6-1-1   Current Consumption, Weight, Enclosure Ratings

The following table lists the current consumption, weight, and enclosure ratings for Environment-resistive Slaves.

Model	Communications current consumption	Weight	Enclosure rating
DRT2-ID08C(-1)	115mA max. (24 V DC) 90mA max. (11 V DC)	340 g max.	IP67
DRT2-HD16C(-1)	200mA max. (24 V DC) 130mA max. (11 V DC)	340 g max.	
DRT2-OD08C(-1)	35mA max. (24 V DC) 60mA max. (11 V DC)	390 g max.	
DRT2-ID04CL(-1)	35mA max. (24 V DC) 55mA max. (11 V DC)	275 g max.	
DRT2-OD04CL(-1)	35mA max. (24 V DC) 55mA max. (11 V DC)	275 g max.	
DRT2-ID08CL(-1)	35mA max. (24 V DC) 50mA max. (11 V DC)	390 g max.	
DRT2-HD16CL(-1)	40mA max. (24 V DC) 55mA max. (11 V DC)	390 g max.	
DRT2-OD08CL(-1)	35mA max. (24 V DC) 50mA max. (11 V DC)	390 g max.	
DRT2-WD16CL(-1)	35mA max. (24 V DC) 55mA max. (11 V DC)	390 g max.	
DRT2-MD16CL(-1)	40mA max. (24 V DC) 55mA max. (11 V DC)	390 g max.	

6-1-2   I/O Indicators

Advanced Slaves (DRT2-□D□□C(-1))

The following table describes the meanings of the I/O indicators provided on Advanced Environment-resistive Slaves. Two I/O indicators, □-A and □-B, are provided for each connector.

Indicator	Color	Status	Definition	Meaning
□-A	Yellow	ON	Device operational	Input ON/Output ON
	Red	ON	Unrecoverable fault	Sensor power shorted
		Flashing	Minor fault	Sensor disconnected
	---	OFF	Device operational	Input OFF/output OFF/input power OFF
□-B	Yellow	ON	Device operational	Input ON
	Red	ON	Unrecoverable fault	Output load shorted
	---	OFF	Device operational	Input OFF/input power OFF

The box indicates the number of the corresponding connector.

Standard Slaves (DRT2-□D□□CL(-1)

The following table describes the meanings of the I/O indicators provided on Standard Environment-resistive Slaves. Two I/O indicators, □-A and □-B, are provided for each connector.

Indicator	Color	Status	Definition	Meaning
□-A	Yellow	ON	Device operational	Input ON/Output ON
---		OFF	Device operational	Input OFF/output OFF/input power OFF
□-B	Yellow	ON	Device operational	Input ON
---		OFF	Device operational	Input OFF/input power OFF

The box indicates the number of the corresponding connector.

6-2 Connecting Communications Cables to Environment-resistive Slaves

Communications cables are connected to Environment-resistive Slaves using round connectors.

Either Thin Cables or Thick Cables can be used as communications cables with the round connectors. Slaves that use the standard square connectors can also be connected to the Master Unit through a T-branch Tap.

The following wiring examples are for systems using Environment-resistive Slaves.

