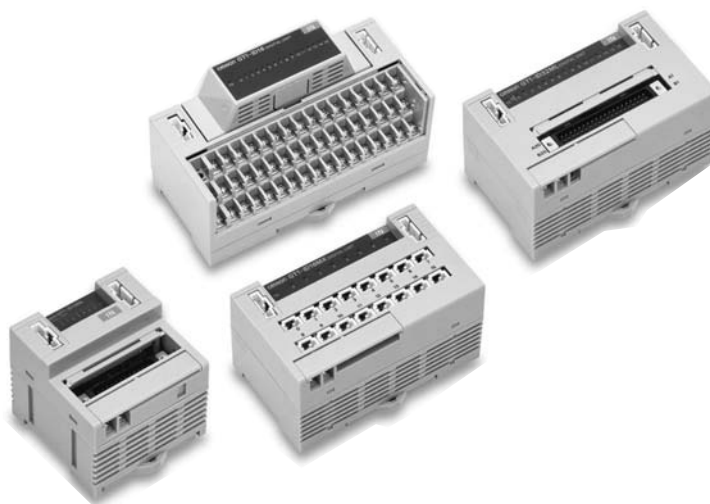


Digital I/O Units

GT1-□D16(-1)/□D16MX(-1)/□D16ML(-1)/□D32ML(-1)/□D16DS(-1)

Digital I/O Units Compatible with MULTIPLE I/O TERMINAL

- Terminal block, connector, and high-density connector models are available.
- The circuit block of the terminal block model can be mounted or dismantled for ease of maintenance without disconnecting the wires.
- DIN track mounting.



Ordering Information

Unit	I/O classification	Internal I/O common	I/O points	I/O connections	Power supply voltage	I/O specification	Model
Terminal block model	Digital input	NPN (+ common)	16	M3 terminal board	24 VDC	DC/transistor	GT1-ID16
		PNP (- common)				GT1-ID16-1	
	Digital output	NPN (- common)				0.5 A, DC/transistor	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/OTAX 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		

General Specifications

I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15%/+10%)		
Current consumption *	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 VAC		
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	DIN 35 mm-track mounting		
Mounting strength	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 applied		
Screw tightening torque	0.3 to 0.5 N·m		
Ambient operating temperature	-10°C to 55°C (with no icing or condensation)		
Ambient operating humidity	25% to 85% (with no icing or condensation)		
Ambient storage temperature	-25°C to 65°C		
Accessories	I/O Unit Connecting Cable (40 mm)		

* 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.

Applicable Connectors

Note: Refer to page 144 for Peripheral Devices.

Input Specifications

Item	Model	GT1-ID□□
ON delay		1.5 ms max.
OFF delay		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 Specifications

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

* 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

Cables for I/O Connector

Cables for Connector Terminal Conversion Units (16 Points)

I/O classification	Model	Applicable cable	Connectable model	Connector Products (Connector-Terminal Block Conversion Units) Connecting method
Digital input (16 points)	GT1-ID16ML(-1)	XW2Z-□□□A	XW2K-20G-T	Push-In Plus
			XW2D-20G6	Phillips screw M3
			XW2R-E20GD-T	Slotted screw M3
Digital output (16 points)	GT1-OD16ML(-1)		XW2K-20G-T	Push-In Plus
			XW2D-20G6	Phillips screw M3
			XW2R-E20GD-T	Slotted screw M3

Cables for Connector Terminal Conversion Units (32 Points)

I/O classification	Model	Applicable cable	Connectable model	Connector Products (Connector-Terminal Block Conversion Units) Connecting method
Digital input (32 points)	GT1-ID32ML(-1)	XW2Z-□□□B	XW2K-40G-T	Push-In Plus
			XW2D-40G6	Phillips screw M3
			XW2R-E40GD-T	Slotted screw M3
Digital output (32 points)	GT1-OD32ML(-1)		XW2K-40G-T	Push-In Plus
			XW2D-40G6	Phillips screw M3
			XW2R-E40GD-T	Slotted screw M3

Cables for I/O Blocks (16 Points)

