

Environment-resistive Terminals with Transistors (High-function Type)

DRT2-□D08C(-1)/□D16C(-1)

Environment-resistive (IP67) I/O Terminals with Troubleshooting Functions such as Sensor Power Supply Short-circuit Detection



- Equipped with the standard Smart Slave functions that provide powerful preventative maintenance and troubleshooting capabilities.
- High degree of environmental resistance with dust-proof and drip-proof construction.
- Power supply wiring is not required for input devices.
- Connect heavy-load devices (up to 1.5 A).
- Power supply wiring is not required for input devices such as sensors. (Power supply wiring is required for output devices.)
- Detects ground faults or disconnects and notifies the Master.

Smart Slave Functions

Contact operation counter	Unit conduction time monitor	Total ON time monitor	Unit comments
Connected device comments	Network power supply voltage monitor	I/O power supply monitor function (output only)	Communications error log function (output only)
Input filter (input only)	Power-ON inrush current protection (input only)	Sensor power supply short-circuit detection (input only)	
Disconnected sensor detection (input only)	External load short-circuit detection (output only)	Communications speed auto-detection	No need to wire Unit power supply
No need to wire input device power supply (input only)	Last maintenance date		

Ordering Information

Specifications		I/O connections	Rated internal circuit power supply voltage	Rated I/O power supply voltage	Model	
Input	NPN (+ common)	8 points	Sensor I/O connector	Supplied from the communications connector	DRT2-ID08C	
	PNP (- common)				DRT2-ID08C-1	
Output	NPN (- common)			24 VDC	Supplied from the communications connector	DRT2-OD08C
	PNP (+ common)					DRT2-OD08C-1
Input	NPN (+ common)	16 points		Supplied from the communications connector	DRT2-HD16C	
	PNP (- common)				DRT2-HD16C-1	

General Specifications

Item	Model	DRT2-ID08C(-1)	DRT2-HD16C(-1)	DRT2-OD08C(-1)
Communications power supply voltage		11 to 25 VDC (Supplied from the communications connector)		
I/O power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)		
Noise immunity		Conforms to IEC 61000-4-4 2 kV (power line)		
Communications power supply current consumption		115 mA max.	190 mA max.	60 mA max.
Vibration resistance		10 to 60 Hz, 0.7-mm double amplitude, 60 to 150 Hz, 50 m/s ² for 80 min each in the X, Y, and Z directions		
Shock resistance		150 m/s ² , 6 directions, 3 times each		
Dielectric strength		500 VAC between isolated circuits		
Insulation resistance		20 MΩ min. (between isolated circuits)		
Ambient operating temperature		-10°C to 55°C		
Ambient operating humidity		25% to 85% (with no condensation)		
Ambient operating atmosphere		No corrosive gases		
Ambient storage temperature		-20°C to 65°C		
Degree of protection		IP67		
Mounting method		M5 screw mounting (front and back)		
Mounting strength		100 N		
Connector strength		30 N		
Screw tightening torque		Round connectors (communications, supply voltage, and I/O): 0.39 to 0.49 N·m M5 (Unit mounting from front): 1.47 to 1.96 N·m		
Weight		340 g max.		390 g max.
I/O power supply connector		--		7/8-16UN
Communications connector		M12		

Input Specifications

● 8-point Inputs Terminals with Transistors

Item	Model	DRT2-ID08C	DRT2-ID08C-1
Internal I/O common		NPN	PNP
I/O points		8 inputs	
ON voltage		9 VDC min. (between input and V terminal)	9 VDC min. (between input and G terminal)
OFF voltage		5 VDC max. (between input and V terminal)	5 VDC max. (between input and G terminal)
OFF current		1.0 mA max.	
Input current		3.0 mA min./point (at 11 VDC) 11.0 mA max./point (at 24 VDC)	
Power supply voltage for sensor		Communications power supply voltage +0 V max. Communications power supply voltage -1.5 V min.	
ON delay time		1.5 ms max.	
OFF delay time		1.5 ms max.	
Number of circuits per common		8 per common	

● 16-point Inputs Terminals with Transistors

Item	Model	DRT2-HD16C	DRT2-HD16C-1
Internal I/O common		NPN	PNP
I/O points		16 inputs	
ON voltage		9 VDC min. (between input and V terminal)	9 VDC min. (between input and G terminal)
OFF voltage		5 VDC max. (between input and V terminal)	5 VDC max. (between input and G terminal)
OFF current		1.0 mA max.	
Input current		3.0 mA min./point (at 17 VDC) 11.0 mA max./point (at 24 VDC)	
Power supply voltage for sensor		Communications power supply voltage +0 V max. Communications power supply voltage -1.5 V min.	
ON delay time		1.5 ms max.	
OFF delay time		1.5 ms max.	
Number of circuits per common		16 per common	

Output Specifications

● 8-point Outputs Terminals with Transistors

Item	Model	DRT2-OD08C	DRT2-OD08C-1
Internal I/O common		NPN	PNP
I/O points		8 inputs	
Rated output current		1.5 A per point, 8.0 A per common	
Residual voltage		1.2 V max. (1.5 A DC between each output terminal and G)	1.2 V max. (1.5 A DC between each output terminal and V)
Leakage current		0.1 mA max.	
I/O power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)	
ON delay time		0.5 ms max.	
OFF delay time		1.5 ms max.	
Number of circuits per common		8 per common	

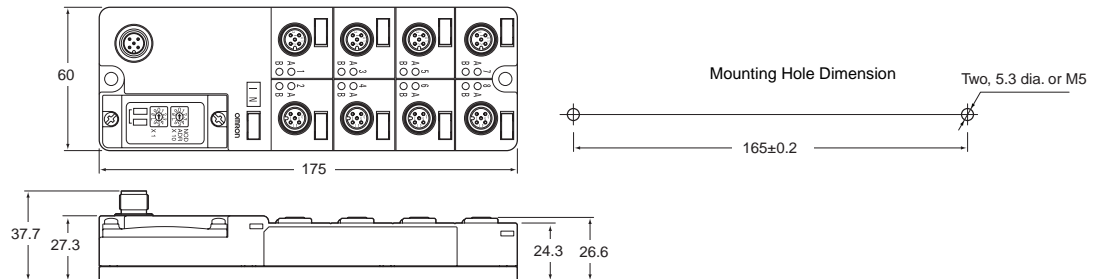
Note: Refer to Peripheral Devices on page 153 for information on applicable connectors.

