maximum contact current	2 A	5 A	0.01 to 1.5 A
Minimum applicable load (reference values)	5 V DC, 10 mA	5 V DC, 100 mA	4 to 48 V DC
Electrical life expectancy	100,000 operations min. with switching frequency of 1,800 operations per hour (at ambient temperature of 23° C with rated load)		---
Mechanical life expectancy	20,000,000 operations min. with switching frequency of 18,000 operations per hour (at ambient temperature of 23° C with rated load)		---

Internal Circuit Configuration

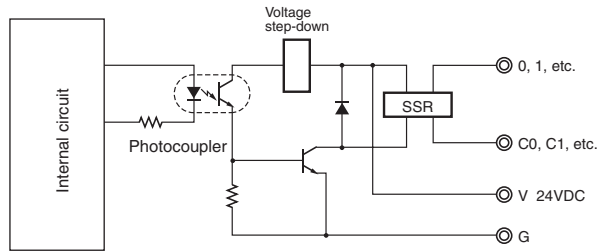
GT1-ROS16



GT1-ROP08



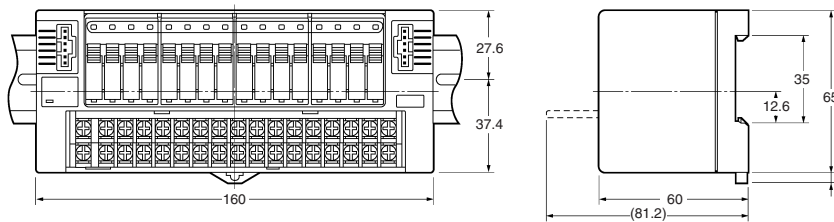
GT1-FOP08



Dimensions

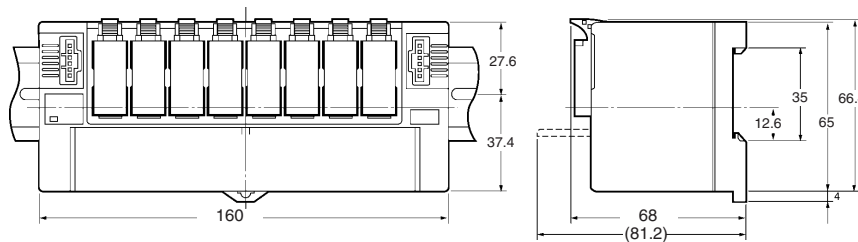
Note: All units are in millimeters unless otherwise indicated.

- GT1-ROS16



Note: Accessory cable included.

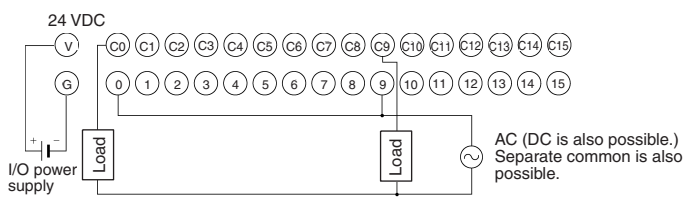
- GT1-ROP08
- GT1-FOP08



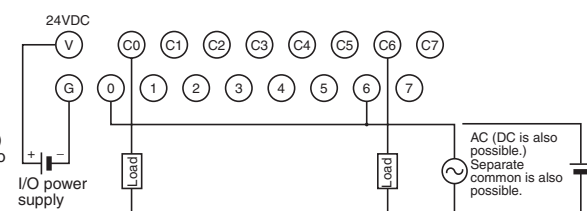
Note: Accessory cable included.

Wiring

GT1-ROS16



GT1-ROP08/GT1-FOP08



*The GT1-FOP08 can use only a DC power supply.

GT1-AD/DA

Analog I/O Units

Analog input units

- Available either with screw terminals or easy to use connectors (GT1-AD08MX)
- 8 or 4 inputs
- High resolution: 1/6,000
- High conversion speed: 8 ms/8 points or 4 ms/4 points.
- DIN rail mounting.