I/O classification	Model	Applicable cable	Connectable model	Remarks
Digital input (16 points) NPN	GT1-ID16ML	XW2Z-R□C	G7TC-ID16 G7TC-IA16	For I/O Block input
Digital input (16 points) PNP	GT1-ID16ML-1		G7TC-ID16-1 G7TC-IA16-1	For I/O Block output
Digital output (16 points) NPN	GT1-OD16ML		G7TC-OC16 G7TC-OC08 G70D-SOC16 G70D-FOM16 G70D-VSOC16 G70D-VFOM16 G70A-ZOC16-3	For I/O Block output
			M7E Series *1	Digital Display Unit
Digital output (16 points) PNP	GT1-OD16ML-1		G7TC-OC16-1 G70D-SOC16-1 G70A-ZOC16-4	For I/O Block output
			M7E-01MB□-□□ *1	Digital Display Unit

Cables for I/O Blocks (32 Points)

I/O classification	Model	Applicable cable	Connectable model	Remarks
Digital input (32 points) NPN	GT1-ID32ML	XW2Z-RI□C-□	G7TC-ID16 G7TC-IA16	For I/O Block input
Digital input (32 points) PNP	GT1-ID32ML-1		G7TC-ID16-1 G7TC-IA16-1	For I/O Block input
Digital output (32 points) NPN	GT1-OD32ML	XW2Z-RO□C-□	G7TC-OC16 G7TC-OC08 G70D-SOC16 G70D-FOM16 G70D-VSOC16 G70D-VFOM16 G70A-ZOC16-3	For I/O Block output
			G7TC-OC16-1 G70D-SOC16-1 G70D-FOM16-1 *1 G70A-ZOC16-4	For I/O Block output

Note 1: For details of applicable cables and connectors, refer to Peripheral Devices.

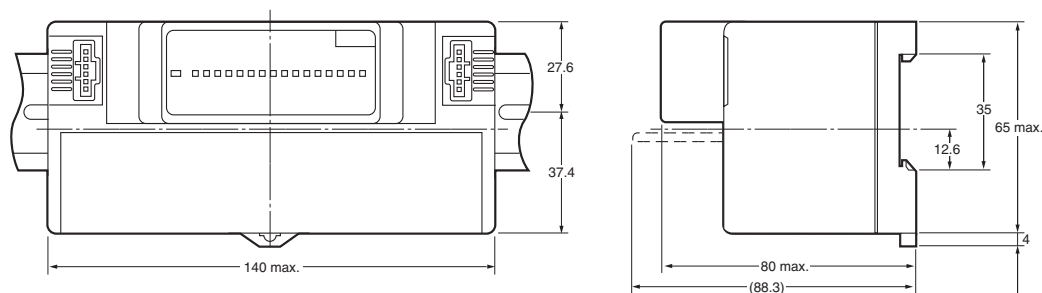
*1. Product no longer available to order.

Dimensions

(Unit: mm)

●Terminal Block Model

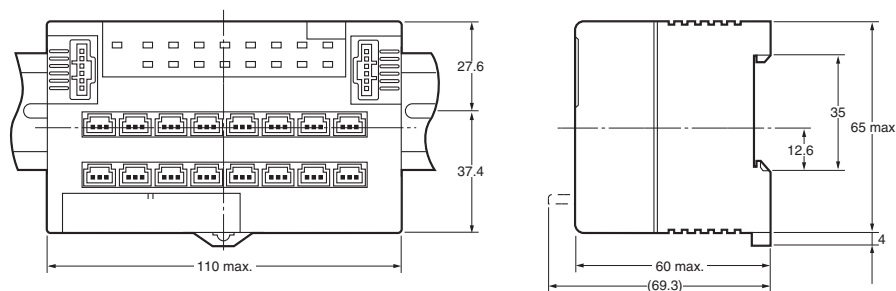
GT1-ID16
GT1-ID16-1
GT1-OD16
GT1-OD16-1



Note: Accessory cable included.

●Connector Model

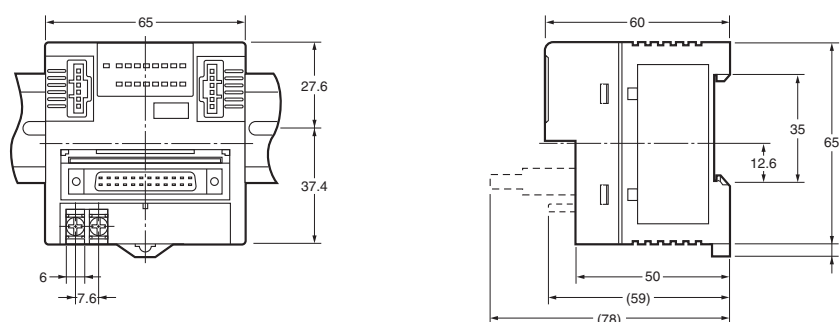
GT1-ID16MX
GT1-ID16MX-1
GT1-OD16MX
GT1-OD16MX-1



Note: Accessory cable included.