Dimensions

(Unit: mm)

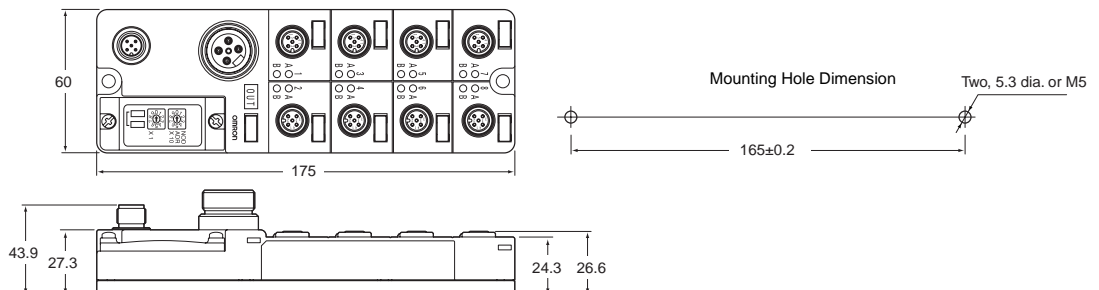
● Environment-resistant Terminals (8 or 16 Inputs)

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



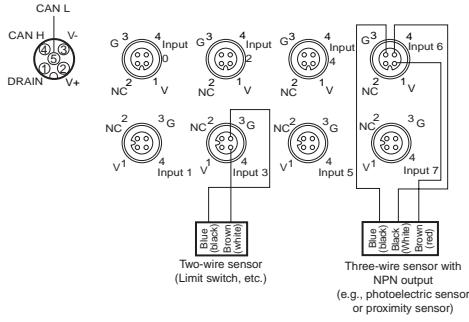
● Environment-resistant Terminals (8 Outputs)

DRT2-OD08C
DRT2-OD08C-1

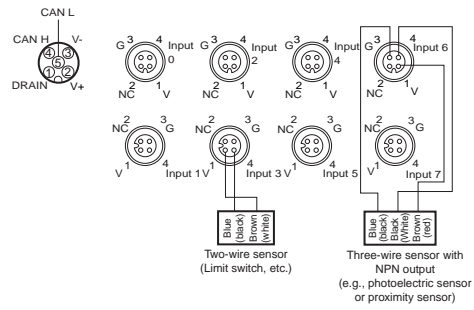


Wiring Diagrams

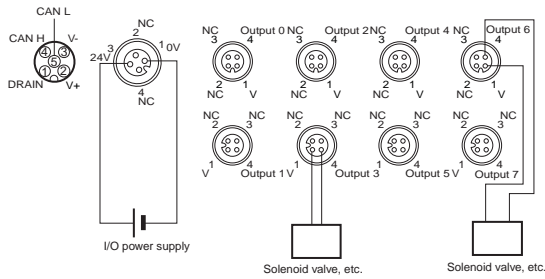
DRT2-ID08C (NPN)



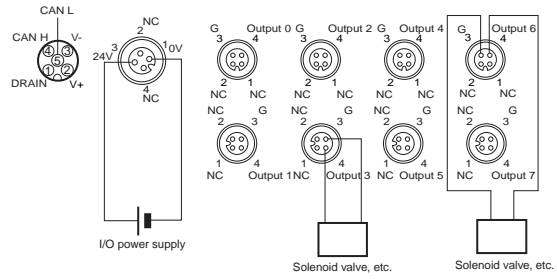
DRT2-ID08C-1 (PNP)



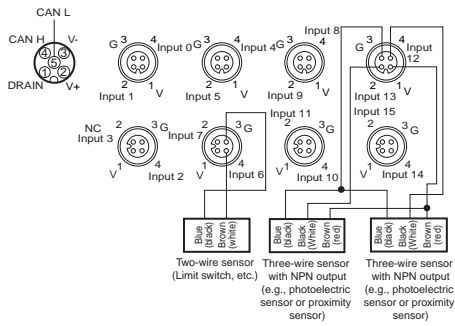
DRT2-OD08C (NPN)



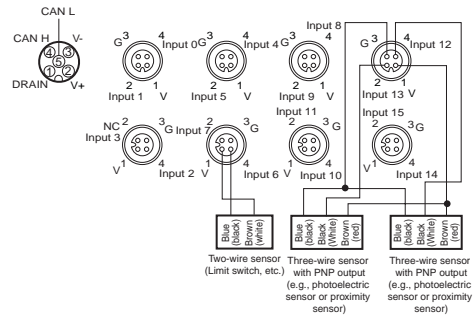
DRT2-OD08C-1 (PNP)



DRT2-HD16C (NPN)



DRT2-HD16C-1 (PNP)



Environment-resistive Terminals with Transistors (Standard Type)

DRT2-□D04CL(-1)/□D08CL(-1)/□D16CL(-1)

Remote I/O Terminals with High Degree of Environmental Resistance (IP67) in Product Lineup Including Economical Input, Output, and Mixed I/O Models



- Common Smart Slave functionality provides strong support for equipment operation status monitoring and effective maintenance.
- High degree of environmental resistance with dust-proof and drip-proof construction. (IP67)
- Models with one connector for two outputs are available to make easier connection with hydraulic valve devices. (Models with 16 outputs and models with 16 mixed I/O)

Smart Slave Functions

Operation time monitor (I/O only) *	Contact operation counter	Unit conduction time monitor
Total ON time monitor	Unit comments	Connected device comments
Network power supply voltage monitor	I/O power supply monitor function	Communications error log function
Input filter (input or I/O only)	Power-ON inrush current protection (input or I/O only)	
Communications speed auto-detection	No need to wire Unit power supply	Last maintenance date

* The operation time monitor can be used with the DRT2-□D04CL(-1).

