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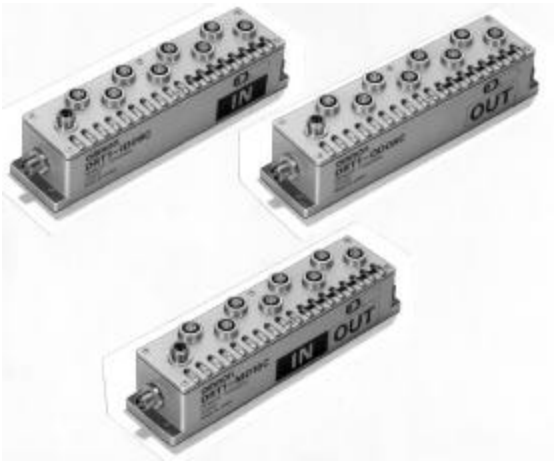
OMRON

Environment Resistive Terminals

DRT1-ID08C/ OD08C/MD16C

8-point Transistor Model and 16-point Transistor Model (8 Inputs and 8 Outputs) are Available

- Compact dimensions: 221 x 56 x 51 (W x H x D)
- No tools are required for connection to a variety of devices, such as sensors and valves incorporating connectors.
- Saves lead time for installation and maintenance.
- IP66 degree of protection ensures resistance to dust and drops or splashes of water.
- UL and CSA approval pending.



Ordering Information

I/O classification	Internal I/O circuit common	I/O points	I/O specification	Rated voltage	I/O rated voltage	Model
Input	NPN (+ common)	8	Sensor I/O connector	24 VDC	24 VDC	DRT1-ID08C
		16				DRT1-HD16C
	PNP (– common)	8				DRT1-HD16C-1
Output	NPN (– common)	16				DRT1-OD08C
		8				DRT1-WD16C
	PNP (+ common)	16				DRT1-WD16C-1
I/O	NPN input (+ common) NPN output (– common)	8 inputs and 8 outputs				DRT1-MD16C
	PNP input (– common) PNP output (+ common)					DRT1-MD16C-1

Specifications

■ Ratings

Input

Item	DRT1-ID08C/MD16C
Number of circuits	8 points (8 points/common)
ON voltage	15 VDC min. between each input terminal and V
OFF voltage	5 VDC max. between each input terminal and V
OFF current	1 mA max.
Input current	6 mA max./point (at 24 VDC between each input terminal and V terminal)
ON delay time	1.5 ms max.
OFF delay time	2.5 ms max.
Insulation method	Photocoupler
External power supply capacity	1 A at 24 VDC

Output

Item	DRT1-OD08C/MD16C
Number of circuits	8 points (8 points/common)
Rated output current	0.3 A/point, 2.4 A/common
Residual voltage	1.2 VDC (0.3 A between each output terminal and ground)
Leakage current	0.1 mA max. (24 VDC between each output terminal and ground)
ON delay time	0.5 ms max.
OFF delay time	1.5 ms max.
Insulation method	Photocoupler

■ Characteristics

Item	Specifications
Communications power supply voltage	11 to 25 VDC (supplied from the communications connector)
External power supply voltage	20.4 VDC to 26.4 VDC (24 VDC -15 to +10%)
Current consumption	Communications power supply: 200 mA max. at 24 VDC
Noise immunity	Communications power supply normal: ±600 V Communications power supply common: ±1,500 V
Vibration resistance	Malfunction: 10 to 57 Hz, 1.0-mm double amplitude and 57 to 150 Hz with 70 m/s^2 Destruction: 10 to 57 Hz, 1.5-mm double amplitude and 57 to 150 Hz with 100 m/s^2
Shock resistance	Malfunction: 200 m/s^2 Destruction: 300 m/s^2
Insulation resistance	20 MΩ min. at 250 VDC between insulated circuits and between all charged metal parts and non-charged metal parts
Dielectric strength	500 VAC for 1 min. between insulated circuits and 1,500 VAC for 1 min. between all charged metal parts and non-charged metal parts.
Ambient temperature	Operating: −10°C to 55°C Storage: −25°C to 65°C
Ambient humidity	Operating: 25% to 85% (with no condensation)
Ambient atmosphere	No corrosive gas
Degree of protection	IEC IP66
Mounting method	M5 screw mounting
Mounting strength	100 N for 10 s
Connector strength	No damage when 100-N pull load was applied for 10 s
Weight	590 g max.