6-2-1 System consisting of a thick cable for the trunk line and thin cables for the branch lines
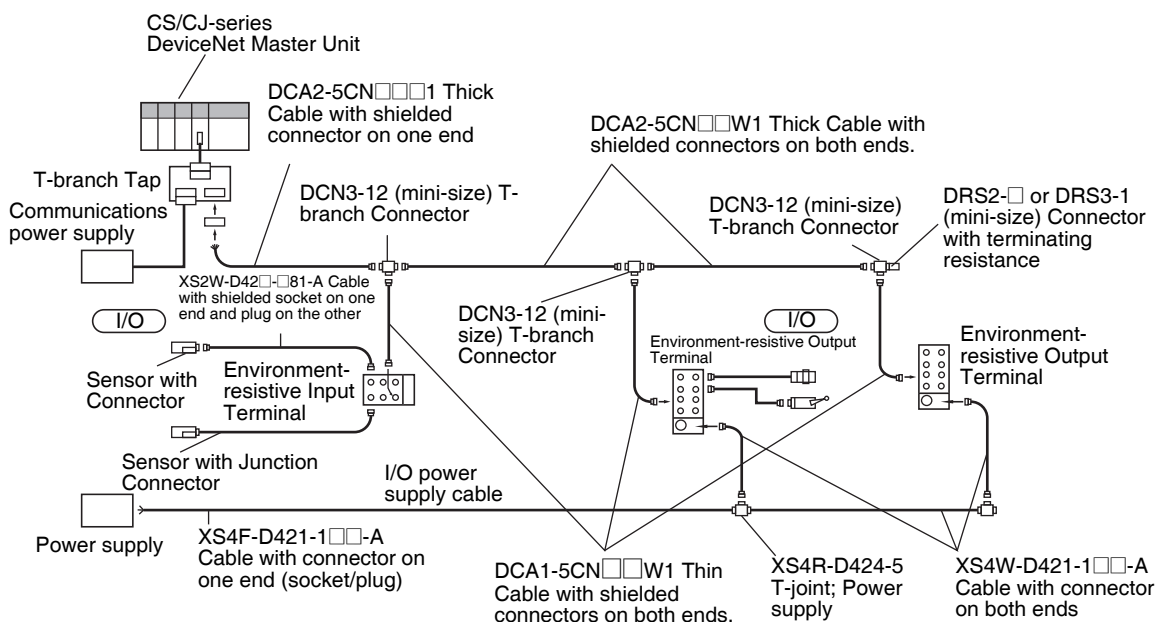
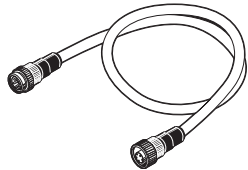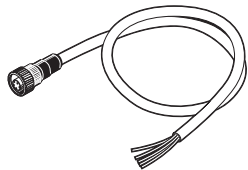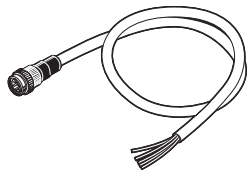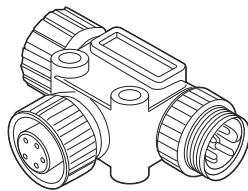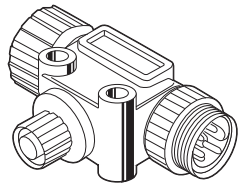## 6-2-2 System consisting of thin cables for both the trunk line and branch lines
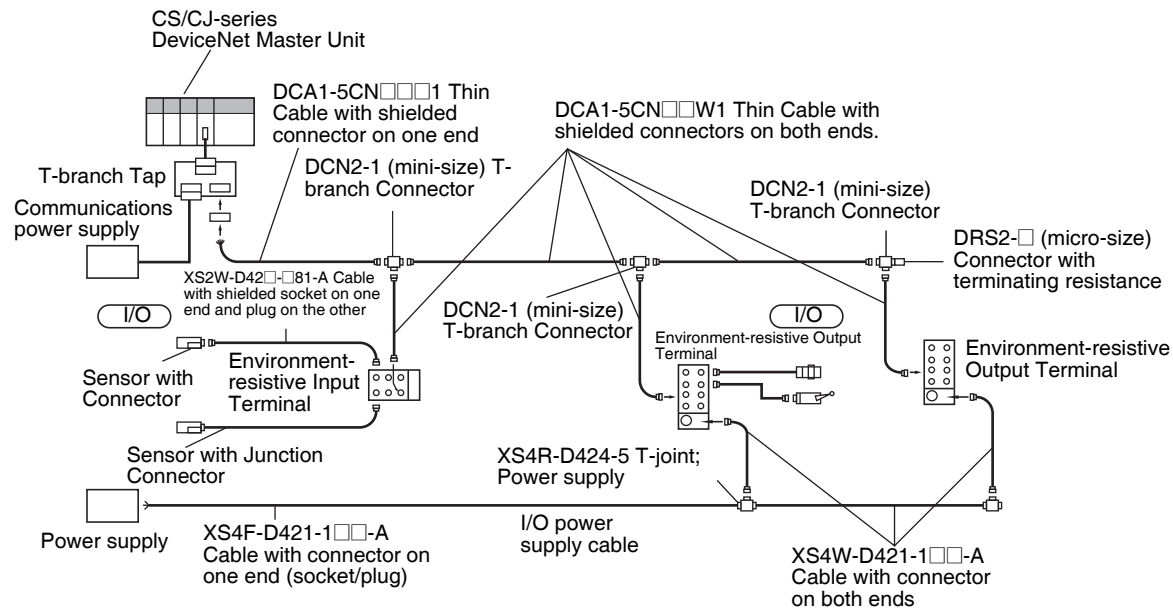
6-2-3 Communication cables used for wiring of environment-resistant terminals