Ordering Information

Specifications		I/O connections	Rated internal circuit power supply voltage	Rated I/O power supply voltage	Model
Inputs	NPN (+ common)	4 points	Sensor I/O connector	Supplied from the communications connector	DRT2-ID04CL
	PNP (- common)				DRT2-ID04CL-1
Outputs	NPN (- common)				DRT2-OD04CL
	PNP (+ common)				DRT2-OD04CL-1
Inputs	NPN (+ common)	8 points			DRT2-ID08CL
	PNP (- common)				DRT2-ID08CL-1
Outputs	NPN (- common)				DRT2-OD08CL
	PNP (+ common)				DRT2-OD08CL-1
Inputs	NPN (+ common)	16 points	DRT2-HD16CL		
	PNP (- common)		DRT2-HD16CL-1		
Outputs	NPN (- common)		DRT2-WD16CL		
	PNP (+ common)		DRT2-WD16CL-1		
I/O	NPN (input: + common, output: - common)	8 inputs/ 8 outputs	DRT2-MD16CL		
	PNP (input: - common, output: + common)		DRT2-MD16CL-1		

General Specifications

Item	Model	DRT2-ID04CL(-1)	DRT2-OD04CL(-1)	DRT2-ID08CL(-1)	DRT2-OD08CL(-1)	DRT2-HD16CL(-1)	DRT2-WD16CL(-1)	DRT2-MD16CL(-1)
Communications power supply voltage	11 to 25 VDC (Supplied from the communications connector)							
I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15%/+10%)							
Noise immunity	Conforms to IEC 61000-4-4 2 kV (power line)							
Communications power supply current consumption	50 mA max.	45 mA max.	50 mA max.			55 mA max.		
Vibration resistance	10 to 60 Hz with double-amplitude of 0.7 mm, 60 to 150 Hz and 50 m/s ² in X, Y, and Z directions for 80 min each							
Shock resistance	150m/s ² , 6 directions, 3 times each							
Dielectric strength	500 VAC between isolated circuits							
Insulation resistance	20 MΩ min. (between isolated circuits)							
Ambient operating temperature	-10°C to 55°C							
Ambient operating humidity	25% to 85% (with no condensation)							
Ambient operating atmosphere	No corrosive gases							
Ambient storage temperature	-20°C to 65°C							
Degree of protection	IP67							
Mounting method	M5 screw mounting (front and back)							
Mounting strength	100 N							
Connector strength	30 N							
Screw tightening torque	Round connectors (communications, supply voltage, and I/O): 0.39 to 0.49 N•m M5 (Unit mounting from front): 1.47 to 1.96 N•m							
Weight	275 g max.			390 g max.				
I/O power supply connector	7/8-16UN							
Communications connector	M12							

Input Specifications

● 4-input Models

Item	Model	DRT2-ID04CL	DRT2-ID04CL-1
Internal I/O common		NPN	PNP
I/O points	4 inputs		
ON voltage		15 VDC min. (between each input terminal and V)	15 VDC min. (between each input terminal and G)
OFF voltage		5 VDC max. (between each input terminal and V)	5 VDC max. (between each input terminal and G)
OFF current	1.0 mA max.		
Input current	6.0 mA max. per point at 24 VDC 3.0 mA max. per point at 17 VDC		
I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15%/+10%)		
ON delay time	1.5 ms max.		
OFF delay time	1.5 ms max.		
Number of circuits per common	4 per common		

● 16-input Models

Item	Model	DRT2-HD16CL	DRT2-HD16CL-1
Internal I/O common		NPN	PNP
I/O points	16 inputs		
ON voltage		15 VDC min. (between each input terminal and V)	15 VDC min. (between each input terminal and G)
OFF voltage		5 VDC max. (between each input terminal and V)	5 VDC max. (between each input terminal and G)
OFF current	1.0 mA max.		
Input current	6.0 mA max. per point at 24 VDC 3.0 mA max. per point at 17 VDC		
I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15%/+10%)		
ON delay time	1.5 ms max.		
OFF delay time	1.5 ms max.		
Number of circuits per common	16 per common		

● 8-input Models

Item	Model	DRT2-ID08CL	DRT2-ID08CL-1
Internal I/O common		NPN	PNP
I/O points	8 inputs		
ON voltage		15 VDC min. (between each input terminal and V)	15 VDC min. (between each input terminal and G)
OFF voltage		5 VDC max. (between each input terminal and V)	5 VDC max. (between each input terminal and G)
OFF current	1.0 mA max.		
Input current	6.0 mA max. per point at 24 VDC 3.0 mA max. per point at 17 VDC		
I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15%/+10%)		
ON delay time	1.5 ms max.		
OFF delay time	1.5 ms max.		
Number of circuits per common	8 per common		

● 8-input/8-output Models

Item	Model	DRT2-MD16CL	DRT2-MD16CL-1
Internal I/O common		NPN	PNP
I/O points	8 inputs		
ON voltage		15 VDC min. (between each input terminal and V)	15 VDC min. (between each input terminal and G)
OFF voltage		5 VDC max. (between each input terminal and V)	5 VDC max. (between each input terminal and G)
OFF current	1.0 mA max.		
Input current	6.0 mA max. per point at 24 VDC 3.0 mA max. per point at 17 VDC		
I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15%/+10%)		
ON delay time	1.5 ms max.		
OFF delay time	1.5 ms max.		
Number of circuits per common	8 per common		