■ Input Specifications (DRT1-ID08C/HD16C(-1)/MD16C(-1))

Item	Model	Specifications
Number of circuits	DRT1-ID08C/DRT1-MD16C(-1)	8 points (8 points/common)
	DRT1-HD16C(-1)	16 points (16 points/common)
ON voltage	DRT1-ID08C/DRT1-HD16C/DRT1-MD16C	15 VDC min. between each input terminal and V
	DRT1-HD16C-1/DRT1-MD16C-1	15 VDC min. between each input terminal and ground
OFF voltage	DRT1-ID08C/DRT1-HD16C/DRT1-MD16C	5 VDC max. between each input terminal and V
	DRT1-HD16C-1/DRT1-MD16C-1	5 VDC max. between each input terminal and ground
OFF current	---	1 mA max.
Input current	DRT1-ID08C/DRT1-HD16C/DRT1-MD16C	6 mA max./point (at 24 VDC between each input terminal and V terminal)
	DRT1-HD16C-1/DRT1-MD16C-1	6 mA max./point (at 24 VDC between each input terminal and ground)
ON delay time	---	1.5 ms max.
OFF delay time	---	2.5 ms max.
Insulation method	---	Photocoupler
External power supply capacity	---	24 VDC, 1 A max.

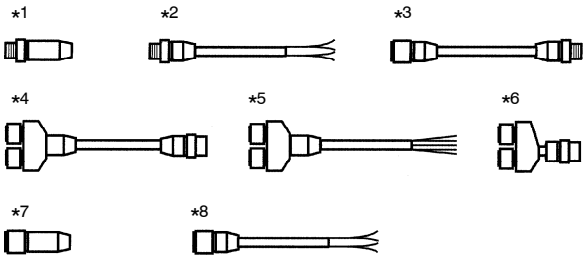
■ Output Specifications (DRT1-OD08C/WD16C(-1)/MD16C(-1))

Item	Model	Specifications
Number of circuits	DRT1-OD08C/DRT1-MD16C(-1)	8 points (8 points/common)
	DRT1-WD16C(-1)	16 points (16 points/common)
Rated output current	---	0.3 A/point, 2.4 A/common
Residual voltage	DRT1-OD08C/DRT1-WD16C/DRT1-MD16C	1.2 VDC (0.3 A between each output terminal and ground)
	DRT1-WD16C-1/DRT1-MD16C-1	1.2 VDC (0.3 A between each output terminal and V)
Leakage current	DRT1-OD08C/DRT1-WD16C/DRT1-MD16C	0.1 mA max. (24 VDC between each output terminal and ground)
	DRT1-WD16C-1/DRT1-MD16C-1	0.1 mA max. (24 VDC between each output terminal and V)
ON delay time	---	0.5 ms max.
OFF delay time	---	1.5 ms max.
Insulation method	---	Photocoupler

■ Connectors

I/O Connectors

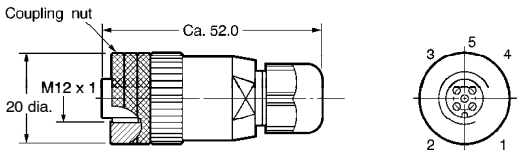
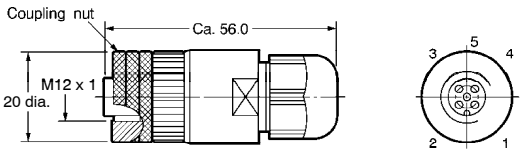
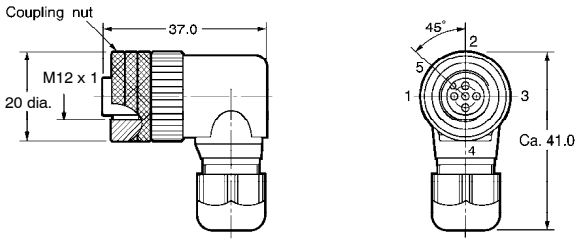
Model	Description
XS2G-D4□□	Connector assembly with press-fit or solder plug*1
XS2H-D421-□□□	Connector on one end of cable*2
XS2W-D42□-□□□	Socket or plug on both ends of cable*3
XS2R-D426-□11F	Y-shaped plug or socket on both ends of cable*4
XS2R-D426-□10F	Y-shaped socket on one end of cable*5
XS2R-D426-1	Y-shaped socket without cable*6



