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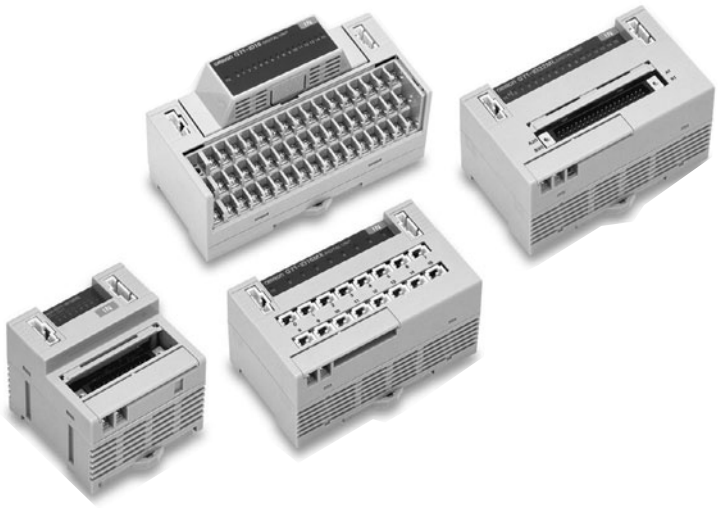
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Find the *OMRON GT1-OD16* at our website: ***Click HERE***

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 dismounted 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 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**

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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

Type			Model	Remarks
Molex connector	Solderless terminal	Housing	**51030-0330**	
		Chain terminal	**70058-0004**	Corresponding to 24 to 30 AWG
			70058-0022	Corresponding to 22 to 24 AWG
		Loose terminal	**70058-0204**	Corresponding to 24 to 30 AWG
			70058-0272	Corresponding to 22 to 24 AWG
		Press-fit tool	**57036-5000**	Corresponding to 22 to 26 AWG
			57037-5000	Corresponding to 24 to 30 AWG
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 classification	Model
Digital input (16 points)	**XW2Z-□□□A**
	G79-□C
Digital output (16 points)	**XW2Z-□□□A**
	G79-□C
Digital input (32 points)	**XW2Z-□□□B**
	G79-I□C□
Digital output (32 points)	**XW2Z-□□□B**
	G79-O□C-□

Note: Refer to page 162 for ordering information.

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

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Cables for I/O Connector

Cables for Connector Terminal Conversion Units (16 Points)

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

Cables for I/O Blocks (16 Points)

I/O classification	Model	Applicable cable	Connectable model	Remarks
Digital input (16 points) NPN	GT1-ID16ML	G79-□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 M7F-□N□□□	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□-□□ M7F-□P□□□	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	G79-I□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	G79-O□C-□	G7TC-OC16 G7TC-OC08 G70D-SOC16 G70D-FOM16 G70D-VSOC16 G70D-VFOM16 G70A-ZOC16-3	For I/O Block output
Digital output (32 points) PNP	GT1-OD32ML-1		G7TC-OC16-1 G70D-SOC16-1 G70D-FOM16-1 G70A-ZOC16-4	For I/O Block output

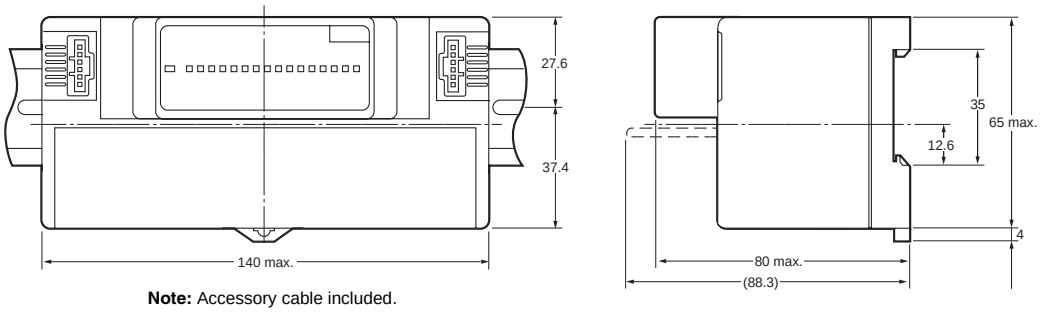
Note: For details of applicable cables and connectors, refer to pages 162 to 163.