Output Specifications

● 4-output Models

Item	Model	DRT2-OD04CL	DRT2-OD04CL-1
Internal I/O common		NPN	PNP
I/O points		4 outputs	
Rated output current		0.5 A per point, 2.0 A per common	
Residual voltage		1.2 V max. (0.5 A DC between each output terminal and G)	1.2 V max. (0.5 A DC between each output terminal and V)
Leakage current		0.1 mA max.	
I/O power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)	
ON delay time		0.5 ms max.	
OFF delay time		1.5 ms max.	
Number of circuits per common		4 per common	

● 8-output Models

Item	Model	DRT2-OD08CL	DRT2-OD08CL-1
Internal I/O common		NPN	PNP
I/O points		8 outputs	
Rated output current		0.5 A per point, 4 A per common	
I/O power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)	
Residual voltage		1.2 V max. (0.5 A DC between each output terminal and G)	1.2 V max. (0.5 A DC between each output terminal and V)
Leakage current		0.1 mA max.	
I/O power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)	
ON delay time		0.5 ms max.	
OFF delay time		1.5 ms max.	
Number of circuits per common		8 per common	

● 16-output Models

Item	Model	DRT2-WD16CL	DRT2-WD16CL-1
Internal I/O common		NPN	PNP
I/O points		16 outputs	
Rated output current		0.5 A per point, 4 A per common	
I/O power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)	
Residual voltage		1.2 V max. (0.5 A DC between each output terminal and G)	1.2 V max. (0.5 A DC between each output terminal and V)
Leakage current		0.1 mA max.	
I/O power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)	
ON delay time		0.5 ms max.	
OFF delay time		1.5 ms max.	
Number of circuits per common		16 per common	

● 8-input/8-output Models

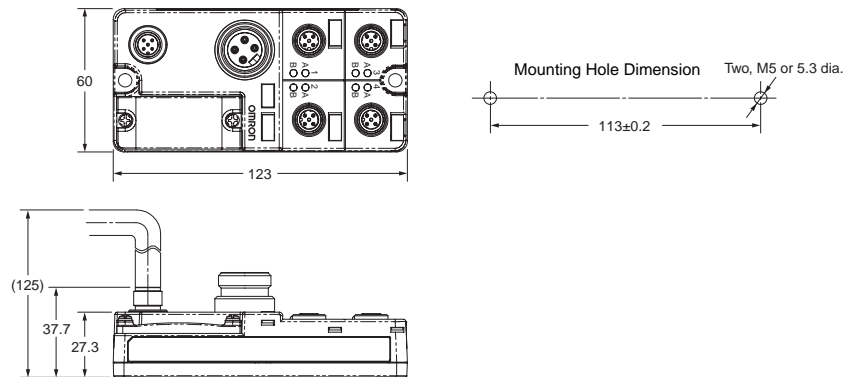
Item	Model	DRT2-MD16CL	DRT2-MD16CL-1
Internal I/O common		NPN	PNP
I/O points		8 outputs	
Rated output current		0.5 A per point, 4 A per common	
I/O power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)	
Residual voltage		1.2 V max. (0.5 A DC between each output terminal and G)	1.2 V max. (0.5 A DC between each output terminal and V)
Leakage current		0.1 mA max.	
I/O power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)	
ON delay time		0.5 ms max.	
OFF delay time		1.5 ms max.	
Number of circuits per common		8 per common	

Note: Refer to Peripheral Devices on page 153 for information on applicable connectors.

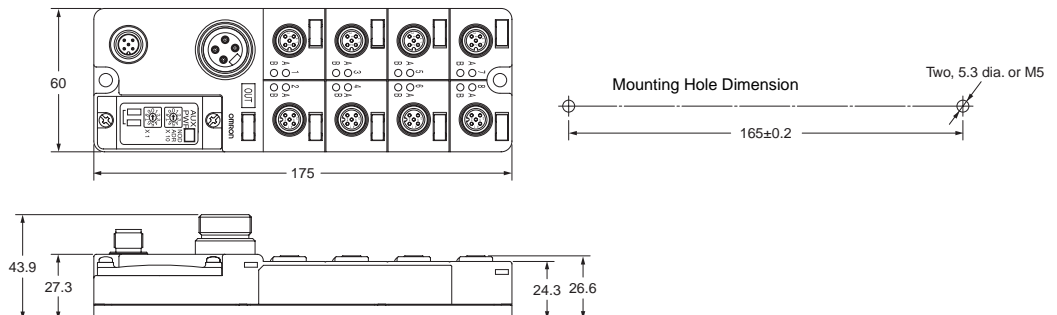
(Unit: mm)

Dimensions

DRT2-ID04CL(-1)
DRT2-OD04CL(-1)

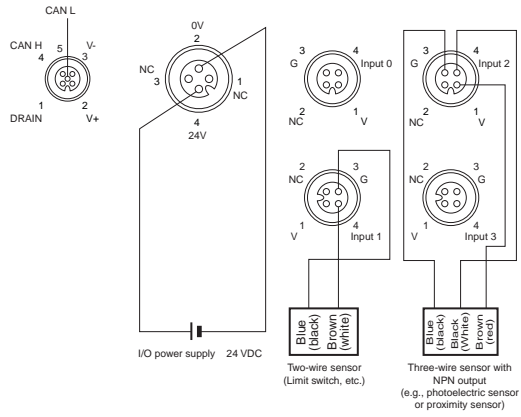


DRT2-ID08CL(-1)
DRT2-OD08CL(-1)
DRT2-HD16CL(-1)
DRT2-WD16CL(-1)
DRT2-MD16CL(-1)