Analog output units

- Available either with screw terminals or easy to use connectors (GT1-DA04MX)
- 4 inputs
 - High resolution: 1/6,000.
 - High conversion speed: of 4 ms/4 points.
 - DIN rail mounting



Remote I/O

Ordering Information

I/O classification	I/O points	Terminal	Power supply voltage	I/O specification	Model
Analog input	8	Molex connector	24 V DC	4 to 20 mA, 0 to 20 mA, 0 to 5 V, 1 to 5 V, 0 to 10 V, -10 to 10 V	GT1-AD08MX
	4	Terminal block			GT1-AD04
Analog output	4	Molex connector	24 V DC	0 to 5 V, 1 to 5 V, 0 to 10 V, -10 to 10 V 0 to 5 V, 1 to 5 V, 0 to 10 V, -10 to 10 V, 4 to 20 mA	GT1-DA04MX
		Terminal block			GT1-DA04

Specifications

Input

Item	Voltage input	Current input
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
	-10° C to 55° C	±0.6% 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.	

Output

Item	Voltage output	Current output
Output type	0 to 5 V, 1 to 5 V, 0 to 10 V, -10 to 10 V	4 to 20 mA
Output permissible load resistance	5 kΩ 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 V DC (24 V DC +10%/–15%) (See note.)	
Current consumption	I/O Unit interface	Internal circuitry power supply
	50 mA max.	GT1-AD08MX:100 mA max. GT1-AD04:100 mA max. GT1-DA04MX:100 mA max. GT1-DA04:150 mA max.
Noise immunity	Conforms to IEC61000-4-4 2 kV (power line)	
Vibration resistance	10 to 150 Hz, 1.0-mm double amplitude or 70 m/s ²	
Shock resistance	200 m/s ²	
Dielectric strength	500 V AC	
Mounting method	35-mm DIN rail mounting	
Mounting strength	No damage when 100 N pull load was applied in all directions (10 N min. in the DIN rail direction)	
Terminal strength	No damage when 100 N pull load was applied	
Ambient temperature	Operating:–10° C to 55° C (with no icing or condensation)	
	Storage:–25° C to 65° C (with no icing or condensation)	
Ambient humidity	Operating:25% to 85% (with no condensation)	
Accessories	I/O Unit Connecting Cable (40 mm)	

Note: Power for analog I/O is provided from the internal power supply.

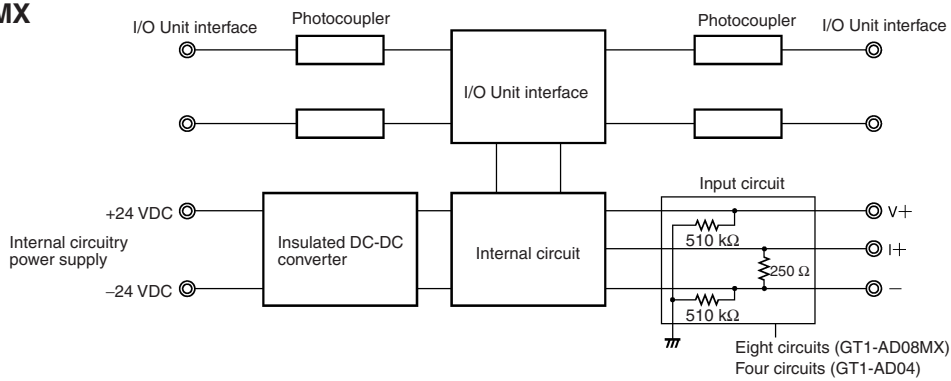
Connector (GT1-AD08MX, GT1-DA04MX)

Type			Model	Remarks
Molex connector	Press-fit terminal	Housing	52109-390	Corresponding to 24 AWG
		Solderless terminal	Housing	51030-0330
	Chain terminal		50083-8014	Corresponding to 24 to 30 AWG
			50084-8014	Corresponding to 22 to 24 AWG
	Loose terminal		50083-8114	Corresponding to 24 to 30 AWG (See note.)
			50084-8114	Corresponding to 22 to 24 AWG
		Press-fit tool	57037-5000	(See note.)

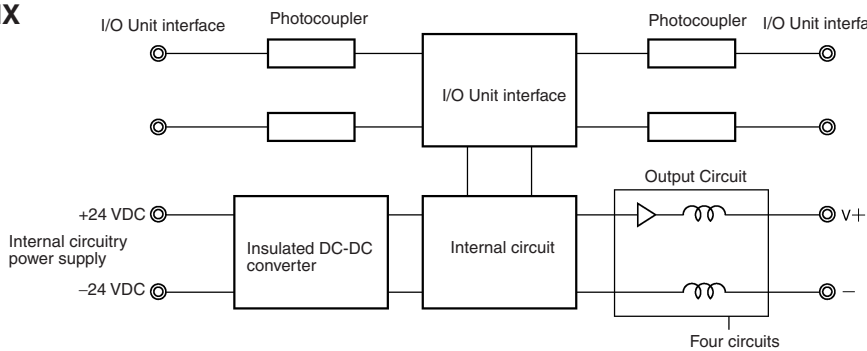
Note: Contact your OMRON representatives for the above connectors.

