

DeviceNet Smart Slaves

Achieving remote maintenance with the smallest environment-resistive slaves in the industry.



Environment-resistive Terminals

DRT2-HD16C(-1)
DRT2-ID08C(-1)
DRT2-OD08C(-1)

Cables and Connectors

Communications Cables

Thin Cables, Connector Type: Micro-size (Standard M12)

Model number	Description
DCA1-5CN□□W1	Cable with shielded connectors at both ends
DCA1-5CN□□F1	Cable with shielded connector (female socket) at one end
DCA1-5CN□□H1	Cable with shielded connector (male plug) at one end
DCA1-5CN□□W5	Cable with shielded connectors at both ends (Mini-size end: plug (male); Micro-size end: socket (female))
DCN2-1	Shielded T-branch connector (one branch line)

Thick Cables, Connector Type: Mini-size

DCA2-5CN□□W1	Cable with shielded connectors at both ends
DCA2-5CN□□F1	Cable with shielded connector (female socket) at one end
DCA1-5CN□□H1	Cable with shielded connector (male plug) at one end
DCN3-11	Shielded T-branch connector (one branch line)
DCN3-12	Shielded T-branch connector (one branch line) An M12 connector is used for the branch line.

Connectors with Terminating Resistance

DRS2-1	Micro-size connector with terminating resistance (male plug)
DRS2-2	Micro-size connector with terminating resistance (female socket)
DRS3-1	Mini-size connector with terminating resistance (male plug)

Cables for Connected Devices and Internal and I/O Power Supplies

Cables for Internal and I/O Power Supplies

Model number	Description
XS4W-D421-1□□-A	Cable with connectors at both ends (plug and socket)
XS4F-D421-1□□-A	Cable with connector at one end (female socket)
XS4H-D421-1□□-A	Cable with connector at one end (male plug)
XS4R-D424-5 T	T-joint

Cables for Connected Devices

Model number	Description
XS2H-D421-□80-A	Cable with connector at one end (female socket)
XS2W-D42□-□81-A	Cable with connectors at both ends (plug and socket)
XS2G-D4□□	Connector plug (male) for custom cable assembly (Crimp and solder models available.)

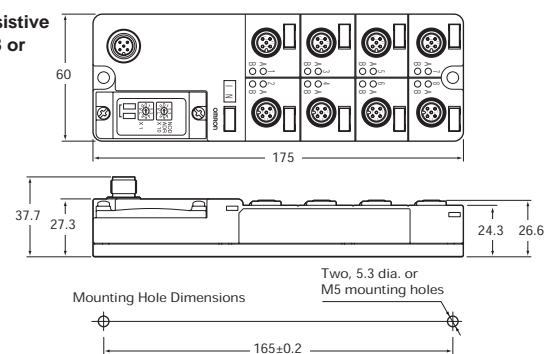
Available Models

Model number	Specification
DRT2-HD16C	16 inputs, NPN
DRT2-HD16C-1	16 inputs, PNP
DRT2-ID08C	8 inputs, NPN
DRT2-ID08C-1	8 inputs, PNP
DRT2-OD08C	8 outputs, NPN
DRT2-OD08C-1	8 outputs, PNP

Dimensions (mm)

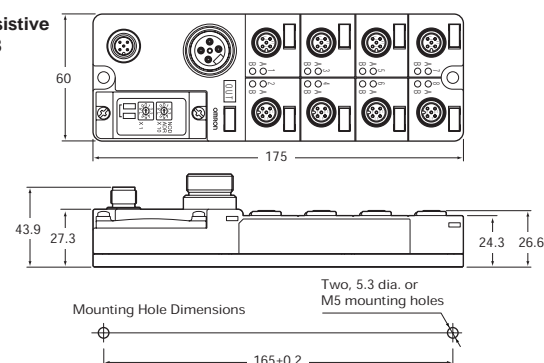
Environment-resistive Terminals with 8 or 16 Inputs

DRT2-HD16C
DRT2-HD16C-1
DRT2-ID08C
DRT2-ID08C-1



Environment-resistive Terminals with 8 Outputs

DRT2-OD08C
DRT2-OD08C-1



Note: Do not use this document to operate the Unit.