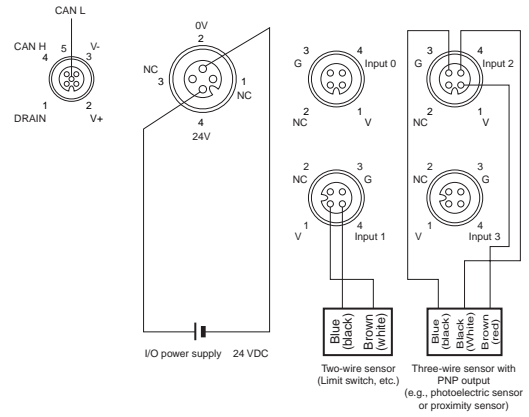


Wiring Diagrams

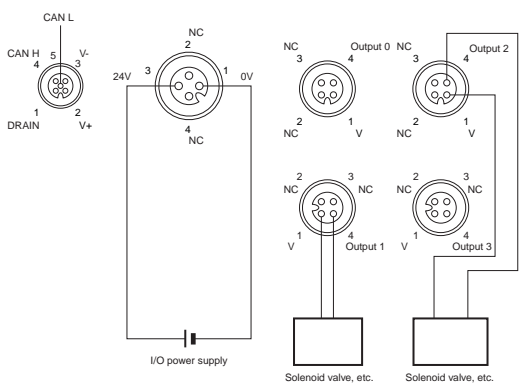
DRT2-ID04CL (NPN)



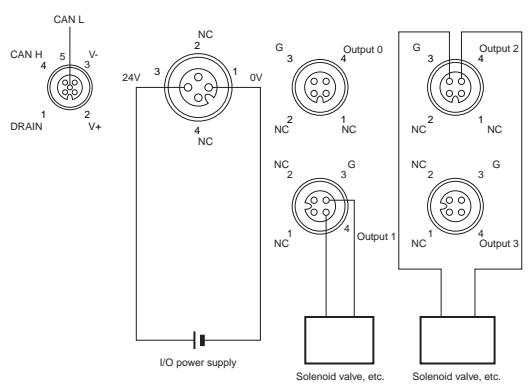
DRT2-ID04CL-1 (PNP)



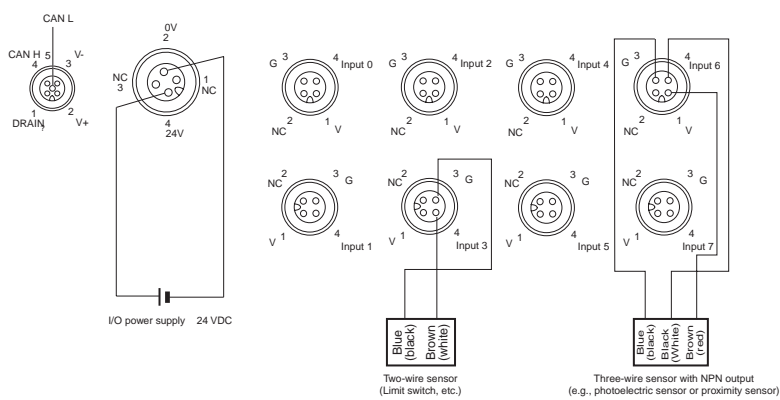
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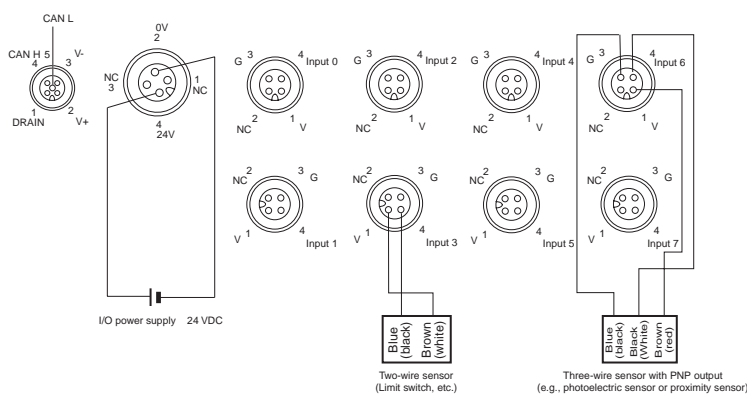
DRT2-OD04CL-1 (PNP)



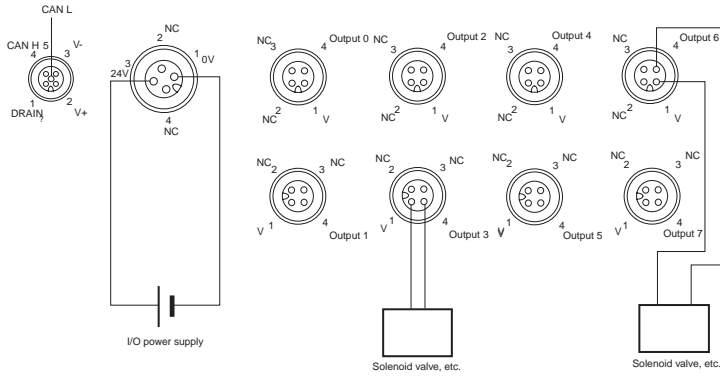
DRT2-ID08CL (NPN)



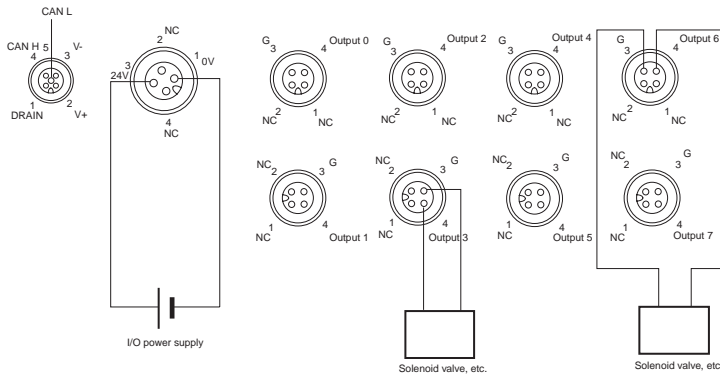
DRT2-ID08CL-1 (PNP)