External Power Supply Connectors

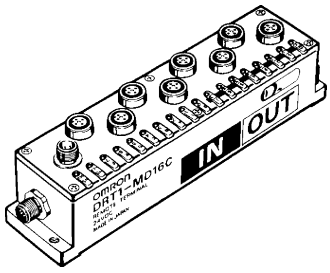
Model	Description
XS2C-D4□□	Connector assembly with press-fit or solder plug*7
XS2F-D42□-□80	Connector on one end of cable*8

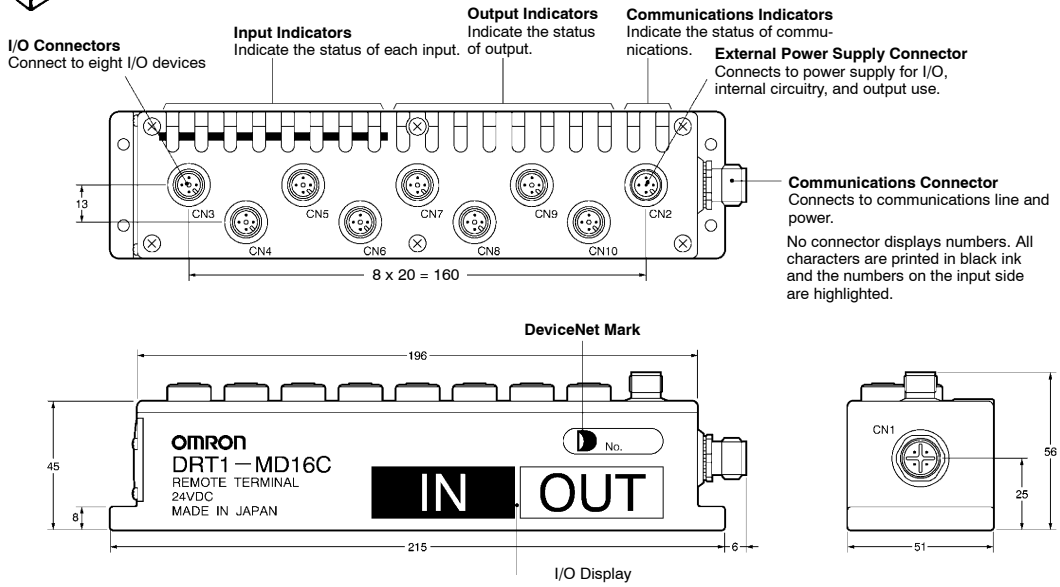
Field Attachable Communications Connector (Conforming to DeviceNet Microconnector)

Dimensions	Model	Manufacturer
	8A5000-31 (Female)	Woodhead Industries
	8A5006-31 (Male)	
	8A5000-32 (Female)	
	8A5006-32 (Male)	
	8A5001-31 (Female)	
	8A5007-31 (Male)	

Contact the following company in U.S. for the above communications connectors.
Woodhead Connectivity
Phone: 1-800-225-7724

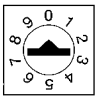
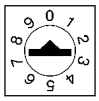
Nomenclature





■ Settings

Address and Baud Rate Settings

Selector	Selector type	Function	Setting
SW1  x 1	Rotary switch	Node address (set value x 1)	1's digit of node address is set. • The value is factory-set to 0.
SW2  x 10	Rotary switch	Node address (set value x 10)	10's digit of node address is set. • The value is factory-set to 0.
	DIP switch	Baud rate	Baud rate is set. 1 / 2 / Baud rate ON / OFF / Prohibited OFF / ON / 500 kbps ON / OFF / 250 kbps OFF / ON / 500 kbps • The value is factory-set to 500 kbps.