●Connector Model

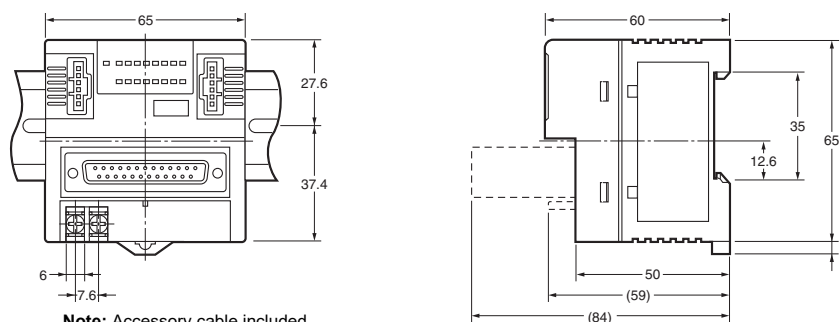
GT1-ID16ML
GT1-ID16ML-1
GT1-OD16ML
GT1-OD16ML-1



Note: Accessory cable included.

●Connector Model

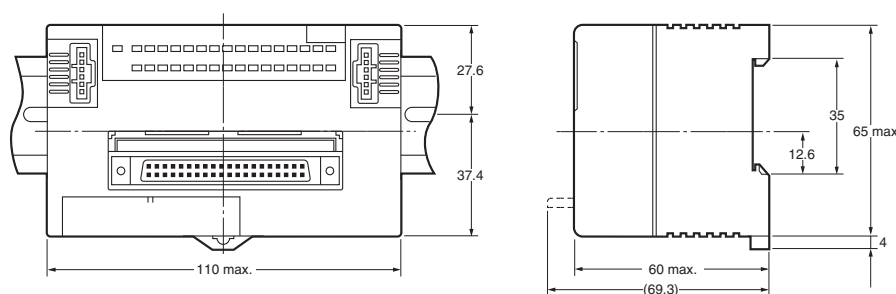
GT1-ID16DS
GT1-ID16DS-1
GT1-OD16DS
GT1-OD16DS-1



Note: Accessory cable included.

●High-density Connector Model

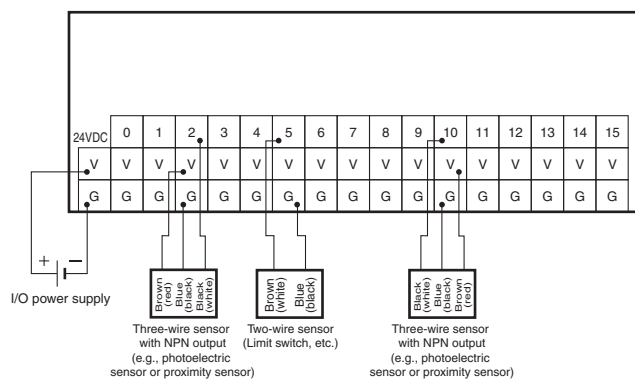
GT1-ID32ML
GT1-ID32ML-1
GT1-OD32ML
GT1-OD32ML-1



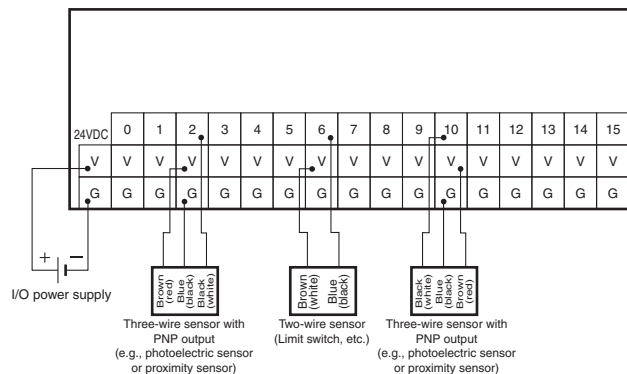
Note: Accessory cable included.