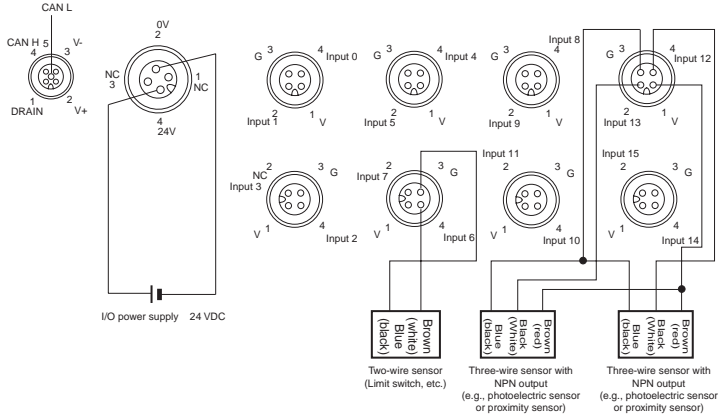
DRT2-OD08CL (NPN)



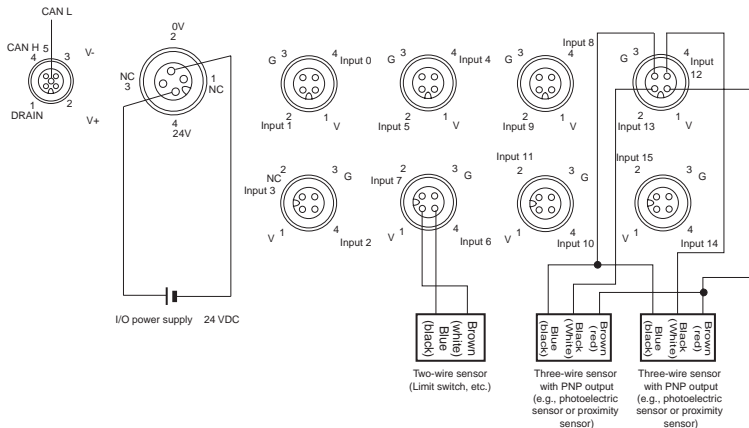
DRT2-OD08CL-1 (PNP)



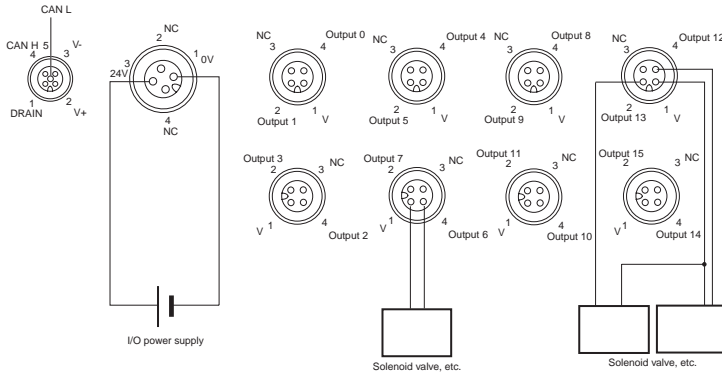
DRT2-HD16CL (NPN)



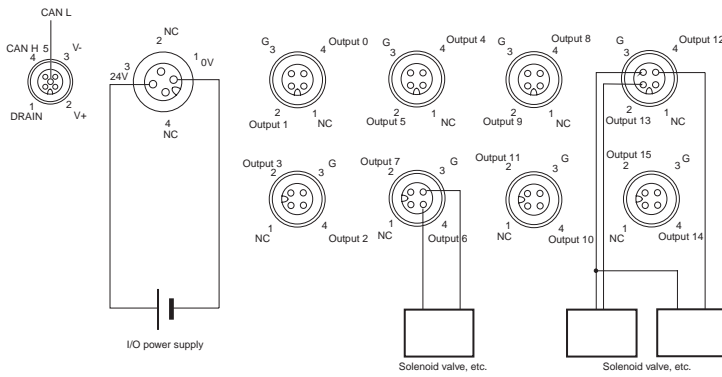
DRT2-HD16CL-1 (PNP)



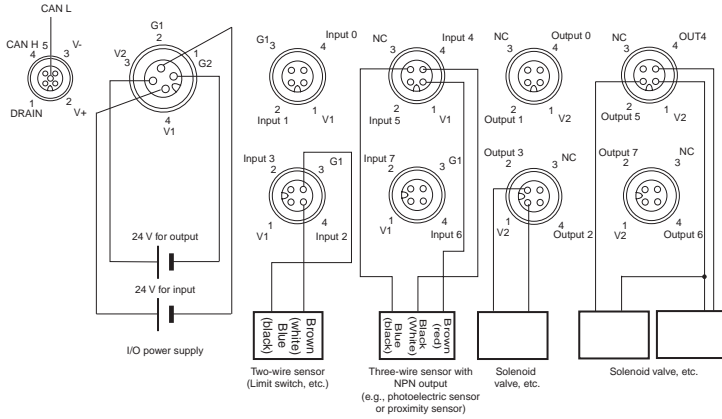
DRT2-WD16CL (NPN)



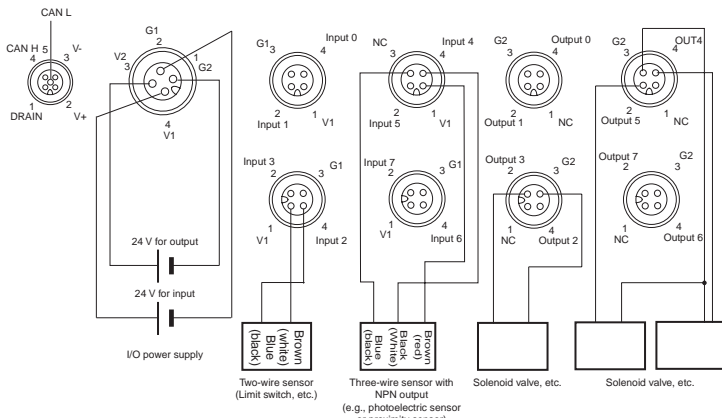
DRT2-WD16CL-1 (PNP)