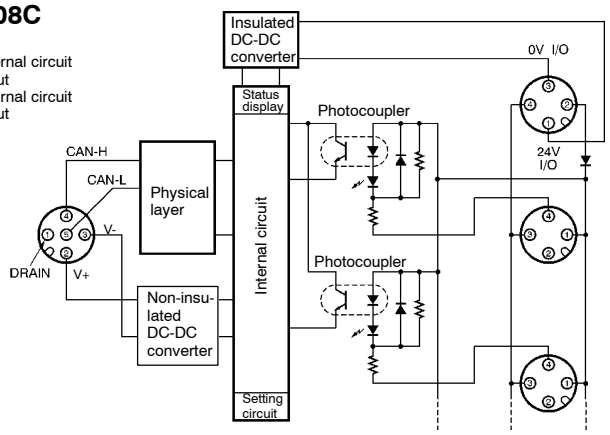
Set the address to a value between 0 and 63.

Installation

■ Internal Circuit Configuration

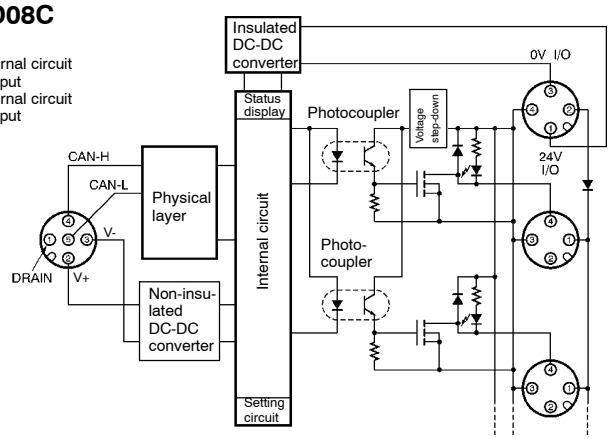
DRT1-ID08C

1: 24 V Internal circuit
2: 24 V Input
3: 0 V Internal circuit
4: 0 V Input



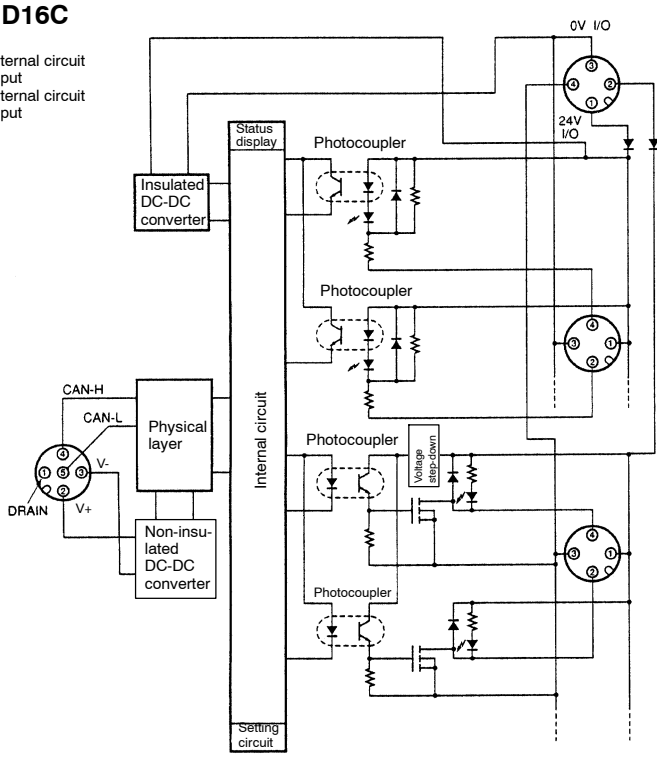
