

## 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.)

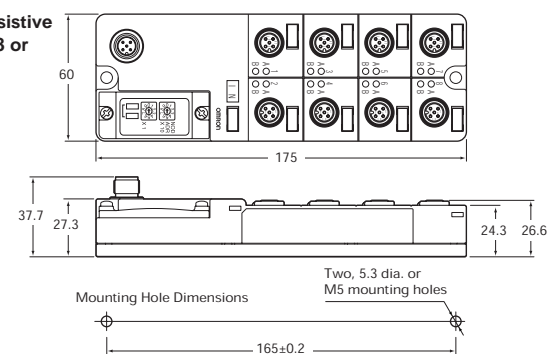
### ■ Available Models

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)

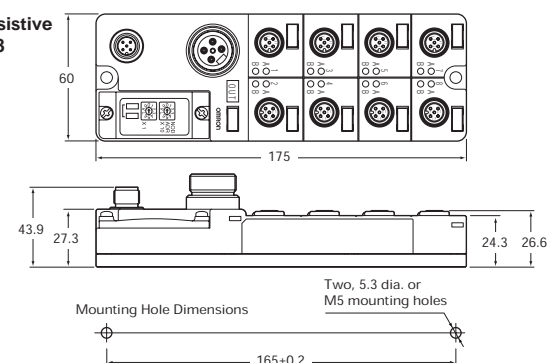
#### Environment-resistive Terminals with 8 or 16 Inputs

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)

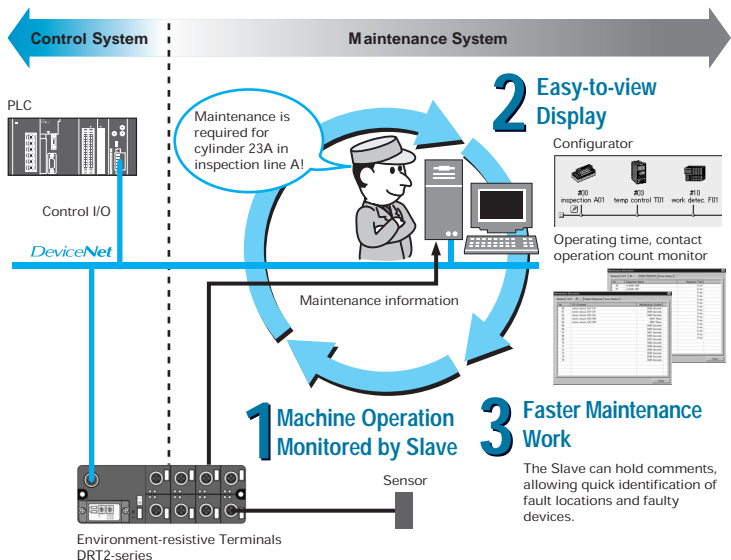
The Terminals have a watertight, oil-resistant construction and use materials that protect against spatter.



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

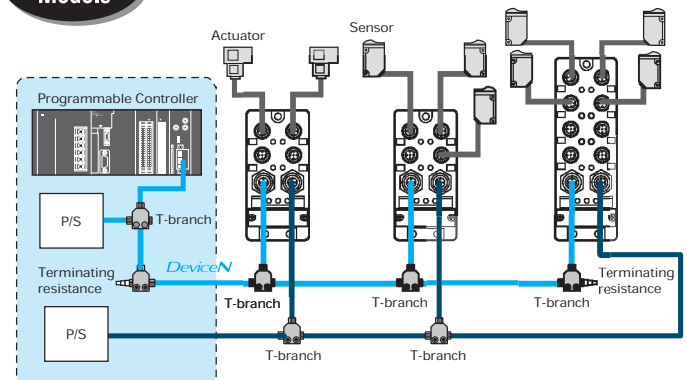
Function	Model	
	Environment-resistant Terminals	Input
Contact operation counter	○	○
Unit conduction time monitor	○	○
Naming slaves and connected devices	○	○
Communications power voltage monitor	○	○
I/O power status monitor	—	○
Communications error history monitor	○	○
Input filter	○	—
Sensor inrush current 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

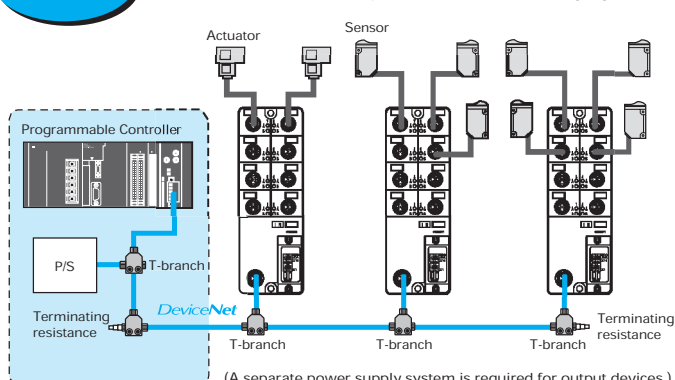
No power supply wiring is required for input devices, such as sensors.