Internal Circuit Configuration

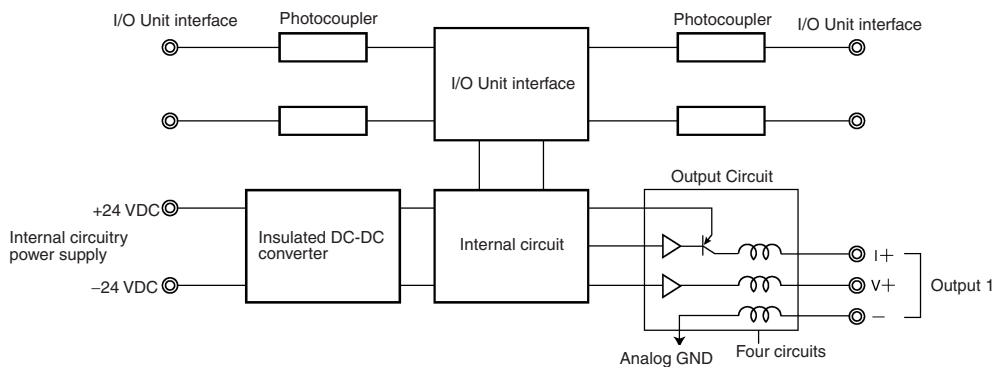
GT1-AD08MX
GT1-AD04



GT1-DA04MX



GT1-DA04

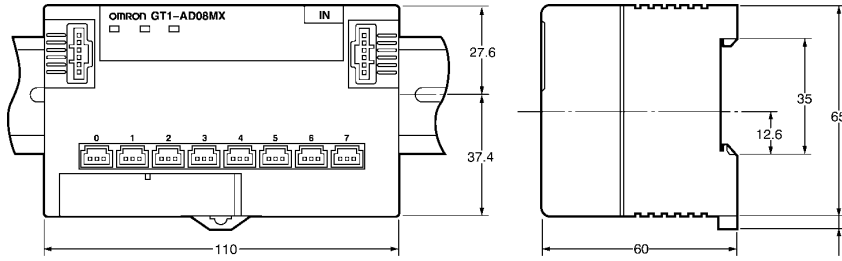


Remote I/O

Dimensions

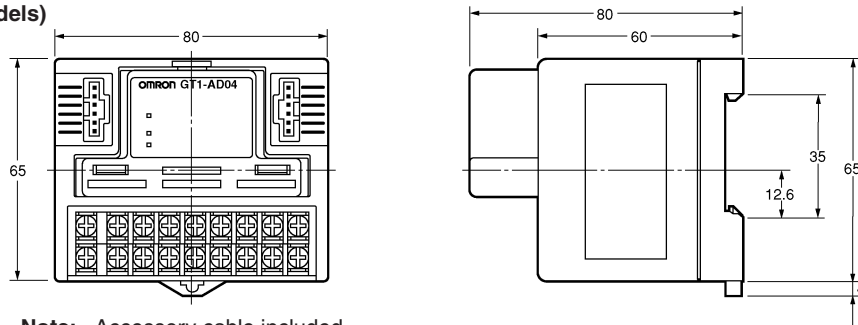
Note: All units are in millimeters unless otherwise indicated.

GT1-AD08MX
GT1-DA04MX
(Molex Connector Models)



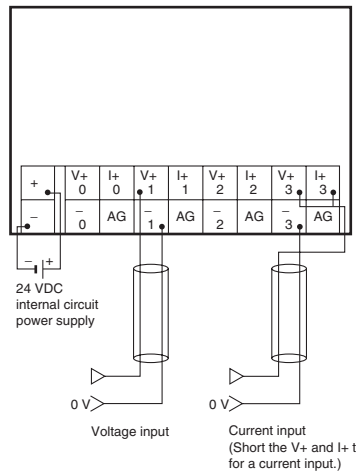
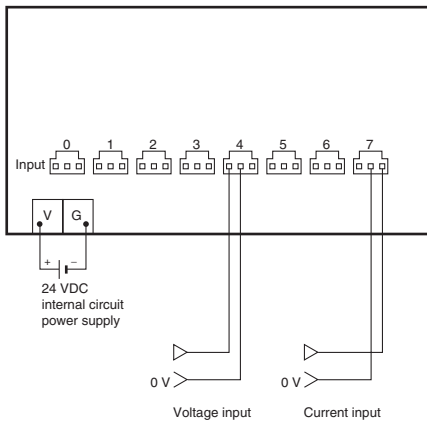
Note: Accessory cable included.