Always use the cables with connectors indicated below for wiring of environment-resistant terminals.

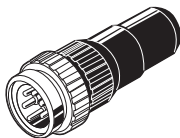### Thin Cables with Connectors: Micro-size (previous M12)

Model	Description	
DCA1-5CN☐☐W1	Cable with shielded connectors on both ends	
DCA1-5CN☐☐F1	Cable with shielded connector (female socket) on one end	
DCA1-5CN☐☐H1	Cable with shielded connector (male plug) on one end	
DCA1-5CN☐☐W5	Cable with shielded connector on both ends (male plug on mini-size end, female socket on micro-size end)	
DCN2-1	Shielded T-branch Connector (for one branch line)	

Thick Cables with Connectors: Mini-size

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

Note   1.   The boxes in the model numbers indicate the cable length in 1-m units. A cable of 0.5 m, however, is indicated as "C5." A thick cable cannot be directly connected to an environment-resistant terminal.

2.   Standard DeviceNet cables are used for these connections, so the cables cannot be used in environments subject to spattering, unless measures are taken to protect the cables.

The following connectors with built-in terminating resistance are also available. A Terminating Resistor can also be connected to a T-branch Connector.

| Model	Details	
DRS2-1	Shielded Connector (male plug, micro-size) with terminating resistance.	
DRS2-2	Shielded Connector (female socket, micro-size) with terminating resistance.	
DRS3-1	Shielded Connector (male plug, mini-size) with terminating resistance.	

Note The allowable current of Thin Cables with shielded connectors is 3 A, and for Thick Cables the allowable current is 8 A.

Multi-drop wiring cannot be used for round communications connectors. Use T-branch wiring and T-branch Taps to connect cables with shielded connectors on both ends.

The rated current capacity of the T-branch Connector's communications power supply pin is 3 A.

A cable with a connector (socket) on one end can be used to connect to a standard DCN1-□C T-branch Tap. A cable with a connector (socket) on one end can also be used to connect to the communications power supply from a T-branch Connector.

6-2-4 Example System Assembly
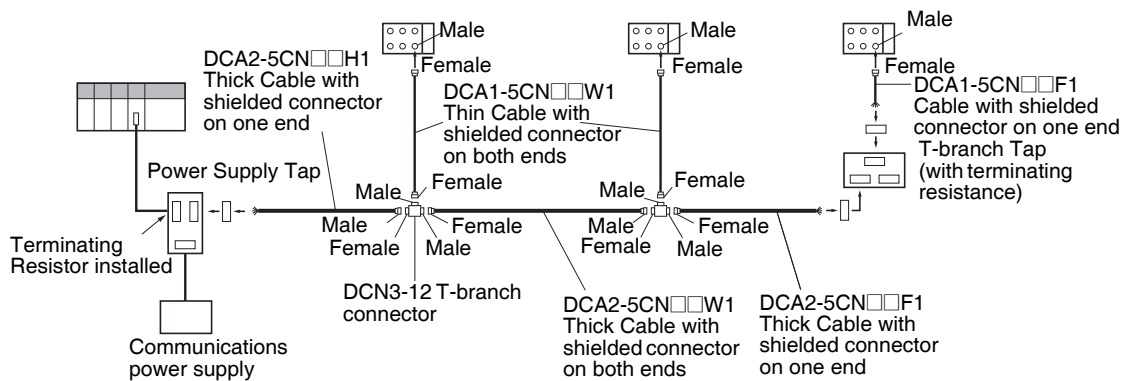
Note Tighten the connector by hand to a torque of 0.39 to 0.49 N·m. If the connector is not tightened sufficiently, it will not provide the expected degree of protection and may become loose due to vibration.