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Dimensions

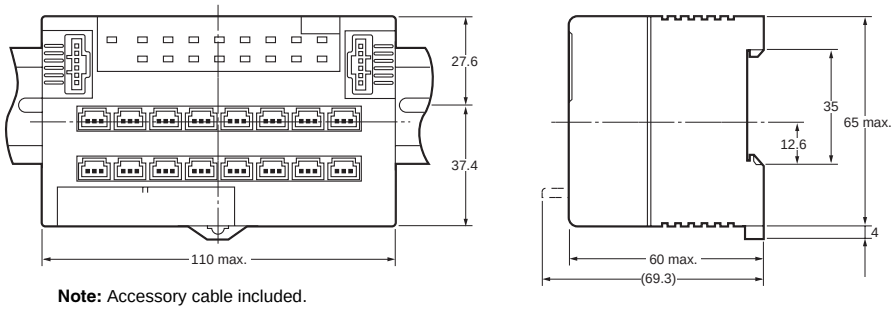
(Unit: mm)

● **Terminal Block Model**
GT1-ID16
GT1-ID16-1
GT1-OD16
GT1-OD16-1



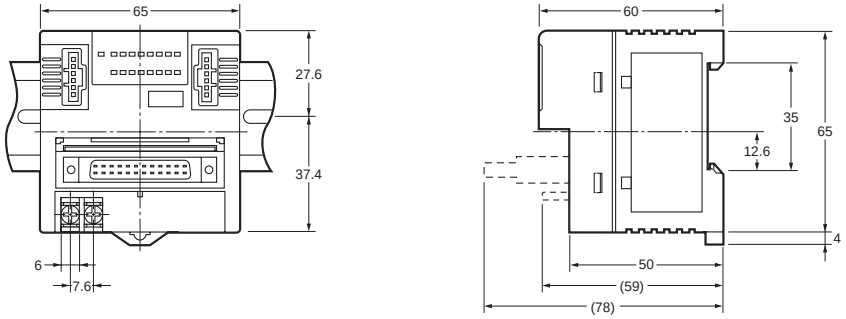
Note: Accessory cable included.

● **Connector Model**
GT1-ID16MX
GT1-ID16MX-1
GT1-OD16MX
GT1-OD16MX-1



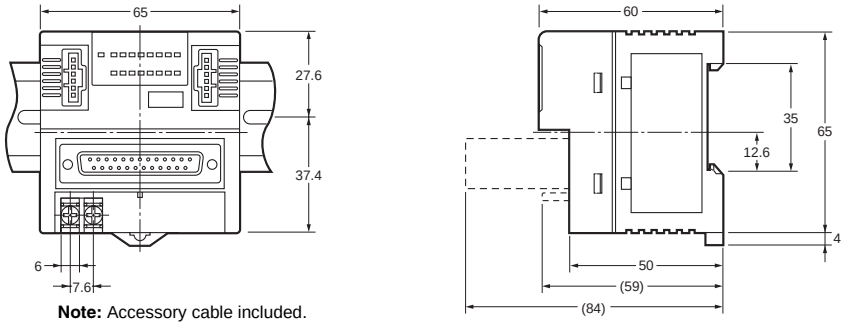
Note: Accessory cable included.

● **Connector Model**
GT1-ID16ML
GT1-ID16ML-1
GT1-OD16ML
GT1-OD16ML-1



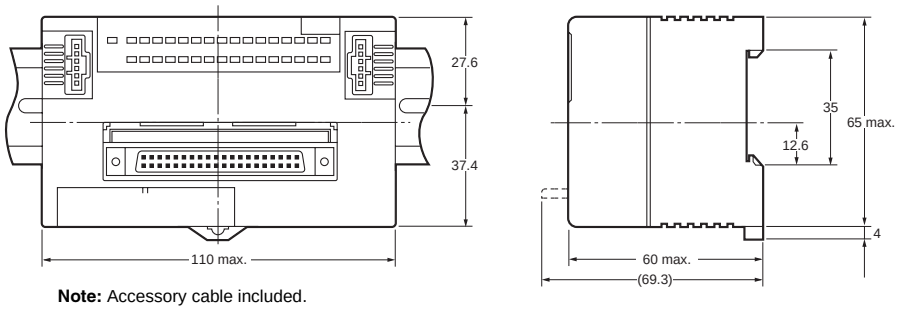
Note: Accessory cable included.