Wiring Diagrams

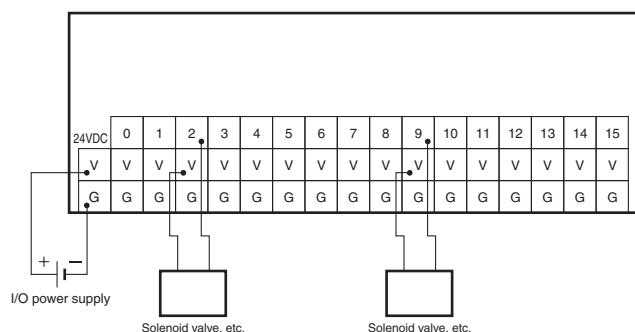
GT1-ID16



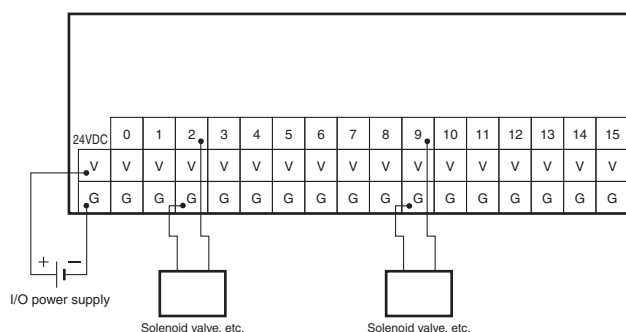
GT1-ID16-1



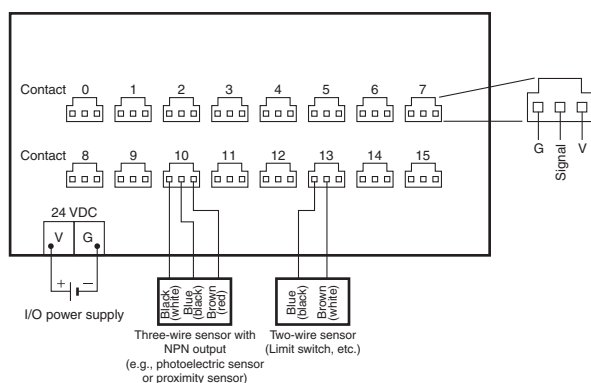
GT1-OD16



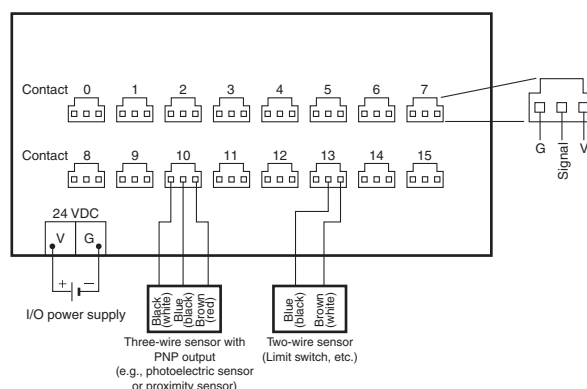
GT1-OD16-1



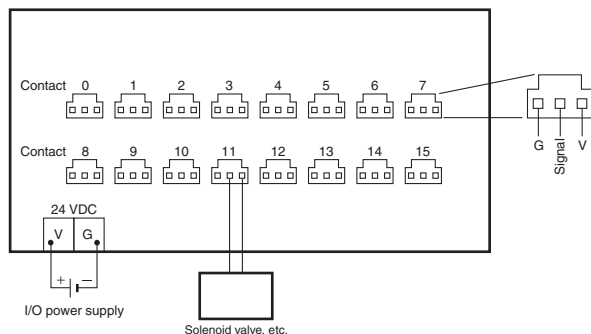
GT1-ID16MX



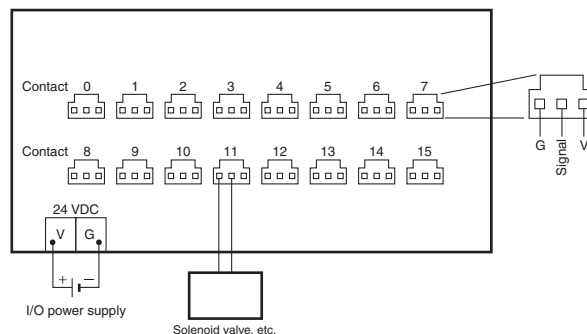
