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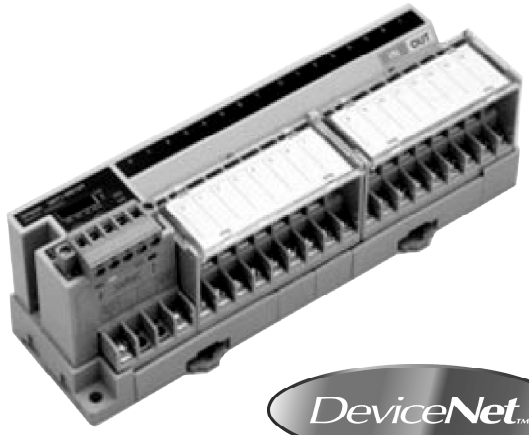
OMRON

Transistor I/O Terminals

DRT1-□D16T(-1)

These new I/O Terminals have a 3-tier Terminal Block (16 I/O points). Six models are available: Input Terminals, I/O Terminals, and Output Terminals with NPN and PNP variations.

- Simplified wiring (Wires do not need be be wired to the same terminal and terminal locations are clearer.)
- Reduced design and wiring time
- Uses detachable cassette-type circuit construction



DeviceNet™

Ordering Information

I/O type	Internal I/O common	Number of I/O points	I/O connections	Part number
Digital Input	NPN (⊕ common)	16 points	M3 terminal blocks	**DRT1-ID16T**
	PNP (⊖ common)			**DRT1-ID16T-1**
Digital I/O	NPN (⊖ common)			**DRT1-MD16T**
	PNP (⊕ common)			**DRT1-MD16T-1**
Digital Output	NPN (⊖ common)			**DRT1-OD16T**
	PNP (⊕ common)			**DRT1-OD16T-1**

Specifications

■ GENERAL SPECIFICATIONS

Communications power supply voltage	11 to 25 V DC (Supplied from the communications connector.)
Internal power supply voltage	24 VDC +10%/–15%
I/O power supply voltage	
Current consumption	Communications: 30 mA max. at 24 VDC Internal circuitry: 90 mA max. at 24 VDC
Inrush current	30 A max.
Insulation resistance	20 MΩ (at 500 VDC)
Dielectric strength	500 V AC for 1 minute between isolated circuits
Vibration resistance	10 to 150 Hz, 0.7-mm double amplitude or 50 m/s^2
Shock resistance	150 m/s^2
Screw tightening torque	0.3 to 0.5 N • m
Ambient temperature	Operating: –10°C to 55°C Storage: –25°C to 65°C
Ambient humidity	Operating: 25% to 85% (with no icing or condensation)
Ground	None
Structure	For mounting inside a panel
Mounting methods	Mount on 35-mm DIN Track or use M4 screws.
Weight	Approx. 315 g
Dimensions	180 × 50 × 58 mm