● **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

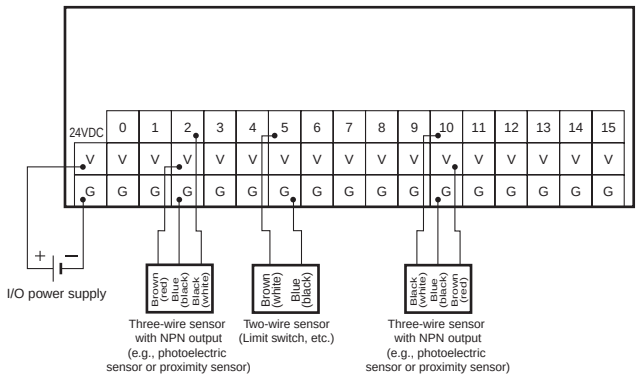


Note: Accessory cable included.

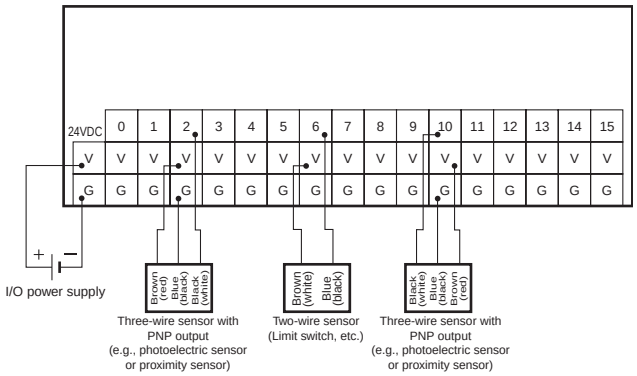
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Wiring Diagrams

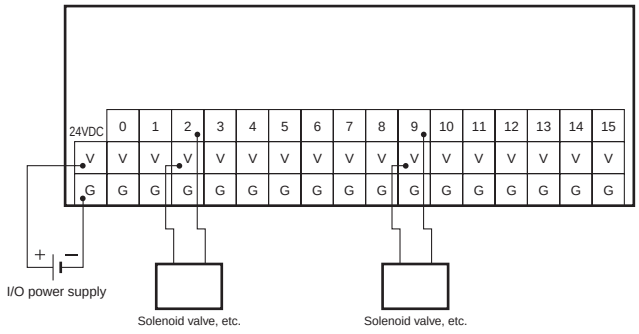
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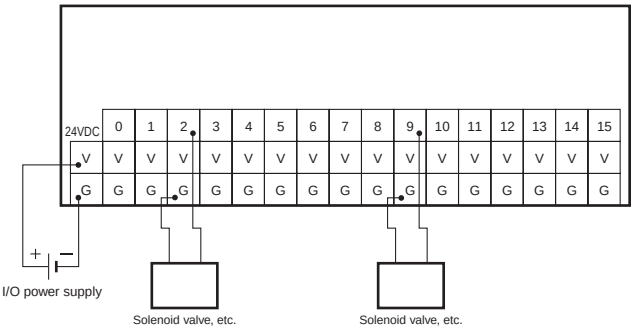
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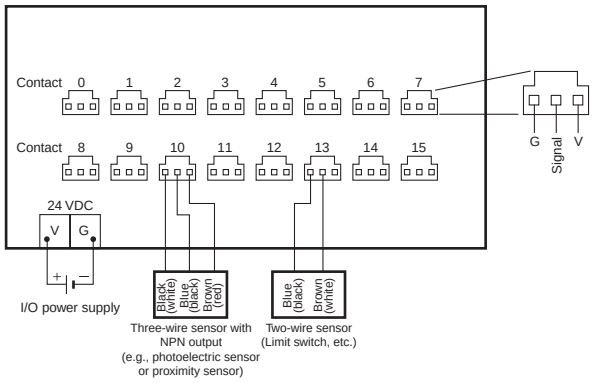
GT1-OD16



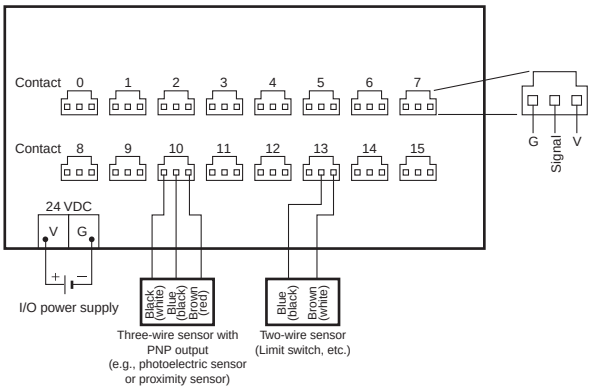
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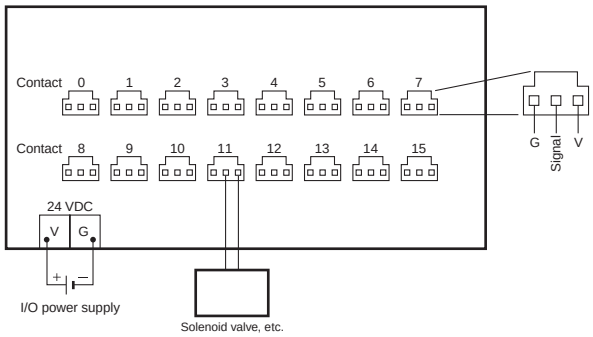
GT1-ID16MX



