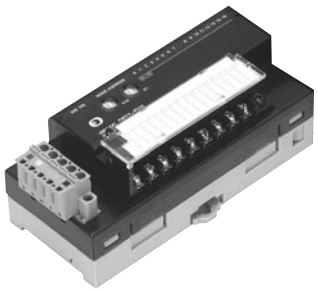
Transistor Remote I/O Terminals

DRT2-□D08(-1)/□D16(-1)

Allows I/O Expansion with Transistor Terminals

- Wide variety of data, such as maintenance system data, can be collected without affecting the productivity of the control system.
- Valuable information can be collected and managed through the network, including information on the communications power supply voltage levels, Unit wear and tear, and equipment operating information.
- Expansion via Expansion I/O Units
- With no communications baud rate settings required and detachable terminal blocks, maintenance is easier.



Smart Slave Functions

Operation time monitor (input and output only) *1	Contact operation counter	Unit conduction time monitor
Total ON time monitor	Unit comments	Connected device comments
Network power supply voltage monitor	I/O power supply monitor function	Communications error log monitor
Input filter (input or I/O only)	Power-ON inrush current protection (input or I/O only)	
Removable terminal block	Communications speed auto-detection	No need to wire Unit power supply
Expansion via Expansion I/O Units *2	Last maintenance date	

✻1. The operation time monitor cannot be used with the DRT2-□D08(-1).
✻2. Expansion Units cannot be added with the DRT2-□D08(-1)or DRT2-MD16(-1).

Ordering Information

Specifications			I/O connections	Rated internal circuit power supply voltage	Rated I/O power supply voltage	Model
Inputs	NPN (+ common)	16 points	M3 Screw terminals	Supplied from the communications connector	24 VDC	**DRT2-ID16**
	PNP (- common)					**DRT2-ID16-1**
Outputs	NPN (- common)					**DRT2-OD16**
	PNP (+ common)					**DRT2-OD16-1**
I/O	NPN (input: + common, output: - common)	Input: 8 points/ Output: 8 points				**DRT2-MD16**
	PNP (input: - common, output: + common)					**DRT2-MD16-1**
Inputs	NPN (+ common)	8 points				**DRT2-ID08**
	PNP (- common)					**DRT2-ID08-1**
Outputs	NPN (- common)	8 points				**DRT2-OD08**
	PNP (+ common)					**DRT2-OD08-1**

Expansion Units

One Expansion Unit can be added to each DRT2-ID16(-1)/-OD16(-1) or DRT2-ROS16 I/O Slave.
The following Expansion Units are available to enable flexible expansion with combinations for the required number of points.

Model	Number of I/O points
XWT-ID08	8-point inputs (NPN)
XWT-ID08-1	8-point inputs (PNP)
XWT-OD08	8-point outputs (NPN)
XWT-OD08-1	8-point outputs (PNP)
XWT-ID16	16-point inputs (NPN)
XWT-ID16-1	16-point inputs (PNP)
XWT-OD16	16-point outputs (NPN)
XWT-OD16-1	16-point outputs (PNP)

General Specifications

Communications power supply voltage	11 to 25 VDC
Unit power supply voltage	Not required (Supplied from the communications connector.)
I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15%/+10%)
Current consumption (Communications)	DRT2-ID08(-1)/MD16: 55 mA max. DRT2-OD08/MD16-1: 50 mA max. DRT2-OD08-1: 45 mA max. DRT2-ID16(-1)/OD16(-1): 60 mA max.
Dielectric strength	500 VAC (between isolated circuits)
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power line)
Vibration resistance	10 to 60 Hz, 0.7-mm double amplitude, 60 to 150 Hz, 50 m/s² for 80 min each in the X, Y, and Z directions
Shock resistance	150m/s², 6 directions, 3 times each
Mounting method	DIN 35 mm-track mounting
Screw tightening torque	M3 (power, I/O terminal): 0.5 N•m
Ambient operating temperature	–10°C to 55°C
Ambient operating humidity	25 to 85% (with no condensation)
Ambient storage temperature	-25°C to 65°C
Weight	DRT2-ID08(-1)/OD08(-1): 135 g max. DRT2-MD16(-1): 145 g max. DRT2-ID16(-1)/OD16(-1): 140 g max.