Do not use pliers or other tools to tighten the connectors, because these tools may damage the connectors.

6-3 Maintenance Information Window

This section describes the Maintenance Information Window, which can be used to check the status of Environment-resistive Slaves. The Monitor Device Window can be used to check the same Slave status information, but the examples in this section uses the Maintenance Information Window. Refer to *4-1-2 Maintenance Mode Window* for details on the differences between the Maintenance Information Window and the Monitor Device Window.

6-3-1 Checking Maintenance Information

From the DeviceNet Configurator's Main Window, click the right mouse button and select **Maintenance Information**. (From the Maintenance Mode Window, double-click the icon of the desired Slave.)

General Window

Window for the DRT2-HD16C(-1) and DRT2-ID08C(-1)

Status check boxes (Status flags)

Window for the DRT2-OD08C(-1)

Status check boxes (Status flags)

Window for the DRT2-HD16CL(-1), DRT2-ID08CL(-1), and DRT2-ID04CL(-1)

Status check boxes (Status flags)

Window for the DRT2-WD16CL(-1), DRT2-OD08CL(-1), and DRT2-OD04CL(-1)

Status check boxes (Status flags)

Dimensions: DRT2-ID08CL and DRT2-ID08CL-1

Mounting hole dimensions

Two 5.3 dia. or M5 mounting holes
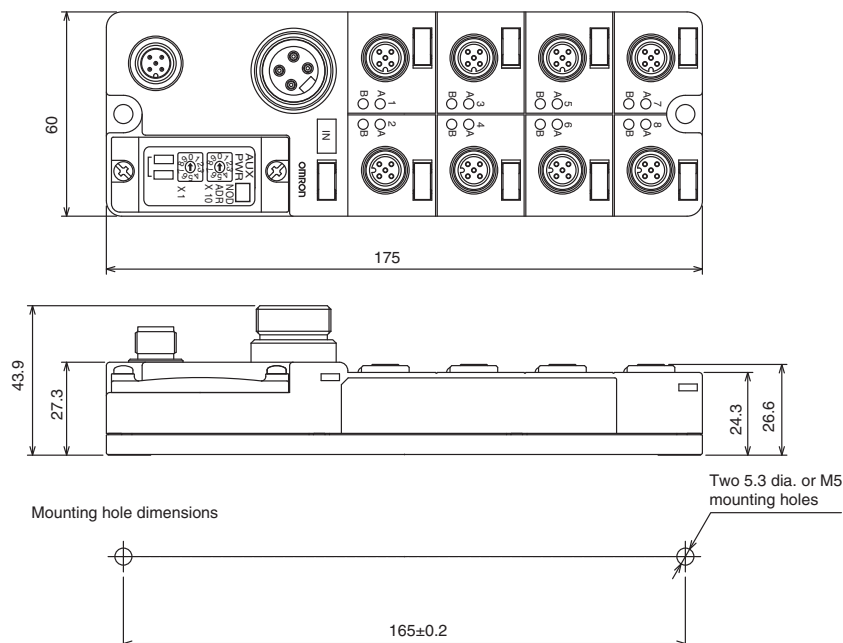
6-5-4   Environment-resistive Terminals with 16 Transistor Inputs (IP67): DRT2-HD16CL (NPN) and DRT2-HD16CL-1 (PNP)