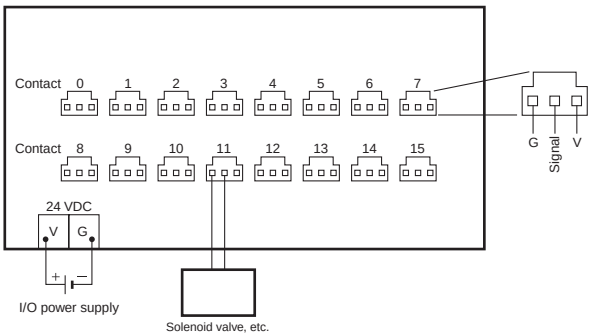
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GT1-OD16MX

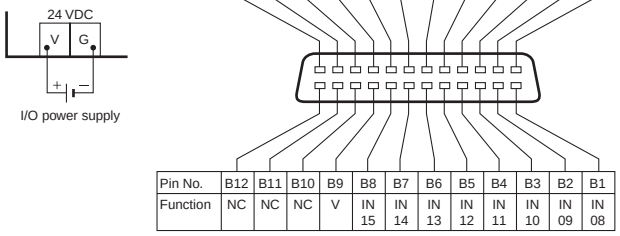


GT1-OD16MX-1



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GT1-ID16ML

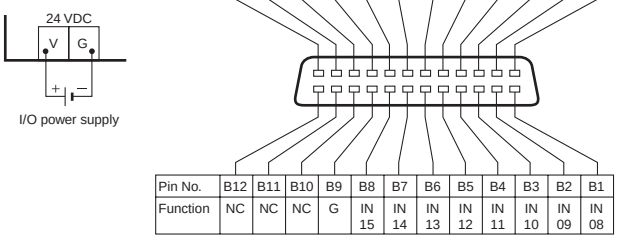


Connector Pin Arrangement

Pin No.	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1
Function	NC	NC	NC	V	IN 07	IN 06	IN 05	IN 04	IN 03	IN 02	IN 01	IN 00

Pin No.	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1
Function	NC	NC	NC	V	IN 15	IN 14	IN 13	IN 12	IN 11	IN 10	IN 09	IN 08

GT1-ID16ML-1

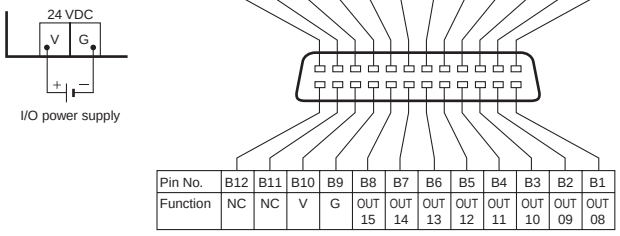


Connector Pin Arrangement

Pin No.	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1
Function	NC	NC	NC	G	IN 07	IN 06	IN 05	IN 04	IN 03	IN 02	IN 01	IN 00

Pin No.	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1
Function	NC	NC	NC	G	IN 15	IN 14	IN 13	IN 12	IN 11	IN 10	IN 09	IN 08

GT1-OD16ML

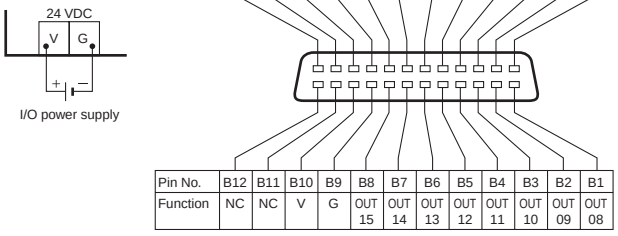


Connector Pin Arrangement

Pin No.	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1
Function	NC	NC	V	G	OUT 07	OUT 06	OUT 05	OUT 04	OUT 03	OUT 02	OUT 01	OUT 00