DRT2-MD16CL (NPN)



DRT2-MD16CL-1 (PNP)



Peripheral Devices for Environment-resistive Slaves


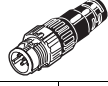
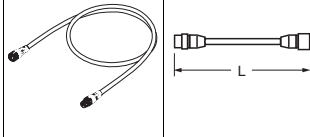
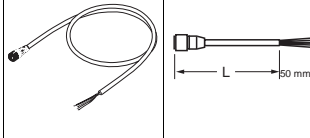
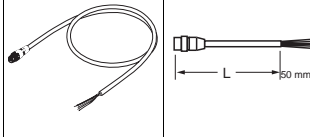


Peripheral Devices for DeviceNet Communications

Ordering Information

● Environment-resistive Connection Products (for Thin Cable, M12 Micro Connectors)

Product	Appearance	Model	Specifications
Sealed Assembling-type Connector (male)		XS2G-D5S7	For communications (plug)
Sealed Assembling-type Connector (female)		XS2C-D5S7	For communications (socket)
Sealed T-branch Connector		DCN2-1	For 1 branch line
Sealed Connector with Terminating Resistor		DRS2-1	Plug
		DRS2-2	Socket
Cables with Sealed Connectors		DCA1-5CNC5W1	Length (L): 0.5 m
		DCA1-5CN01W1	Length (L): 1 m
		DCA1-5CN02W1	Length (L): 2 m
		DCA1-5CN03W1	Length (L): 3 m
		DCA1-5CN05W1	Length (L): 5 m
		DCA1-5CN10W1	Length (L): 10 m
		DCA1-5CNC5F1	Length (L): 0.5 m
		DCA1-5CN01F1	Length (L): 1 m
		DCA1-5CN02F1	Length (L): 2 m
		DCA1-5CN03F1	Length (L): 3 m
		DCA1-5CN05F1	Length (L): 5 m
		DCA1-5CNC5H1	Length (L): 0.5 m
		DCA1-5CN01H1	Length (L): 1 m
		DCA1-5CN02H1	Length (L): 2 m
		DCA1-5CN03H1	Length (L): 3 m
Shielded Panel-mounting Connectors (female)		DCA1-5CNC5P1	Panel-mounting connector (socket) with 0.5-m cable
		XS2P-D522-2	Panel-mounting connector socket
Shielded Panel-mounting Connectors (male)		DCA1-5CNC5M1	Panel-mounting connector (plug) with 0.5-m cable
		XS2M-D524-4	Panel-mounting connector (plug) with solder-cup terminals
Waterproof cover (for socket)		XS2Z-22	Used to cover an unused connector section
Dust cover (for socket)		XS2Z-15	

● Environment-resistive Models (for Thin Wires and M12 Micro Connectors) 

Product	Appearance	Model	Specifications
Sealed T-branch Connector		DCN2-1S	For 1 branch line
Sealed Assembling type Connector (female)		DRS2-1S	Plug
		DRS2-2S	Socket
Connectors with Shielded Cables		DCA1-5CSC5W1	Length (L): 0.5 m
		DCA1-5CS01W1	Length (L): 1 m
		DCA1-5CS02W1	Length (L): 2 m
		DCA1-5CS03W1	Length (L): 3 m
		DCA1-5CS05W1	Length (L): 5 m
		DCA1-5CS10W1	Length (L): 10 m
		DCA1-5CSC5F1	Length (L): 0.5 m
		DCA1-5CS01F1	Length (L): 1 m
		DCA1-5CS02F1	Length (L): 2 m
		DCA1-5CS03F1	Length (L): 3 m
		DCA1-5CS05F1	Length (L): 5 m
		DCA1-5CS10F1	Length (L): 10 m
		DCA1-5CSC5H1	Length (L): 0.5 m
		DCA1-5CS01H1	Length (L): 1 m
		DCA1-5CS02H1	Length (L): 2 m
Shielded Branch Relay Box		DCN2-S4C5H1	4 ports, 0.5-m cable
		DCN2-S8C5H1	8 ports, 0.5-m cable

● Environment-resistive Models for Thick Wires with 7/8-16UN Mini Connectors

Product	Appearance	Model	Specifications
Sealed T-branch Connector		DCN3-11	T-branch Connector
		DCN3-12	T-branch Connector (Branch connector is M12.)
Sealed Connector with Terminating Resistor		DRS3-1	Plug
Cables with Sealed Connectors		DCA2-5CN01W1	Length (L): 1 m
		DCA2-5CN02W1	Length (L): 2 m
		DCA2-5CN05W1	Length (L): 5 m
		DCA2-5CN10W1	Length (L): 10 m
		DCA2-5CN01F1	Length (L): 1 m
		DCA2-5CN02F1	Length (L): 2 m
		DCA2-5CN05F1	Length (L): 5 m
		DCA2-5CN10F1	Length (L): 10 m
		DCA2-5CN01H1	Length (L): 1 m
		DCA2-5CN02H1	Length (L): 2 m
		DCA2-5CN05H1	Length (L): 5 m
		DCA2-5CN10H1	Length (L): 10 m
		DCA1-5CN01W5	Length (L): 1 m
		DCA1-5CN02W5	Length (L): 2 m
		DCA1-5CN05W5	Length (L): 5 m
		DCA1-5CN10W5	Length (L): 10 m
Panel-mounting Connector (female)		DCA2-5CNC5P1	Panel-mounting connector (socket) with 0.5-m cable
Panel-mounting Connector (male)		DCA2-5CNC5M1	Panel-mounting connector (plug) with 0.5-m cable
Panel-mounting Connector (male)		XS4M-D521-1	Panel-mounting connector (plug) DIP terminals
Waterproof Cap (for Plug)	-	XS4Z-11	Used to cover an unused connector section.
Waterproof Cap (for Socket)	-	XS4Z-12	