Input Specifications

Item	Specifications	
Model	DRT2-HD16CL	DRT2-HD16CL-1
Internal I/O common	NPN	PNP
Input points	16 points	
ON voltage	15 V DC min. (between each input terminal and V)	15 V DC min. (between each input terminal and G)
OFF voltage	5 V DC max. (between each input terminal and V)	5 V DC max. (between each input terminal and G)
OFF current	1 mA max.	
Input current	6.0 mA max./point (for 24 V DC), 3.0 mA min./point (for 17 V DC)	
I/O power supply voltage	20.4 to 26.4 V DC (24 V DC, −15 to +10%)	
ON delay time	1.5 ms max.	
OFF delay time	1.5 ms max.	
Number of circuits	16 points with one common	

Indicators

I/O Status Indicators   The I/O status indicator displays and their meanings are shown in the following table. Refer to the section following on names of components and functions for details on the location of the I/O status indicators. In the indicator

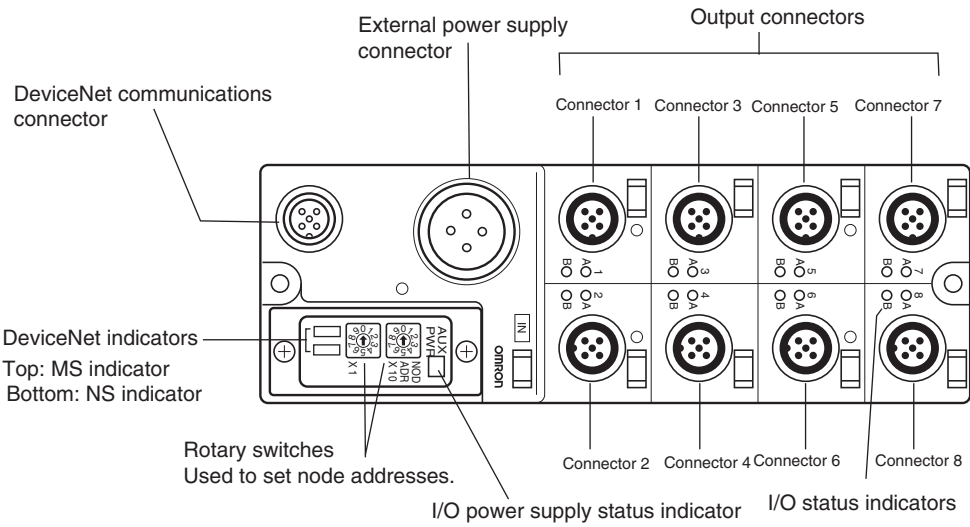name "1-A," the "1" indicates the connector number, and the "A" indicates that it is an I/O status indicator.