Pin No.	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1
Function	NC	NC	V	G	OUT 15	OUT 14	OUT 13	OUT 12	OUT 11	OUT 10	OUT 09	OUT 08

GT1-OD16ML-1



Connector Pin Arrangement

Pin No.	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1
Function	NC	NC	V	G	OUT 07	OUT 06	OUT 05	OUT 04	OUT 03	OUT 02	OUT 01	OUT 00

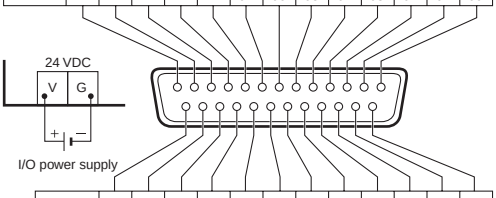
Pin No.	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1
Function	NC	NC	V	G	OUT 15	OUT 14	OUT 13	OUT 12	OUT 11	OUT 10	OUT 09	OUT 08

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GT1-ID16DS

Connector Pin Arrangement

Pin No.	13	12	11	10	9	8	7	6	5	4	3	2	1
Function	NC	NC	NC	V	G	IN 07	IN 06	IN 05	IN 04	IN 03	IN 02	IN 01	IN 00

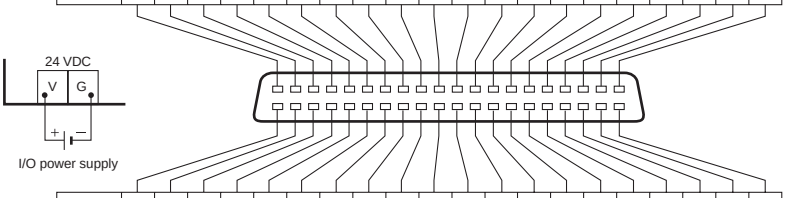


Pin No.	25	24	23	22	21	20	19	18	17	16	15	14
Function	NC	NC	V	G	IN 15	IN 14	IN 13	IN 12	IN 11	IN 10	IN 09	IN 08

GT1-ID32ML

Connector Pin Arrangement

	Pin No.	A20	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1
Wd m	Function	NC	NC	V	IN 15	IN 14	IN 13	IN 12	IN 11	IN 10	IN 09	IN 08	V	IN 07	IN 06	IN 05	IN 04	IN 03	IN 02	IN 01	IN 00

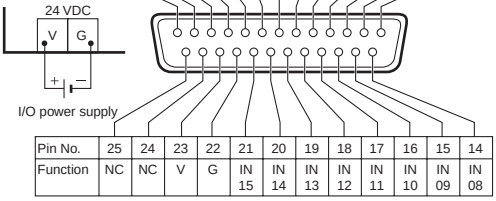


	Pin No.	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1
Wd m+1	Function	NC	NC	V	IN 15	IN 14	IN 13	IN 12	IN 11	IN 10	IN 09	IN 08	V	IN 07	IN 06	IN 05	IN 04	IN 03	IN 02	IN 01	IN 00

GT1-ID16DS-1

Connector Pin Arrangement

Pin No.	13	12	11	10	9	8	7	6	5	4	3	2	1
Function	NC	NC	NC	V	G	IN 07	IN 06	IN 05	IN 04	IN 03	IN 02	IN 01	IN 00

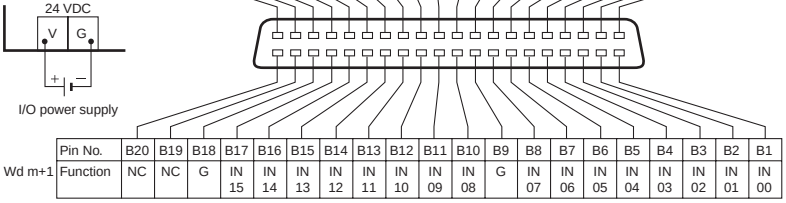


Pin No.	25	24	23	22	21	20	19	18	17	16	15	14
Function	NC	NC	V	G	IN 15	IN 14	IN 13	IN 12	IN 11	IN 10	IN 09	IN 08

GT1-ID32ML-1

Connector Pin Arrangement

	Pin No.	A20	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1
Wd m	Function	NC	NC	G	IN 15	IN 14	IN 13	IN 12	IN 11	IN 10	IN 09	IN 08	G	IN 07	IN 06	IN 05	IN 04	IN 03	IN 02	IN 01	IN 00