Input Specifications

● 8-point Inputs Terminals with Transistors

Item / Model	DRT2-ID08	DRT2-ID08-1
Internal I/O common	NPN	PNP
Number of I/O points	8 inputs	
ON voltage	15 VDC min. (between each input terminal and V)	15 VDC min. (between each input terminal and G)
OFF voltage	5 VDC max. (between each input terminal and V)	5 VDC min. (between each input terminal and G)
OFF current	1.0 mA max.	
Input current	6.0 mA max. per point at 24 VDC 3.0 mA max. per point at 17 VDC	
ON delay time	1.5 ms max.	
OFF delay time	1.5 ms max.	
Number of points per common	8 per common	

● 16-point Inputs Terminals with Transistors

Item / Model	DRT2-ID16	DRT2-ID16-1
Internal I/O common	NPN	PNP
Number of I/O points	16 inputs	
ON voltage	15 VDC min. (between each input terminal and V)	15 VDC min. (between each input terminal and G)
OFF voltage	5 VDC max. (between each input terminal and V)	5 VDC min. (between each input terminal and G)
OFF current	1.0 mA max.	
Input current	6.0 mA max. per point at 24 VDC 3.0 mA max. per point at 17 VDC	
ON delay time	1.5 ms max.	
OFF delay time	1.5 ms max.	
Number of points per common	16 per common	

● 8-point Inputs/8-point Outputs Terminals with Transistors

Item / Model	DRT2-MD16	DRT2-MD16-1
Internal I/O common	NPN	PNP
Number of I/O points	8 inputs	
ON voltage	15 VDC min. (between each input terminal and V)	15 VDC min. (between each input terminal and G)
OFF voltage	5 VDC max. (between each input terminal and V)	5 VDC min. (between each input terminal and G)
OFF current	1.0 mA max.	
Input current	6.0 mA max. per point at 24 VDC 3.0 mA max. per point at 17 VDC	
ON delay time	1.5 ms max.	
OFF delay time	1.5 ms max.	
Number of points per common	8 per common	

Output Specifications

● 8-point Outputs Terminals with Transistors

Item / Model	DRT2-OD08	DRT2-OD08-1
Internal I/O common	NPN	PNP
Number of I/O points	8 outputs	
Rated output current	0.5 A per point, 4 A per common	
Residual voltage	1.2 V max. (0.5 A DC between each output terminal and G)	1.2 V max. (0.5 A DC between each output terminal and V)
Leakage current	0.1 ms max.	
ON delay time	0.5 ms max.	
OFF delay time	1.5 ms max.	
Number of points per common	8 per common	

● 16-point Outputs Terminals with Transistors

Item / Model	DRT2-OD16	DRT2-OD16-1
Internal I/O common	NPN	PNP
Number of I/O points	16 outputs	
Rated output current	0.5 A per point, 4 A per common	
Residual voltage	1.2 V max. (0.5 A DC between each output terminal and G)	1.2 V max. (0.5 A DC between each output terminal and V)
Leakage current	0.1 ms max.	
ON delay time	0.5 ms max.	
OFF delay time	1.5 ms max.	
Number of points per common	16 per common	

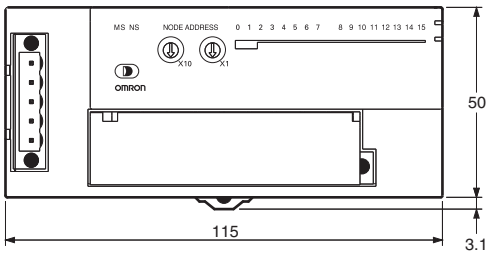
● 8-point Inputs/8-point Outputs Terminals with Transistors

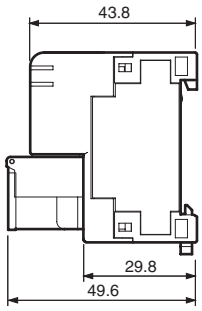
Item / Model	DRT2-MD16	DRT2-MD16-1
Internal I/O common	NPN	PNP
Number of I/O points	8 outputs	
Rated output current	0.5 A per point, 4 A per common	
Residual voltage	1.2 V max. (0.5 A DC between each output terminal and G)	1.2 V max. (0.5 A DC between each output terminal and V)
Leakage current	0.1 ms max.	
ON delay time	0.5 ms max.	
OFF delay time	1.5 ms max.	
Number of points per common	8 per common	

Dimensions

(Unit: mm)