DRT1-OD08C

1: 24 V Internal circuit
2: 24 V Output
3: 0 V Internal circuit
4: 0 V Output



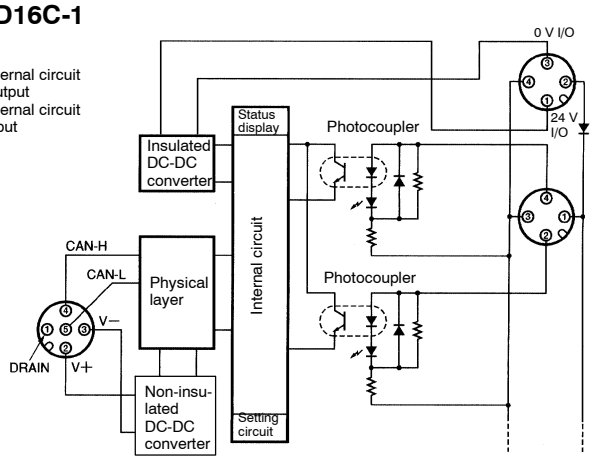
DRT1-MD16C

1: 24 V Internal circuit
2: 24 V Input
3: 0 V Internal circuit
4: 0 V Input



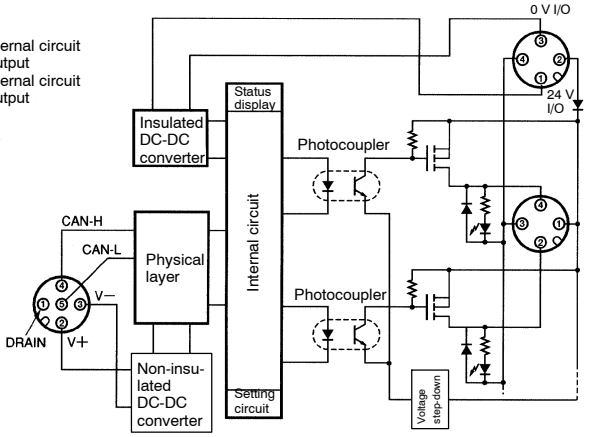
DRT1-HD16C-1

1: 24 V Internal circuit