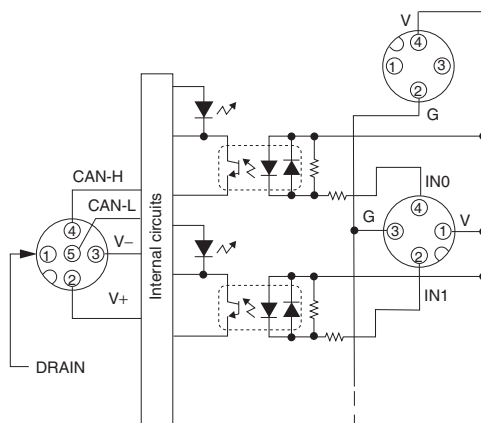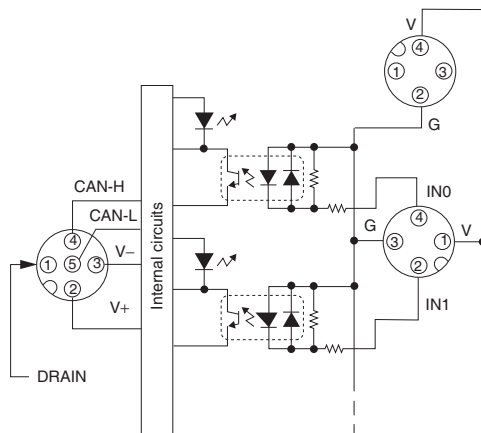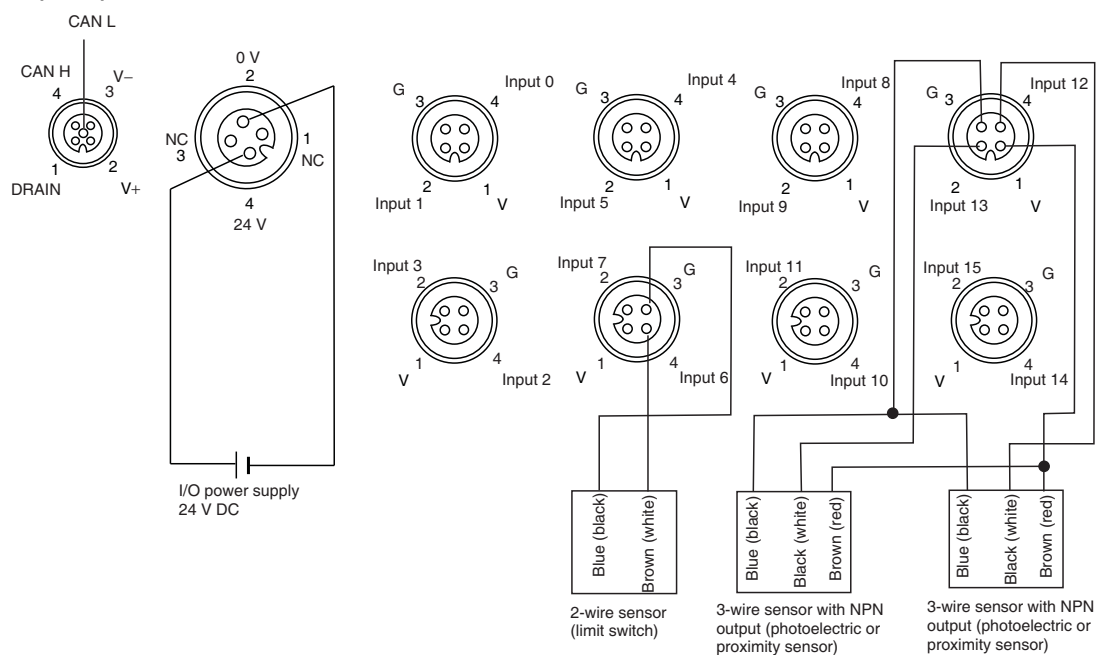| Indicator	Color	Status	Meaning
1-A	Yellow	ON	Input 0 is ON.
1-B	Yellow	ON	Input 1 is ON.
2-A	Yellow	ON	Input 2 is ON.
2-B	Yellow	ON	Input 3 is ON.
3-A	Yellow	ON	Input 4 is ON.
3-B	Yellow	ON	Input 5 is ON.
4-A	Yellow	ON	Input 6 is ON.
4-B	Yellow	ON	Input 7 is ON.
5-A	Yellow	ON	Input 8 is ON.
5-B	Yellow	ON	Input 9 is ON.
6-A	Yellow	ON	Input 10 is ON.
6-B	Yellow	ON	Input 11 is ON.
7-A	Yellow	ON	Input 12 is ON.
7-B	Yellow	ON	Input 13 is ON.
8-A	Yellow	ON	Input 14 is ON.
8-B	Yellow	ON	Input 15 is ON.

Note Although the connectors are numbered from 1 to 8, the input bits are numbered from 0 to 7. (The input bits are also numbered from 0 to 7 in the Configurator display.)

I/O Power Supply Status Indicator

Indicator	Color	Status	Meaning
AUX PWR	Green	ON	I/O power is being supplied.

Component Names and Functions: DRT2-HD16CL and DRT2-HD16CL-1

Internal Circuits

DRT2-HD16CL (NPN)

DRT2-HD16CL-1 (PNP)

Wiring

DRT2-HD16CL (NPN)

DRT2-HD16CL-1 (PNP)

Note Wire colors in parentheses are the previous JIS colors for photoelectric and proximity sensors.

Dimensions: DRT2-HD16CL and DRT2-HD16CL-1