GT1-ID16MX-1



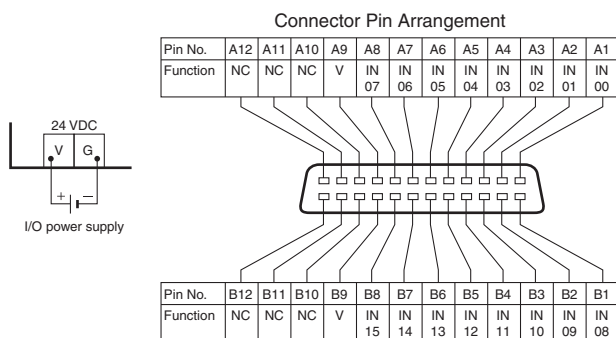
GT1-OD16MX



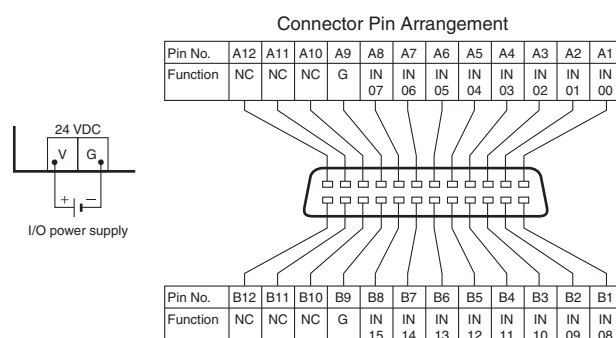
GT1-OD16MX-1



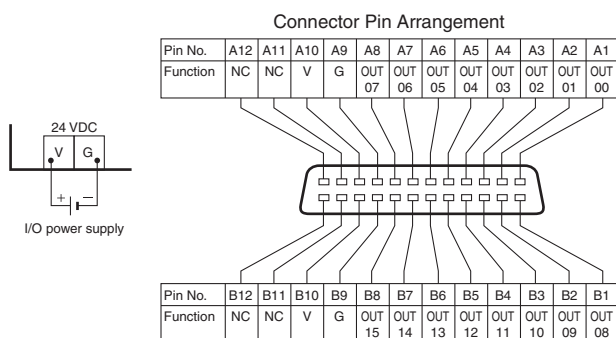
GT1-ID16ML



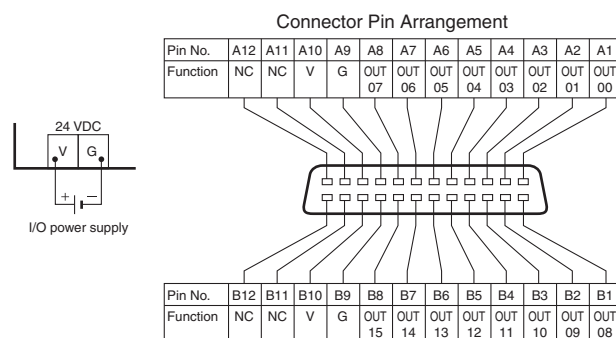
GT1-ID16ML-1



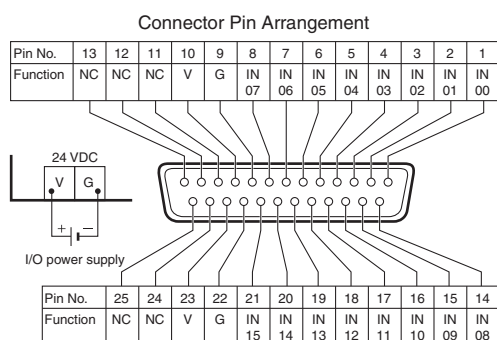
GT1-OD16ML



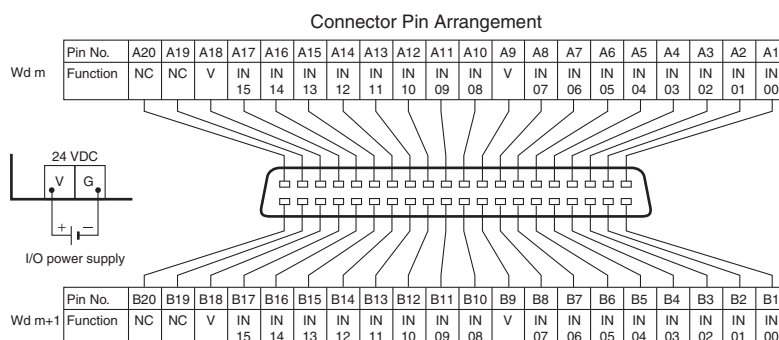