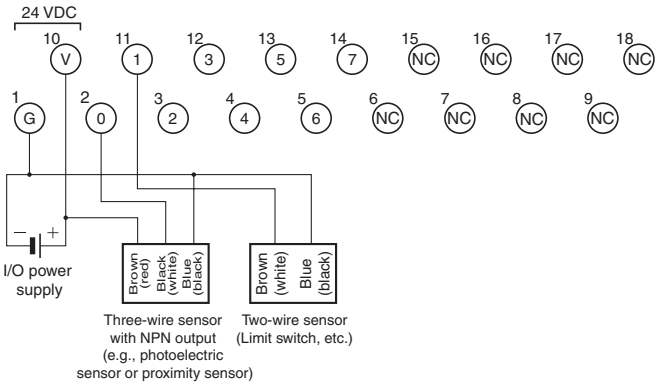
DRT2-ID16(-1)
DRT2-OD16(-1)
DRT2-ID08(-1)
DRT2-OD08(-1)
DRT2-MD16(-1)



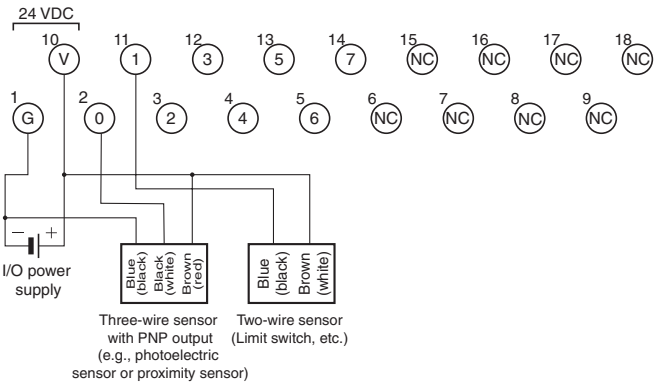


Wiring Diagrams

DRT2-ID08 (NPN)



DRT2-ID08-1 (PNP)



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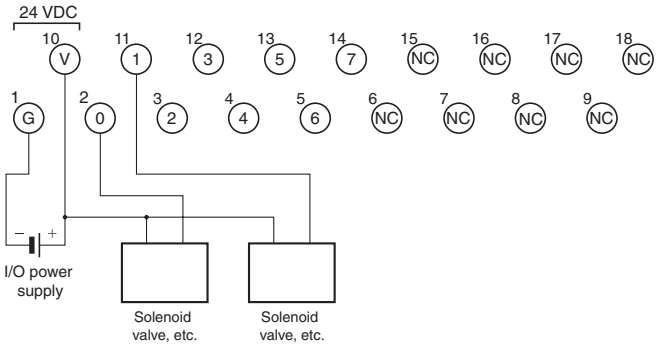

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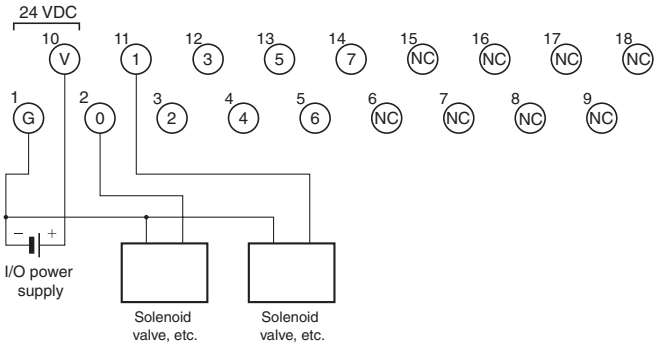
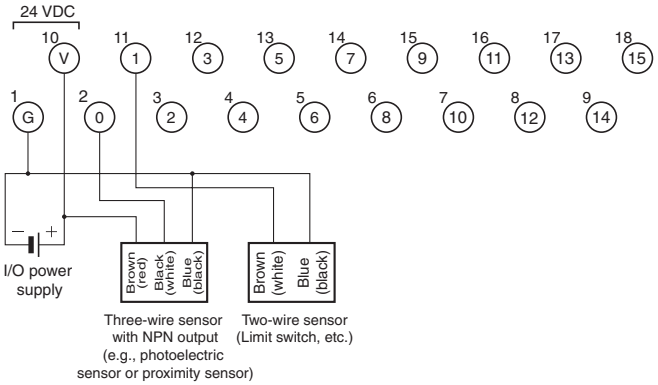
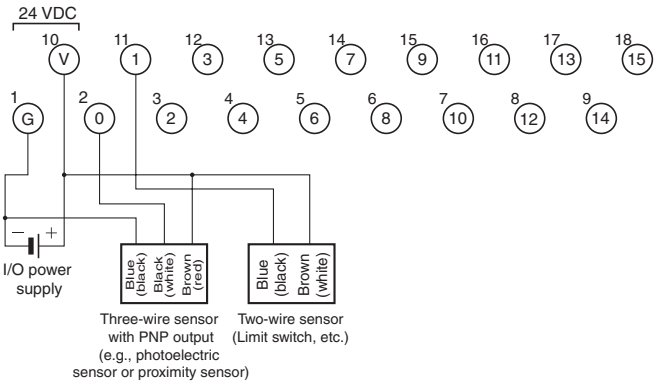