GT1-AD04
GT1-DA04
(Terminal Block Models)

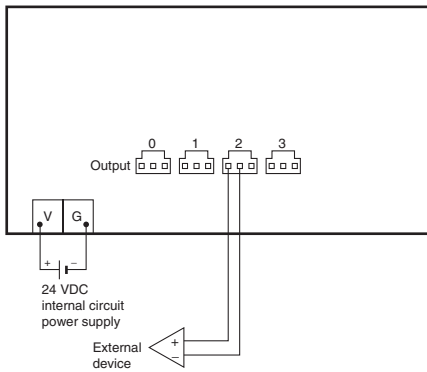


Note: Accessory cable included.

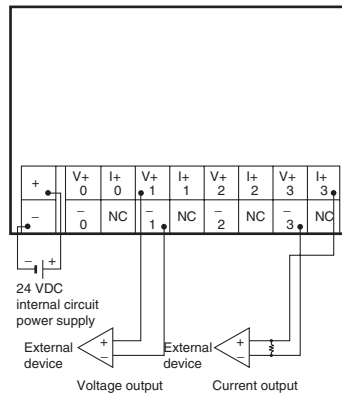
Wiring



GT1-DA04MX



GT1-DA04



GT1-TS04□

Temperature Input Units

Temperature input units

- Four inputs.
- Two different models are available. One for thermocouples and one for platinum resistance thermometer.
- Conversion time is only 250 ms for 4 inputs.
- The DeviceNet configurator can be used to calibrate temperature inputs..
- The electronic circuit section can be removed, so there is no need to disconnect wires during maintenance.
- DIN rail mounting.



Ordering Information

I/O type	I/O points	Connection	Rated voltage	Input specification	Model
Temperature inputs	Four inputs	Terminal Block	24 V DC	Thermocouple	GT1-TS04T
				Platinum resistance thermometer	GT1-TS04P

Specifications

General Specifications

Supply voltage	20.4 to 26.4 V DC (24 V DC -15% to 10%)
Current consumption	I/O Unit Interface: 50 mA max. Internal power supply: 80 mA max.
Vibration resistance	10 to 150 Hz, 0.7-mm amplitude or 50 m/s ²
Shock resistance	150 m/s ²
Dielectric strength	500 V AC
Mounting method	35-mm DIN rail mounting
Ambient temperature	Operating: -10 to 55 °C Storage: -25 to 65 °C
Ambient humidity	Operating: 25 to 85% (with no condensation)
Accessories	I/O Unit Connecting Cable (40 mm)

Input Specifications

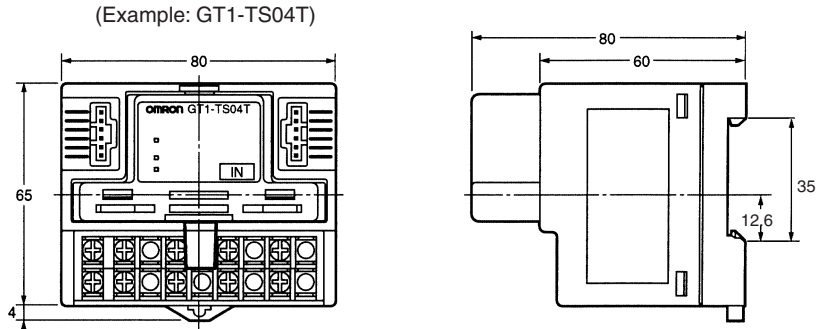
Item	GT1-TS04T	GT1-TS04P
Input type	Switchable: R, S, K, J, T, L, or B	Switchable: Pt100 or JPt100
Indicated accuracy	(The larger of $\pm 0.3\%$ of the indicated value or $\pm 1^\circ\text{C}$. See note.) ± 1 digit max.	When the range is -200.0 to 650.0: (The larger of $\pm 0.3\%$ of the indicated value or $\pm 0.8^\circ\text{C}$) ± 1 digit max. When the range is -200.0 to 200.0: (The larger of $\pm 0.3\%$ of the indicated value or $\pm 0.5^\circ\text{C}$) ± 1 digit max.
Conversion interval	250 ms/4 inputs	
Isolation method	Photocoupler isolation between inputs and communications lines Photocoupler isolation between each temperature input signal	