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



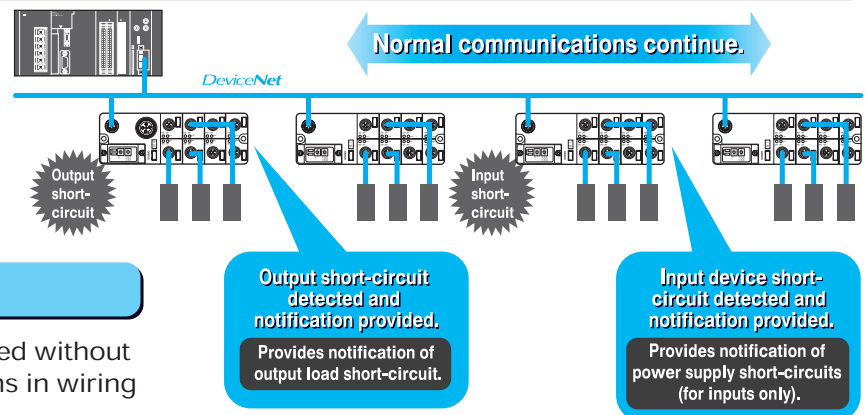
## DRT2

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

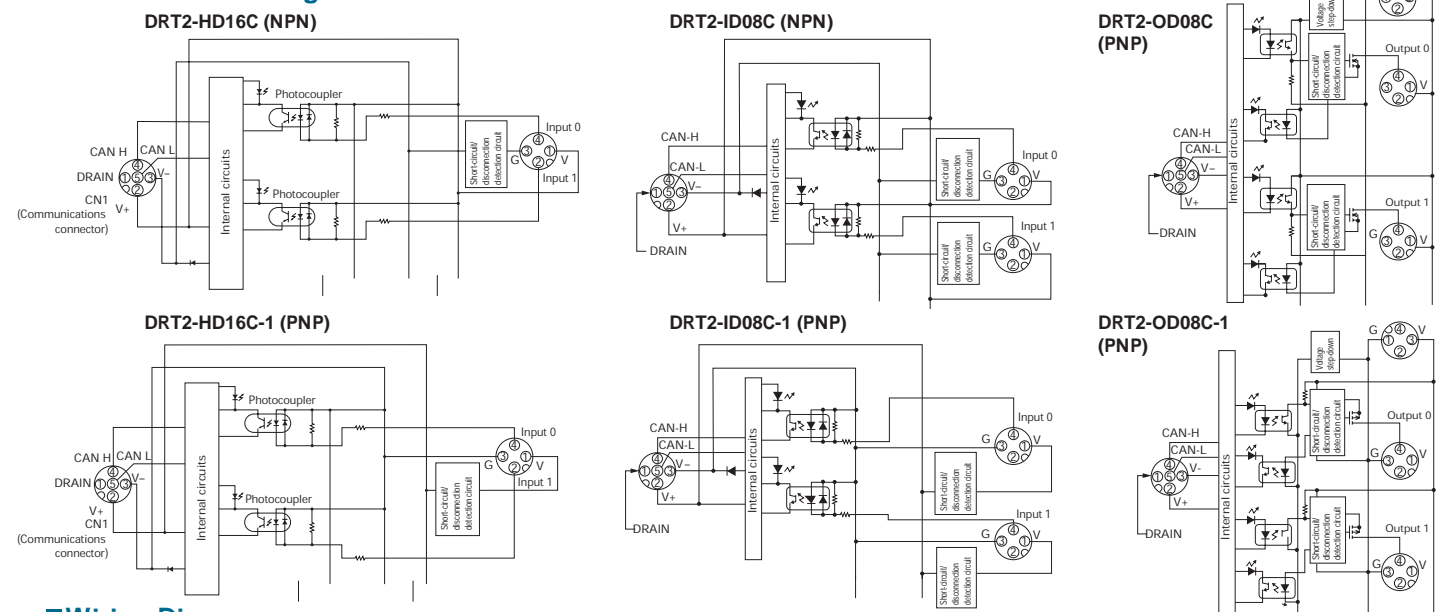
Item	Specification
Communications power supply voltage	11 to 25 VDC (supplied from the communications connector)
Current consumption (See note.)	DRT2-ID08C(-1): 115 mA max. DRT2-HD16C(-1): 190 mA max. DRT2-OD08C(-1): 60 mA max.
Noise immunity	Conforms to IEC61000-4-4: 2 kV (power lines)
Vibration resistance	10 to 150 Hz, 0.7-mm double amplitude
Shock resistance	200 m/s <sup>2</sup>
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