2: 24 V Output
3: 0 V Internal circuit
4: 0 V Input



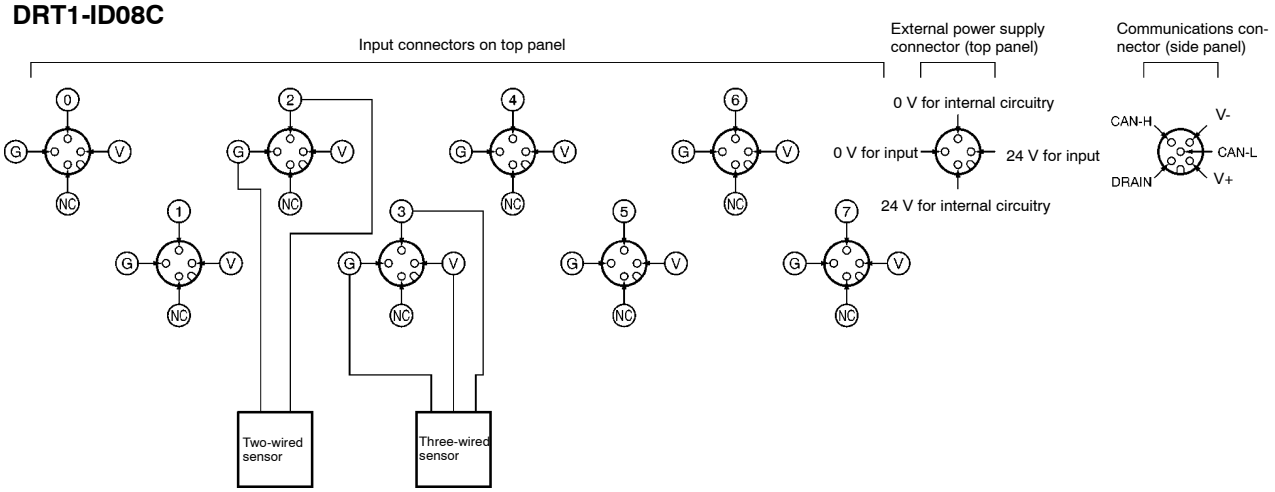
DRT1-WD16C-1

1: 24 V Internal circuit
2: 24 V Output
3: 0 V Internal circuit
4: 0 V Output

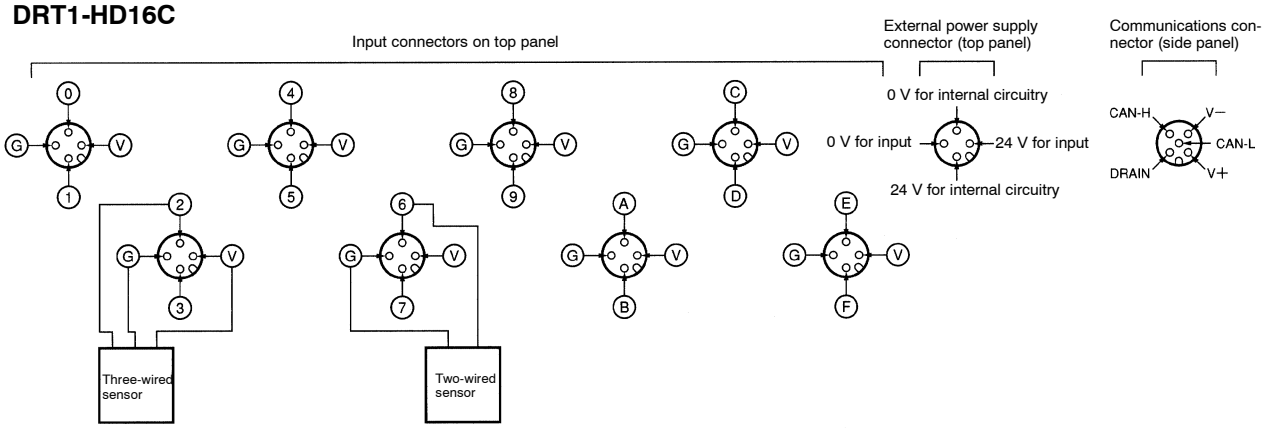


■ Wiring

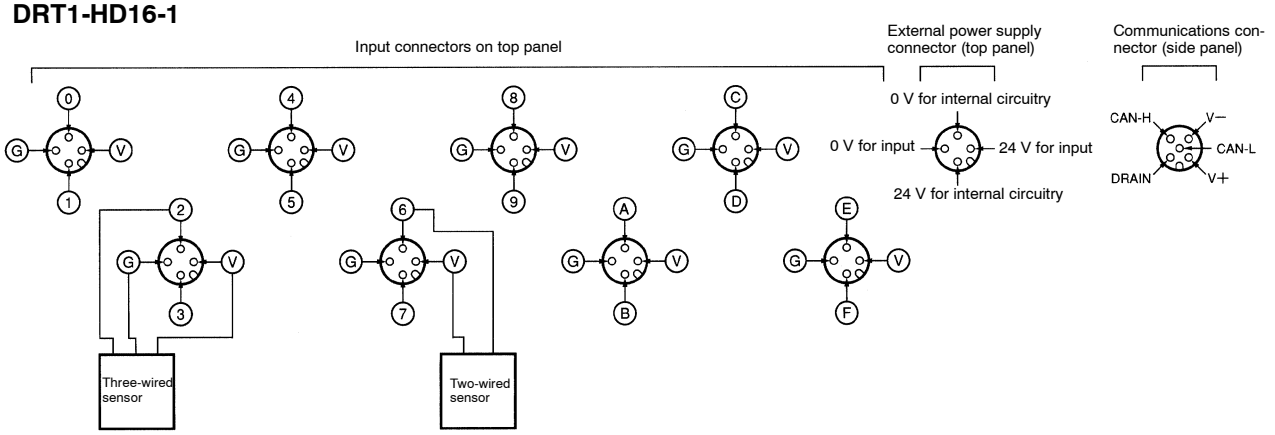
DRT1-ID08C