Note: K or T below -100°C : $+2^\circ\text{C} \pm 1$ digit max.
L: $\pm 2^\circ\text{C} \pm 1$ digit max.
R or S below 200°C : $\pm 3^\circ\text{C} \pm 1$ digit max.
B below 400°C : No standard set

Dimensions

Note: All units are in millimeters unless otherwise indicated.

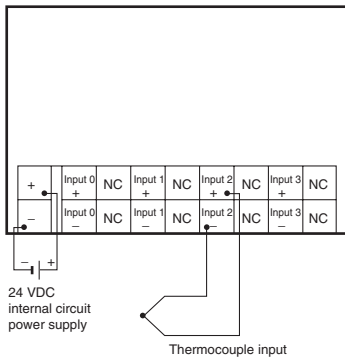
GT1-TS04T
GT1-TS04P



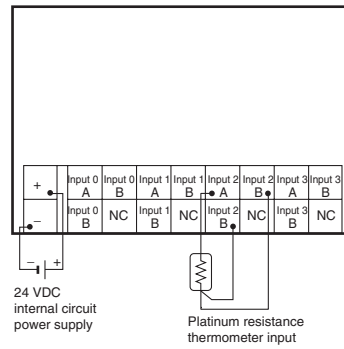
Note: Accessory cable included.

Wiring

GT1-TS04T



GT1-TS04P

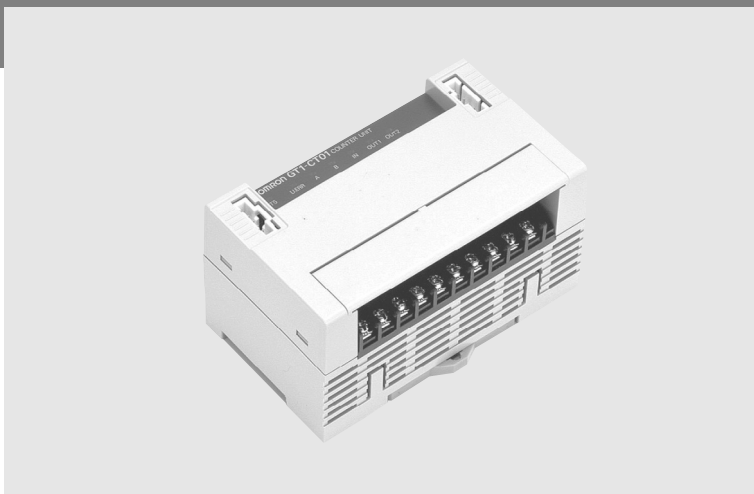


GT1-CT01

Counter Unit

Counter unit supporting encoder input

- High-speed pulse with counting speeds up to 50 kHz.
- Counting can be set to a multiplication factor of 1 or 4.
- Wide range of measurement: –8,388,608 to 8,388,607.
- One external input and two external outputs are available.
- DIN rail mounting.



Ordering Information

I/O classification	External I/O points	Terminal	Operating mode	Model
Counter Unit	Inputs: 1 Outputs: 2	Terminal block	Linear counter	GT1-CT01

Specifications

Output

Output current	0.5 A per point max.
Residual voltage	1.2 V max. (0.5 A DC, between each output terminal and ground)
Leakage current	0.1 mA max. (24 V DC, between each output terminal and G)
ON delay time	0.5 ms max.
OFF delay time	1.5 ms max.
Number of circuits	2

Ratings

Current consumption	90 mA max.
Connection distance	Total length: 3 m Maximum length between Units: 1 m
I/O power supply voltage	20.4 to 26.5 V DC (24 V DC –15%/+10%)
Ambient temperature	–10° C to 55° C
Ambient humidity	Operating: 25% to 85% (with no condensation)
Weight	Approx. 250 g
Dimensions	110 × 60 × 65 (W × H × D)
Accessories	I/O Unit connecting cable (40 mm)