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Note: Specifications subject to change without notice.

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High Environmental Resistance (IP67)

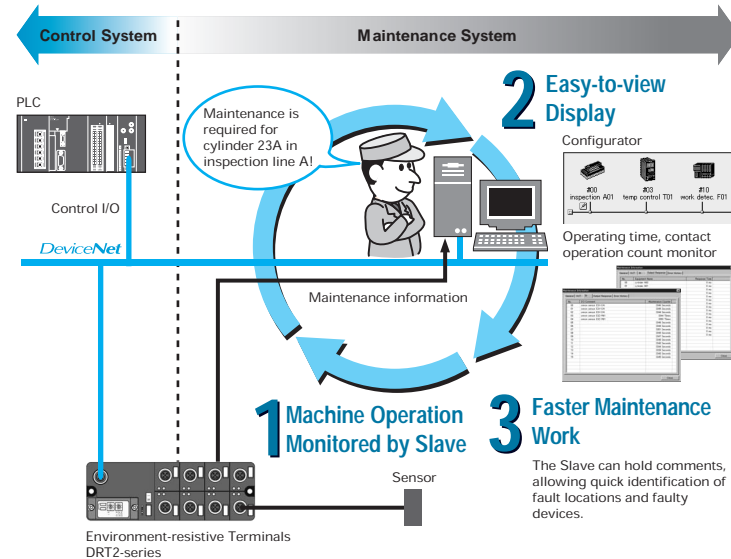
The Terminals have a watertight, oil-resistant construction and use materials that protect against spatter.



Environment-resistant Terminals
DRT2-HD16C(-1)
DRT2-ID08C(-1)
DRT2-OD08C(-1)

Smart Functions

The Terminals provide smart functions that improve remote maintenance. A variety of information can be collected for maintenance systems without influencing control systems and productivity.



List of Functions

○: Supported —: Not supported

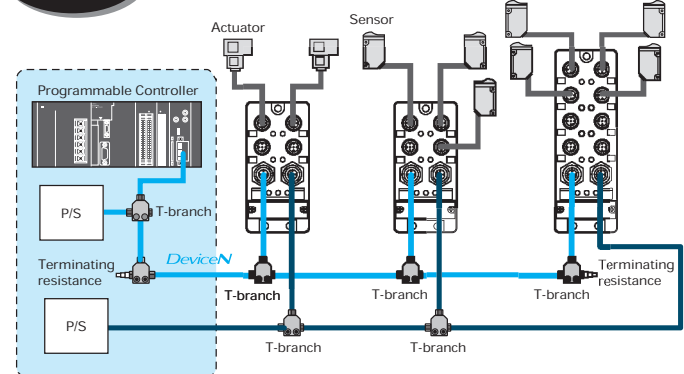
Function	Model	
	Environment-resistant Terminals	
Contact operation counter	○	○
Unit conduction time monitor	○	○
Naming slaves and connected devices	○	○
Communications power voltage monitor	○	○
I/O power status monitor	—	○
Communications error history monitor	○	○
Input filter	○	—
Sensor inrush current prevention	○	—
Sensor power short-circuit protection	○	—
External load short-circuit protection	—	○
Sensor disconnection detection	○	—
Automatic baud rate recognition	○	○
Unit power supply wiring not required	○	○
Input device power supply wiring not required	○	—

Note: The contact operation counter and the unit conduction time monitor cannot be used simultaneously.