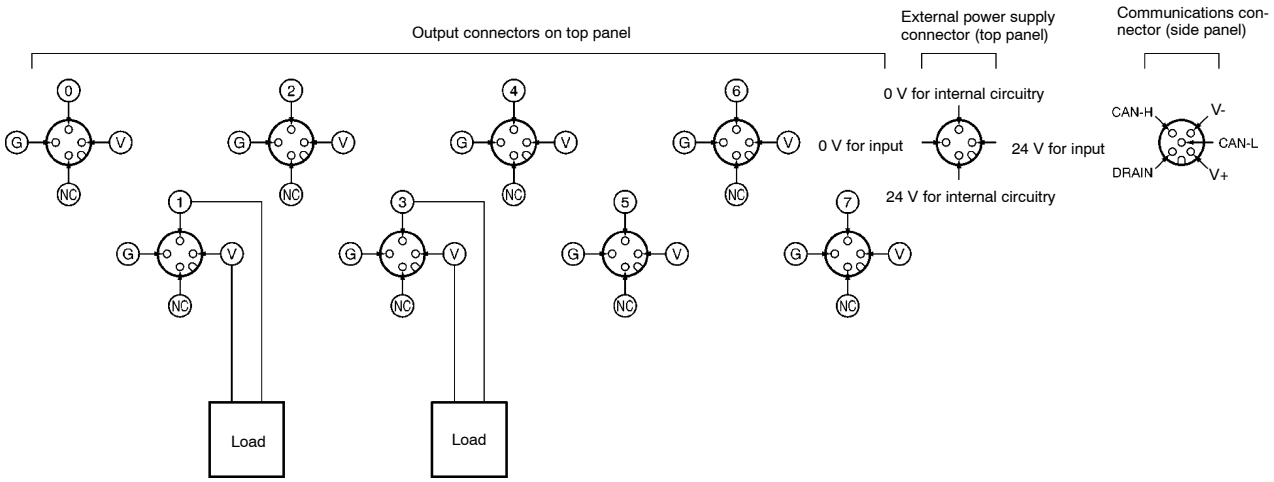
DRT1-HD16C



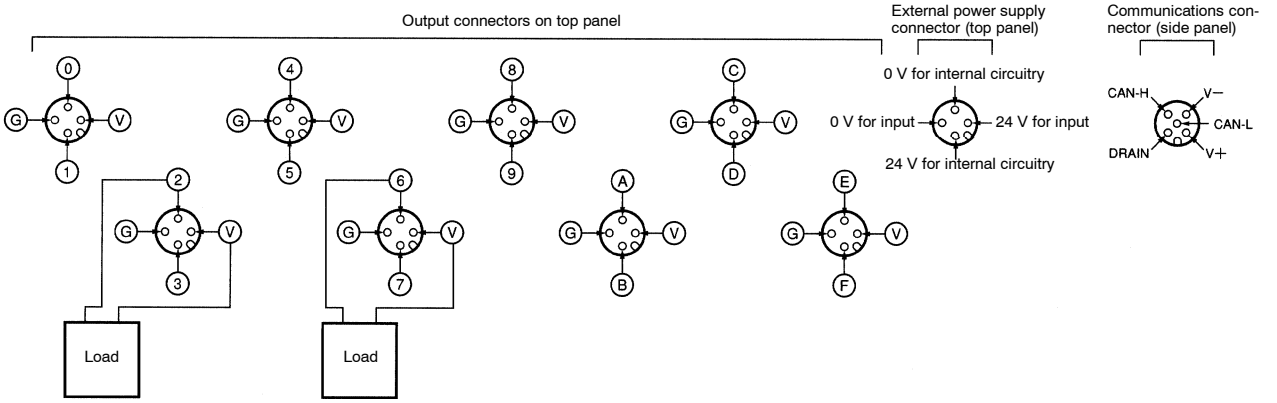
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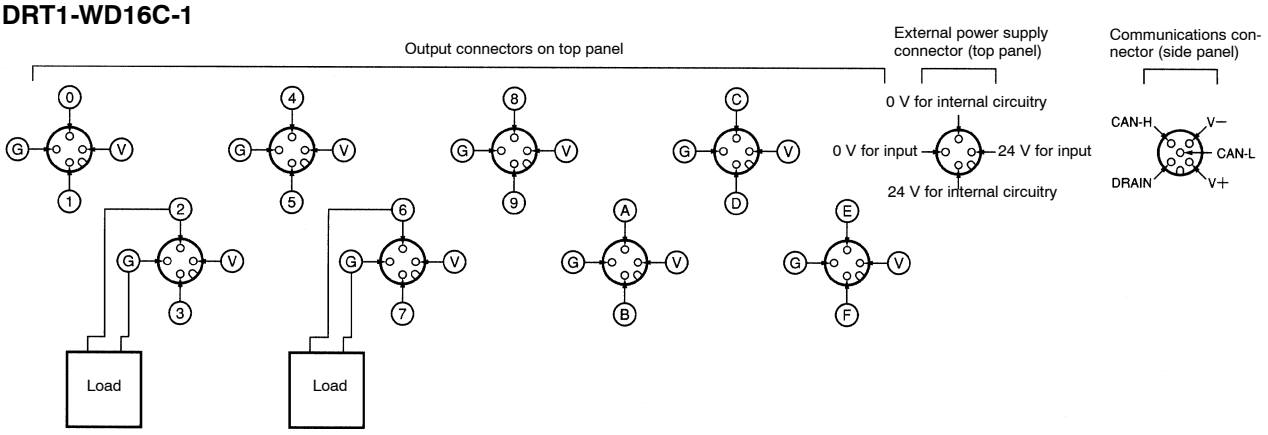
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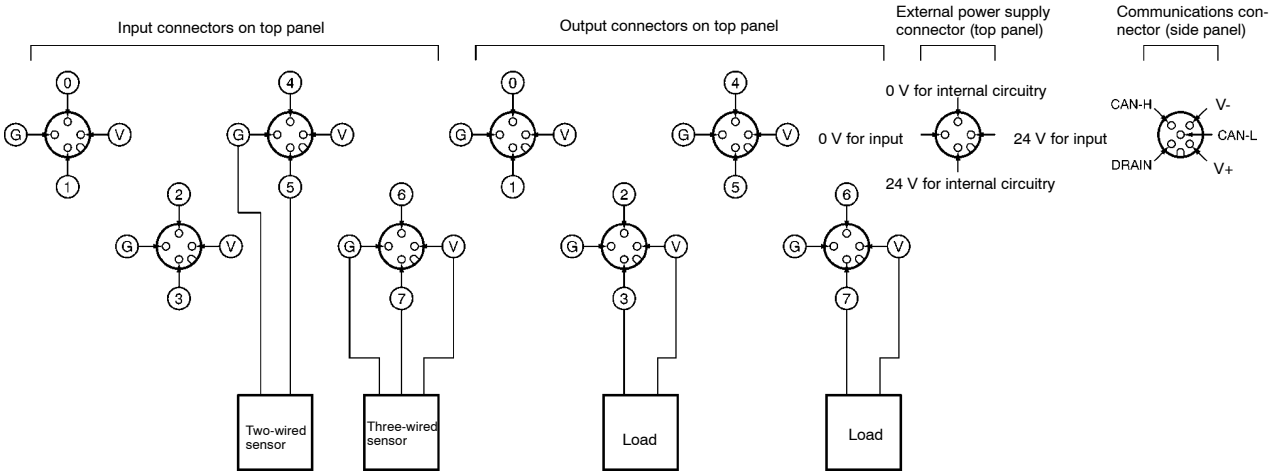
DRT1-WD16C