Characteristics

Number of counters		1
Operating mode		Linear counter
Count input	Input signal	Encoder input (A, B, Z)
	Signal level	24 V DC
	Input type	Differential phase pulse input Pulse and direction input
	Maximum counting speed	50 kHz (kcps)
	Counting range	-8,388,608 to +8,388,607
Other		Differential phase pulse input can be set to a multiplication factor of 1 or 4.
External input	Input signal	External input (IN)
	Signal level	24 V DC
External output	Output	2 external outputs (OUT1 and OUT2)
	Maximum switching capacity	24 V DC 0.5 A
Allocated words	IN	3 words
	OUT	3 words

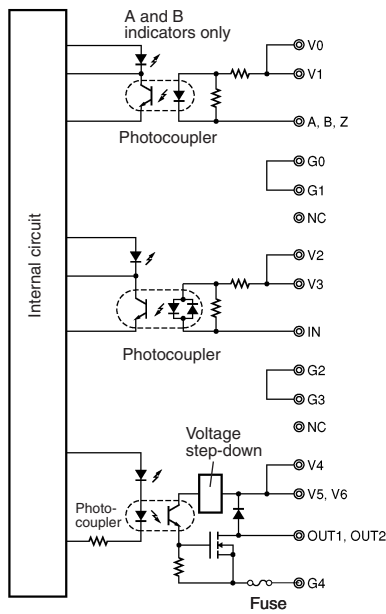
Encoders

Output type	Open-collector output
Power supply voltage	24 V DC
Models	E6B2-CWZ6C E6H-CWZ6C

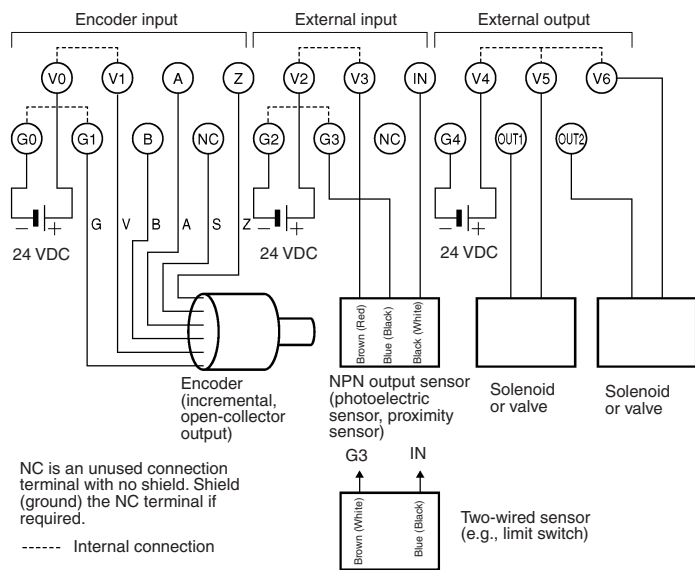
Operation

Internal Circuit Configuration

Wiring



Be sure to connect Molex connectors for analog output wires and connect the wires as shown below.



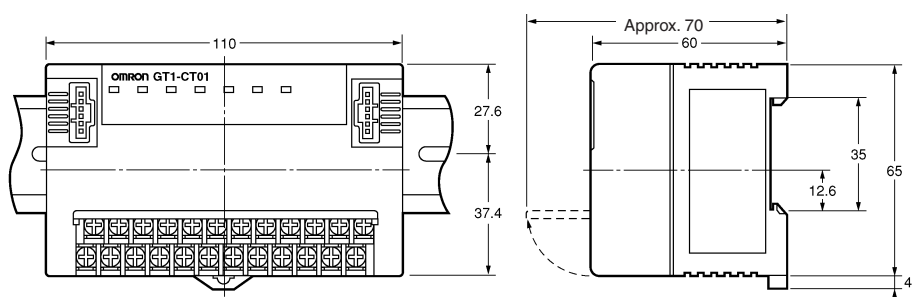
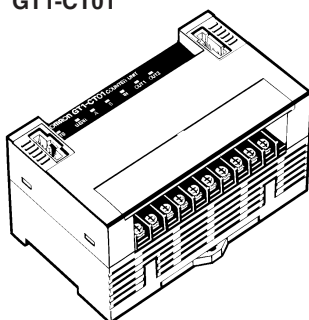
NC is an unused connection terminal with no shield. Shield (ground) the NC terminal if required.

----- Internal connection

Dimensions

Note: All units are in millimeters unless otherwise indicated.

GT1-CT01



Note: Accessory cable included.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.