Reduced Wiring

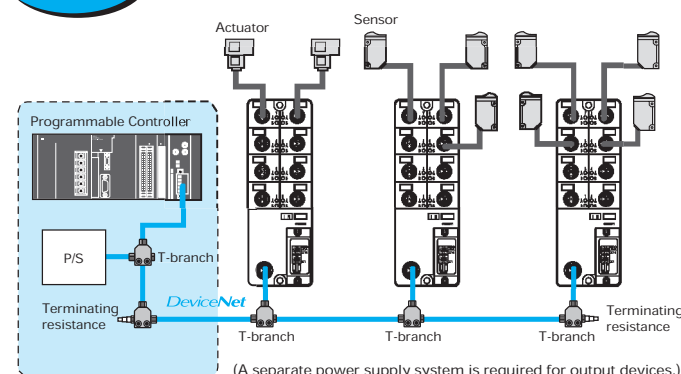
No power supply wiring is required for input devices, such as sensors.

Previous Models Three power supply systems were required: One each for communications, slaves, and input devices.



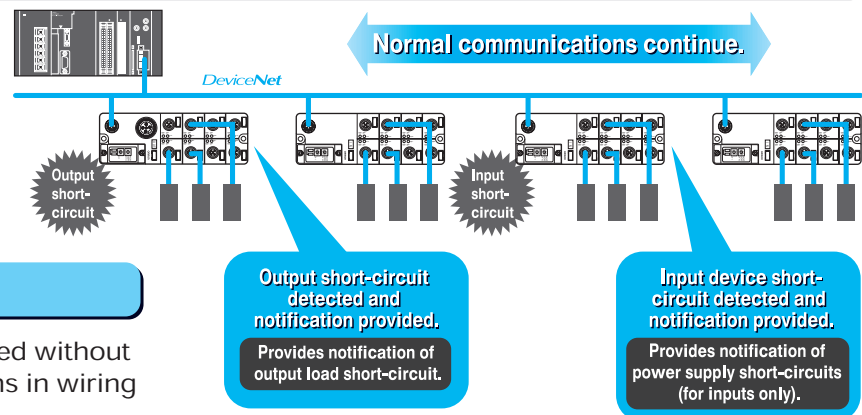
DRT2

Power can be provided to communications, slaves, and input devices with just one power supply system.



Detect Short-circuits to Prevent the System from Going Down

Short-circuits in the power supply for input devices are detected for each connector. Short-circuits in output devices are detected for each contact. Notification of any short-circuits that are detected is provided as part of status information. This enables stable operation.



Maximum Output Load: 1.5 A

Output loads of up to 1.5 A can be controlled without using relays, enabling significant reductions in wiring costs.