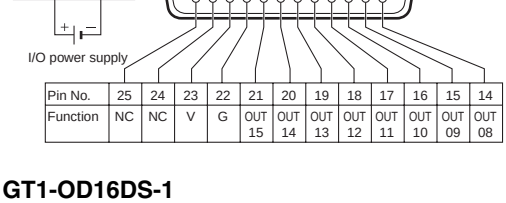


	Pin No.	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1
Wd m+1	Function	NC	NC	G	IN 15	IN 14	IN 13	IN 12	IN 11	IN 10	IN 09	IN 08	G	IN 07	IN 06	IN 05	IN 04	IN 03	IN 02	IN 01	IN 00

GT1-OD16DS

Connector Pin Arrangement

Pin No.	13	12	11	10	9	8	7	6	5	4	3	2	1
Function	NC	NC	NC	V	G	OUT 07	OUT 06	OUT 05	OUT 04	OUT 03	OUT 02	OUT 01	OUT 00

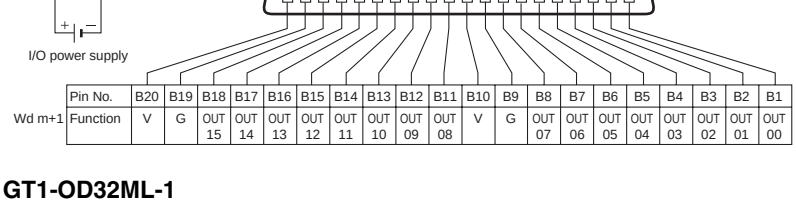


Pin No.	25	24	23	22	21	20	19	18	17	16	15	14
Function	NC	NC	V	G	OUT 15	OUT 14	OUT 13	OUT 12	OUT 11	OUT 10	OUT 09	OUT 08

GT1-OD32ML

Connector Pin Arrangement

	Pin No.	A20	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1
Wd m	Function	V	G	OUT 15	OUT 14	OUT 13	OUT 12	OUT 11	OUT 10	OUT 09	OUT 08	V	G	OUT 07	OUT 06	OUT 05	OUT 04	OUT 03	OUT 02	OUT 01	OUT 00

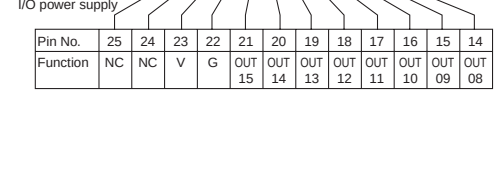


	Pin No.	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1
Wd m+1	Function	V	G	OUT 15	OUT 14	OUT 13	OUT 12	OUT 11	OUT 10	OUT 09	OUT 08	V	G	OUT 07	OUT 06	OUT 05	OUT 04	OUT 03	OUT 02	OUT 01	OUT 00

GT1-OD16DS-1

Connector Pin Arrangement

Pin No.	13	12	11	10	9	8	7	6	5	4	3	2	1
Function	NC	NC	NC	V	G	OUT 07	OUT 06	OUT 05	OUT 04	OUT 03	OUT 02	OUT 01	OUT 00

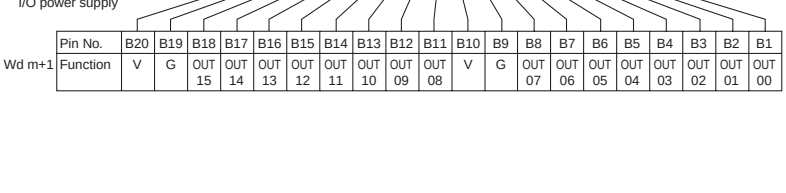


Pin No.	25	24	23	22	21	20	19	18	17	16	15	14
Function	NC	NC	V	G	OUT 15	OUT 14	OUT 13	OUT 12	OUT 11	OUT 10	OUT 09	OUT 08

GT1-OD32ML-1

Connector Pin Arrangement

	Pin No.	A20	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1
Wd m	Function	V	G	OUT 15	OUT 14	OUT 13	OUT 12	OUT 11	OUT 10	OUT 09	OUT 08	V	G	OUT 07	OUT 06	OUT 05	OUT 04	OUT 03	OUT 02	OUT 01	OUT 00



	Pin No.	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1
Wd m+1	Function	V	G	OUT 15	OUT 14	OUT 13	OUT 12	OUT 11	OUT 10	OUT 09	OUT 08	V	G	OUT 07	OUT 06	OUT 05	OUT 04	OUT 03	OUT 02	OUT 01	OUT 00

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