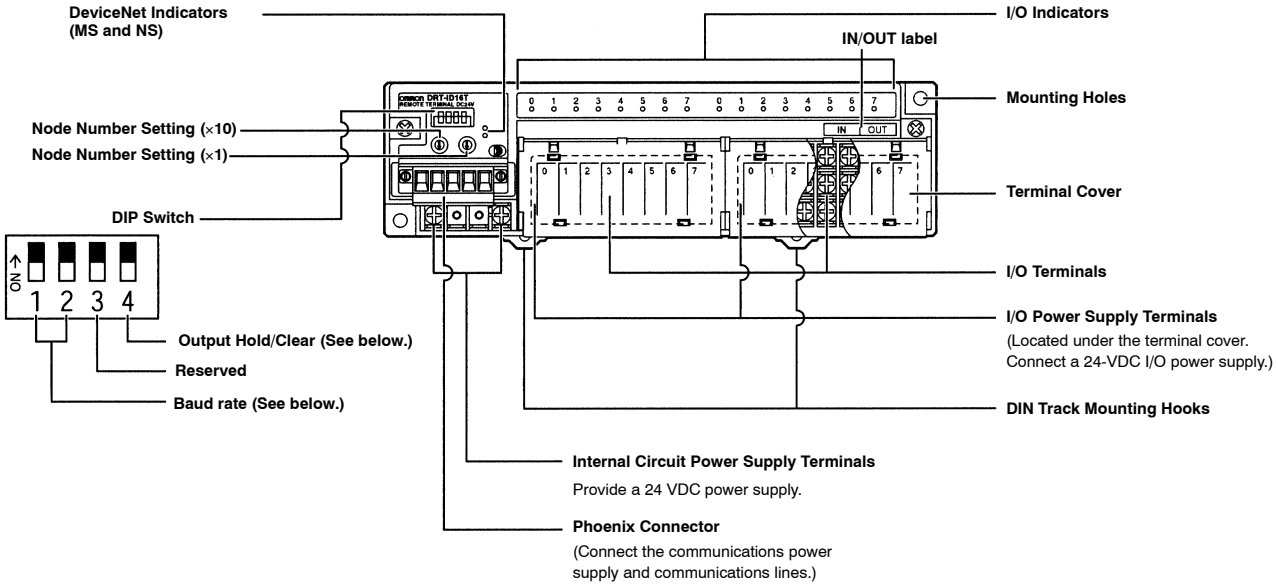
■ INPUT SPECIFICATIONS

Input current		6.0 mA max. at 24 V DC
ON delay time		1.5 ms max.
OFF delay time		1.5 ms max.
ON voltage	**NPN**	15 V DC min. between each input terminal and V
	PNP	15 V DC min. between each input terminal and G
OFF voltage	**NPN**	5 V DC max. between each input terminal and V
	PNP	5 V DC max. between each input terminal and G
OFF current		1 mA max.
Isolation method		Photocoupler

■ OUTPUT SPECIFICATIONS

Rated output current	0.5 A/output max.
Residual voltage	1.2 V max. at 0.5 A (between output terminal and G)
ON delay time	0.5 ms max.
OFF delay time	1.5 ms max.
Leakage current	0.1 mA max. at 24 V DC (between each output terminal and G)
Isolation method	Photocoupler

Nomenclature



Baud Rate Setting

Pin 1 (DR0)	Pin 2 (DR1)	Baud rate
OFF	OFF	125,000 bps (default setting)
ON	OFF	250,000 bps
OFF	ON	500,000 bps
ON	ON	Not allowed.

Output Hold/Clear Setting

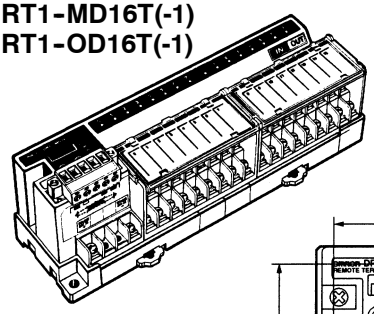
Pin	Pin setting	Function
3	Always OFF	Reserved for the system.
4	OFF (Clear outputs.)	When a communications error occurs, the output data received from the Master is all cleared to 0.
	ON (Hold outputs.)	When a communications error occurs, the last output data received from the Master is retained.

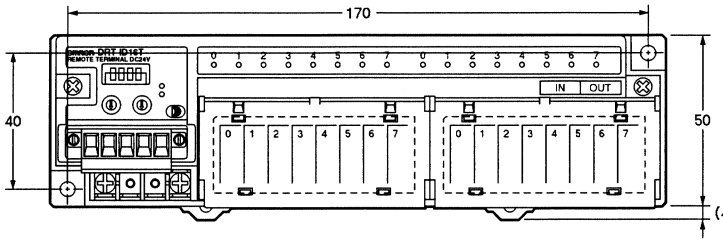
Note: The ID type is not cleared.

Dimensions

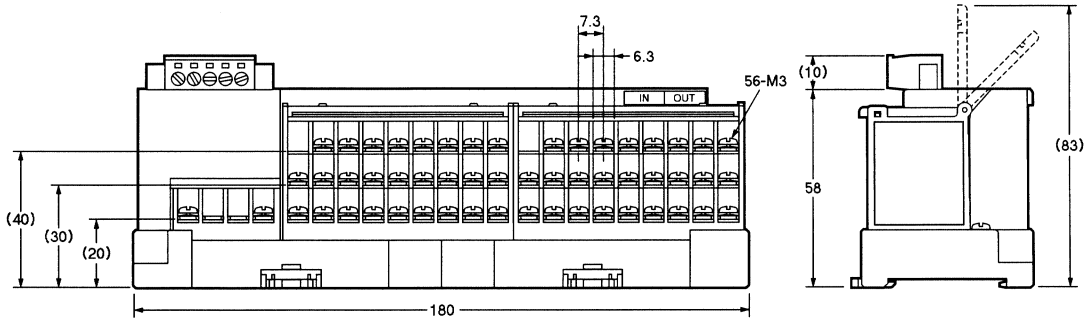
Unit: mm (inch)