DRT2-ID16 (NPN)



DRT2-ID16-1 (PNP)



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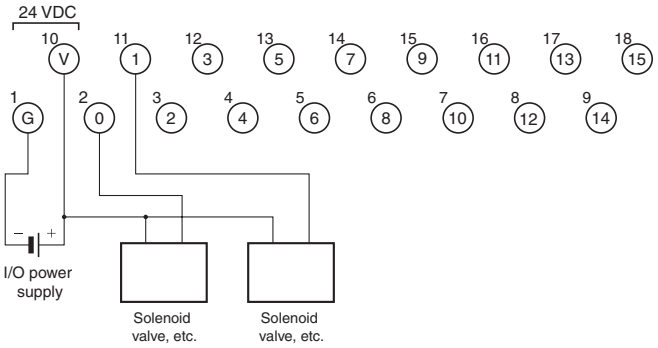

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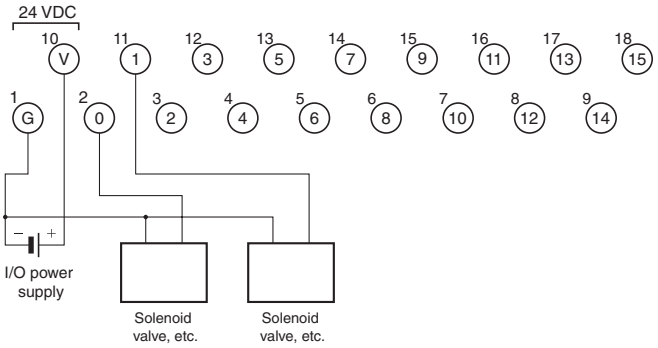
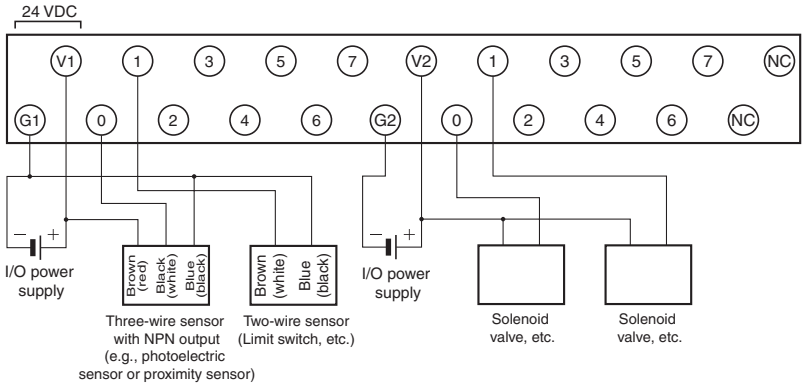


DRT2-MD16 (NPN)



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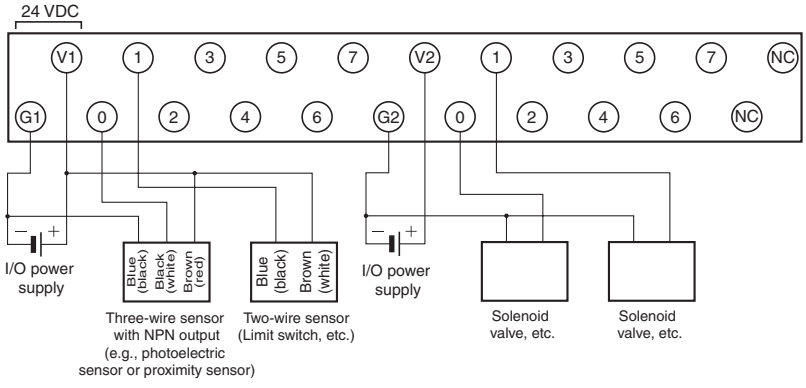

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