GT1-OD16ML-1



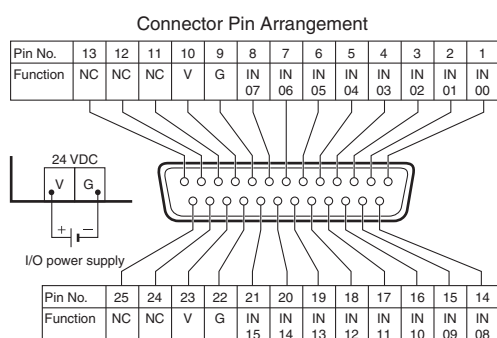
GT1-ID16DS



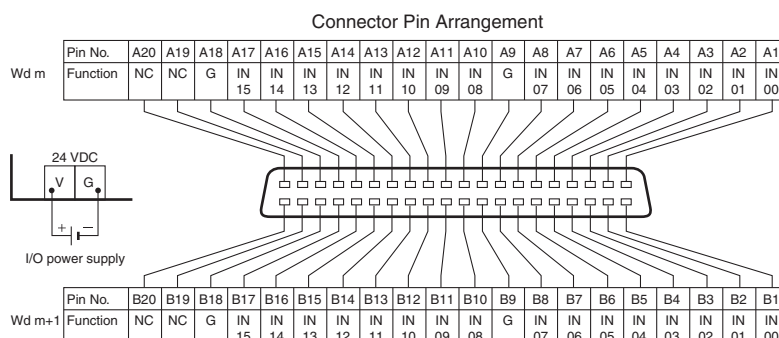
GT1-ID32ML



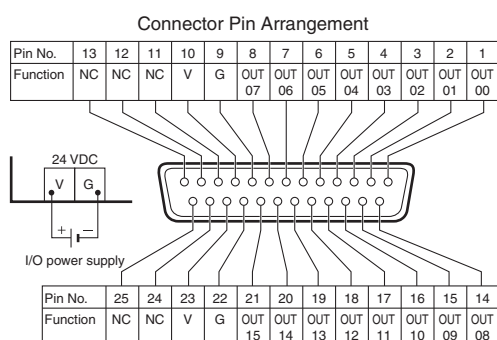
GT1-ID16DS-1



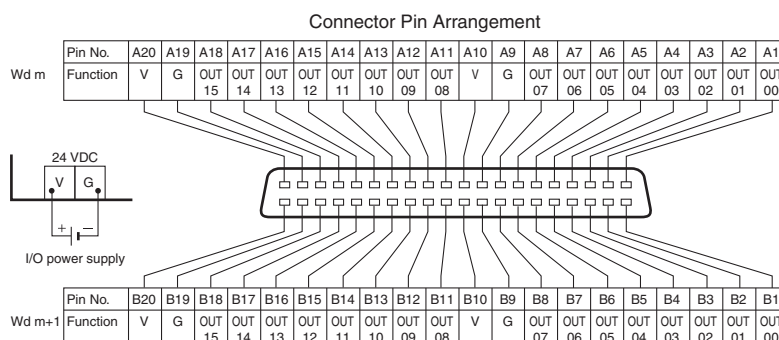
GT1-ID32ML-1



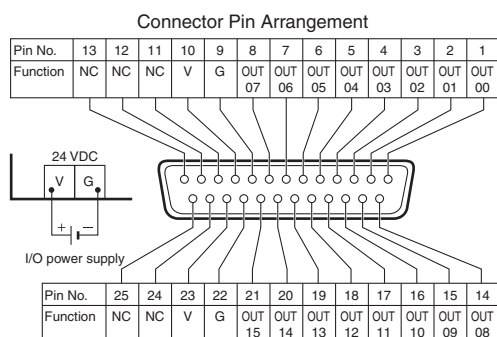
GT1-OD16DS



GT1-OD32ML



GT1-OD16DS-1



GT1-OD32ML-1