DRT1-ID16T(-1)
DRT1-MD16T(-1)
DRT1-OD16T(-1)

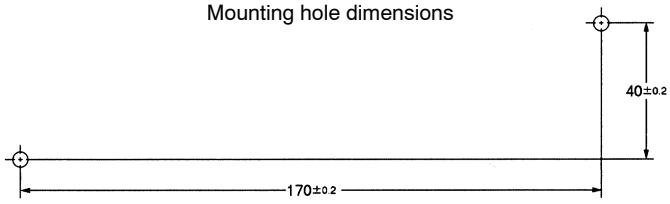




Dimensions with connector attached.



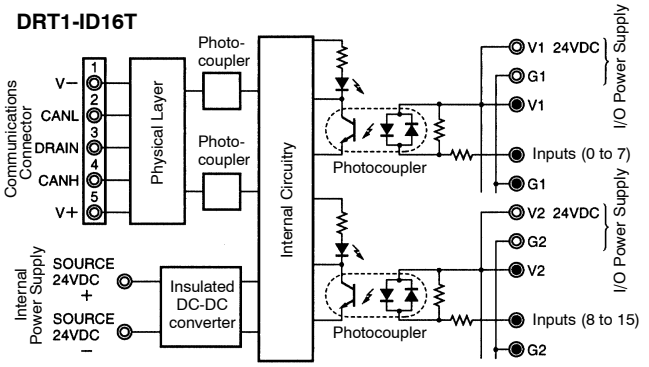
Mounting hole dimensions



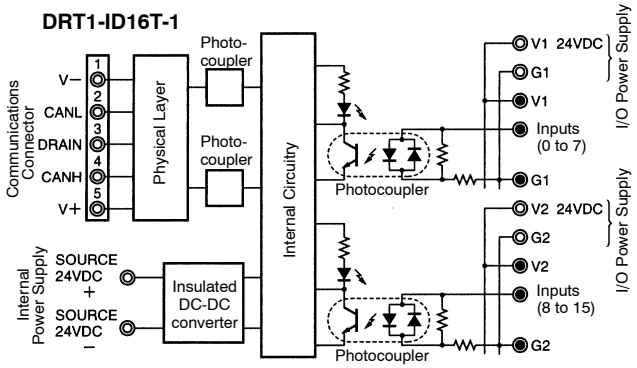
Installation

■ WIRING

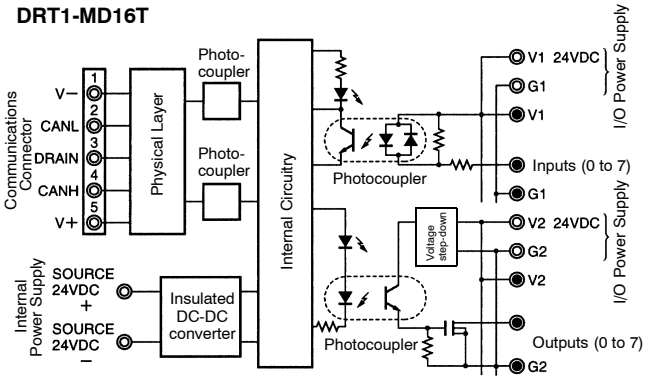
DRT1-ID16T



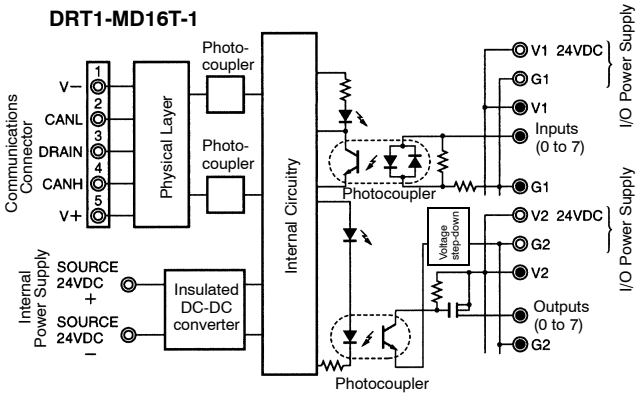
DRT1-ID16T-1



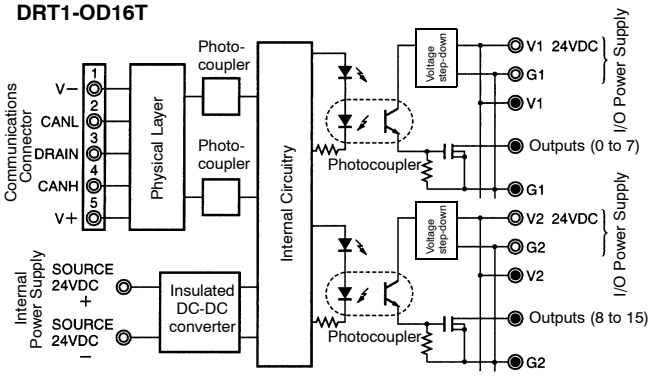
DRT1-MD16T



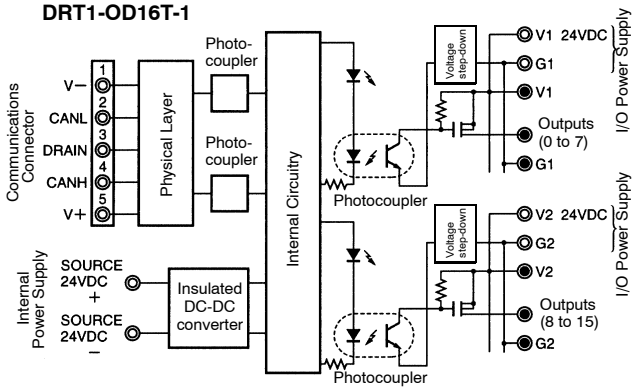
DRT1-MD16T-1



DRT1-OD16T



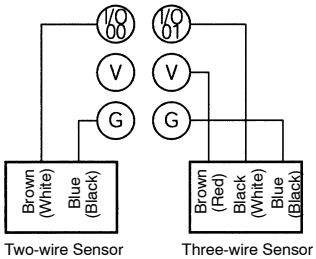
DRT1-OD16T-1



■ EXTERNAL CONNECTIONS

Inputs (NPN)

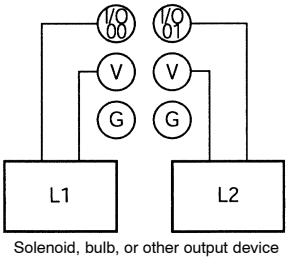
DRT1-ID16T
DRT1-MD16T



Two-wire Sensor Three-wire Sensor

Outputs (NPN)

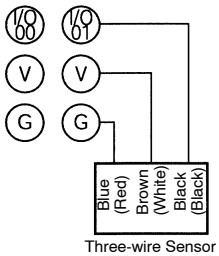
DRT1-OD16T
DRT1-MD16T



Solenoid, bulb, or other output device

Inputs (PNP)

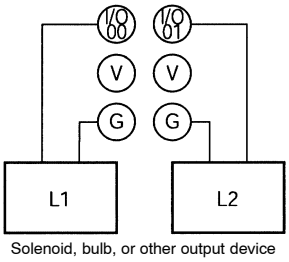
DRT1-ID16T-1
DRT1-MD16T-1



Three-wire Sensor

Outputs (PNP)

DRT1-OD16T-1
DRT1-MD16T-1



Solenoid, bulb, or other output device

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

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OMRON ELECTRONICS LLC
One East Commerce Drive
Schaumburg, IL 60173
1-800-55-OMRON

OMRON ON-LINE
Global - http://www.omron.com
USA - http://www.omron.com/oei
Canada - http://www.omron.com/oci

OMRON CANADA, INC.
885 Milner Avenue
Scarborough, Ontario M1B 5V8
416-286-6465

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