General Specifications

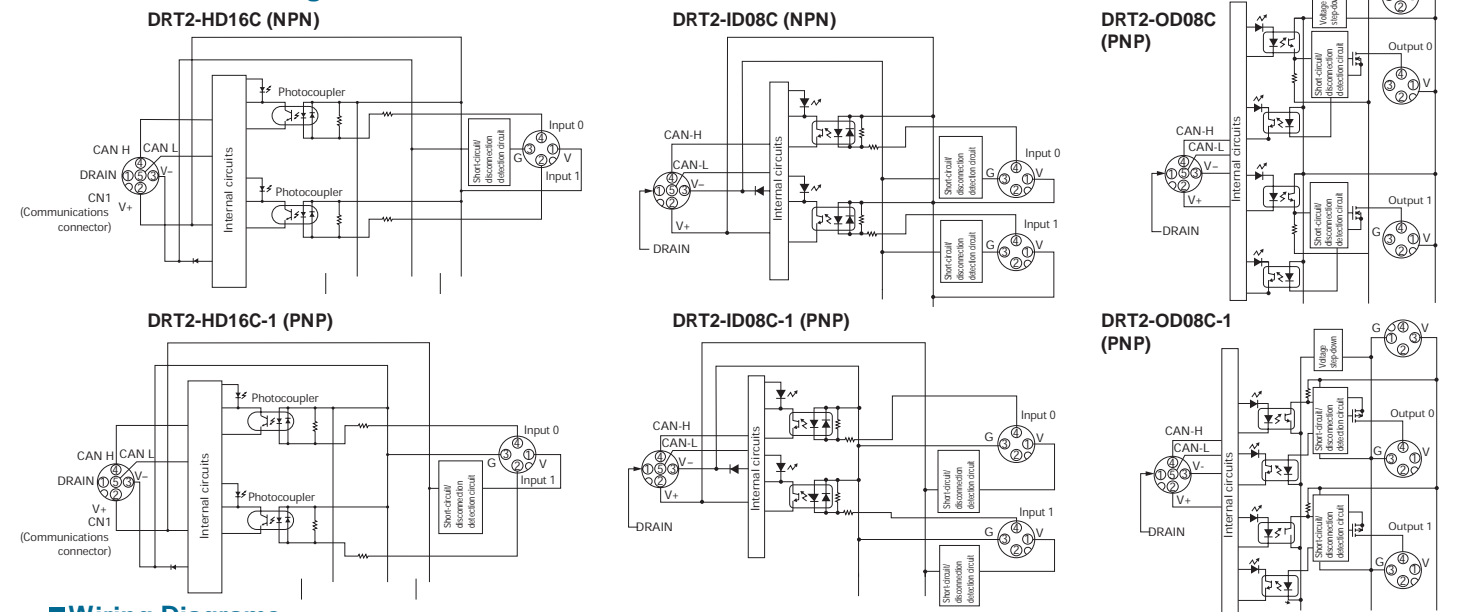
Item	Specification
Communications power supply voltage	11 to 25 VDC (supplied from the communications connector)
Current consumption (See note.)	DRT2-ID08C(-1): 115 mA max. DRT2-HD16C(-1): 190 mA max. DRT2-OD08C(-1): 60 mA max.
Noise immunity	Conforms to IEC61000-4-4: 2 kV (power lines)
Vibration resistance	10 to 150 Hz, 0.7-mm double amplitude
Shock resistance	200 m/s ²
Dielectric strength	500 VAC (between isolated circuits)
Insulation resistance	20 MΩ min. (between isolated circuits)
Ambient operating temperature	-10 to 55°C
Ambient operating humidity	25% to 85%
Ambient atmosphere	No corrosive gases
Ambient storage temperature	-20 to 65°C
Degree of protection	IP67
Mounting method	Mounting using M5 screws (front and back)
Mounting strength	100 N
Communication connector strength	30 N
Screw tightening torque	Round connectors (for communications, power supply, and I/O): 0.39 to 0.49 N·m
Weight	DRT2-HD16C(-1)/ID08C(-1): 340 g DRT2-OD08C(-1): 390 g

Note: Add the current consumption of the input devices to determine the required power supply capacity.

Input Specifications

Item	Specification			
	DRT2-ID08C	DRT2-ID08C-1	DRT2-HD16C	DRT2-HD16C-1
Model number	DRT2-ID08C	DRT2-ID08C-1	DRT2-HD16C	DRT2-HD16C-1
Internal I/O common processing	NPN	PNP	NPN	PNP
Number of I/O points	8 inputs		16 inputs	
ON voltage	9 VDC min. (between each input terminal and V)	9 VDC min. (between each input terminal and G)	9 VDC min. (between each input terminal and V)	9 VDC min. (between each input terminal and G)
OFF voltage	5 VDC min. (between each input terminal and V)	5 VDC min. (between each input terminal and G)	5 VDC min. (between each input terminal and V)	5 VDC min. (between each input terminal and G)
OFF current	1 mA max.			
Input current	3 mA min. per point at 11 VDC; 11 mA max. per point at 24 VDC			
Sensor power supply voltage	Maximum: Communications power supply voltage +0 V Minimum: Communications power supply voltage -1.5 V			

Internal Circuit Diagrams



Wiring Diagrams