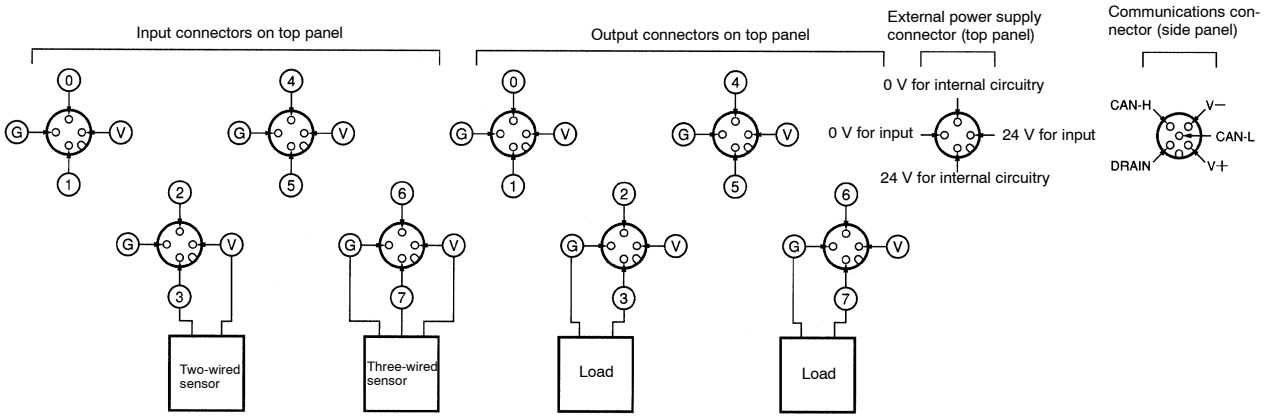
DRT1-WD16C-1



DRT1-MD16C



DRT1-MD16C-1



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

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