Specifications

● Environment-resistive Connection Products (for Thin Cable, M12 Micro Connectors)

Type	Connectors with Cables DCA1-5CN□□□1	T-branch Connector DCN2-1	Assembling-type Connector XS2□-D5S7	Connectors with Terminating Resistor DRS2-□
Rated current	3 A			
Rated voltage	125 VDC			
Contact resistance (connector)	40 mΩ max. (at 20 mVDC max. and 100 mA max.)			
Insulation resistance	1,000 MΩ min. (at 500 VDC)			
Dielectric strength (connector)	1,500 VAC for 60 seconds (leakage current: 1 mA max.)			
Ambient operating temperature	-20°C to 65°C			
Storage temperature range	-25°C to 70°C			
Degree of protection	IEC IP67			
Insertion durability	200 times			
Cable strength	98 N for 15 s	--		
Vibration resistance	No current interruptions of more than 1 μm while performing simple vibrations at either 10 to 500 Hz with 1.52-mm full amplitude or at acceleration 100 m/s ² , whichever is smaller			

● Environment-resistive Models (for Thin Wires and M12 Micro Connectors)

Type	Connectors with Cables DCA1-5CS□□□1	T-branch Connector DCN2-1S	Connectors with Terminating Resistor DRS2-□S	Branch Relay Box DCN2-S□C5H
Rated current	3 A			
Rated voltage	125 VDC			
Contact resistance (connector)	40 mΩ max. (at 20 mVDC max. and 100 mA max.)			
Insulation resistance	1,000 MΩ min. (at 500 VDC)			
Dielectric strength (connector)	1,500 VAC for 60 seconds (leakage current: 1 mA max.)			1,000 VAC for 60 seconds
Ambient operating temperature	-20°C to 65°C			
Storage temperature range	-25°C to 70°C			
Degree of protection	IEC IP67			
Insertion durability	200 times			
Cable strength	98 N for 15 s	--		
Vibration resistance	No current interruptions of more than 1 μm while performing simple vibrations at either 10 to 500 Hz with 1.52-mm full amplitude or at acceleration 100 m/s ² , whichever is smaller			
Lock strength	Pulling: 100 N/15 s, Rotating: 1 N·m/15 s			
Lock force	0.1 to 0.25 N·m			

● Environment-resistive Models for Thick Wires with 7/8-16UN Mini Connectors

Type	Connectors with Thick Cables DCA2-5CN□□□1	Connectors with Thin Cables DCA1-5CN□□W5	T-branch Connector DCN3-11	T-branch Connector DCN3-12	Connectors with Terminating Resistor DRS3-1	Panel Mounting Connector DCA2-5CNC5P1	Panel Mounting Connector XS4M-D521-1
Rated current	8 A	3 A	8 A	3 A *	8 A		
Rated voltage	125 VDC						
Contact resistance (connector)	30 mΩ max. (at 20 mVDC max. and 100 mA max.)						
Insulation resistance	1,000 MΩ min. (at 500 VDC)						
Dielectric strength (connector)	1,500 VAC for 60 seconds (leakage current: 1 mA max.)						
Ambient operating temperature	-20°C to 65°C						
Storage temperature range	-25°C to 70°C						
Degree of protection	IEC IP67						
Insertion durability	200 times						
Cable strength	98 N for 15 s			--		98 N for 15 s	--
Vibration resistance	No current interruptions of more than 1 μm while performing simple vibrations at either 10 to 500 Hz with 1.52-mm full amplitude or at acceleration 100 m/s ² , whichever is smaller						

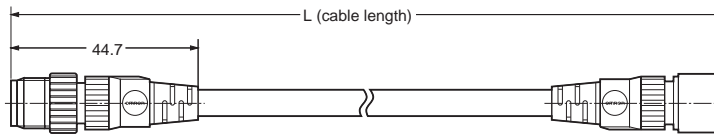
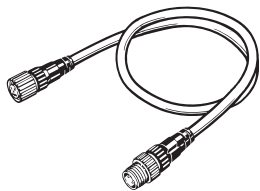
* The rated current between thick wires is 8 A.

Dimensions

● Environment-resistive Connection Products (for Thin Cable, M12 Micro Connectors)

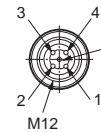
Cables with Connectors on Both Ends

DCA1-5CN□□W1



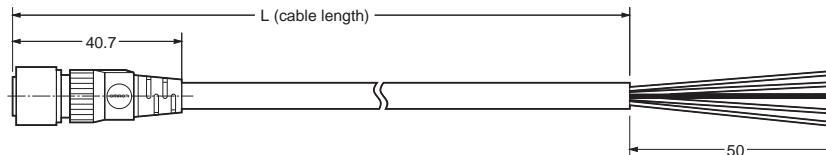
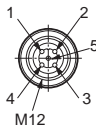
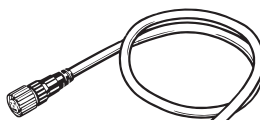
Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L



Cables with Connector on Single End (Socket)

DCA1-5CN□□F1

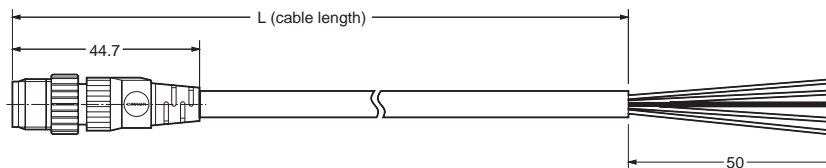
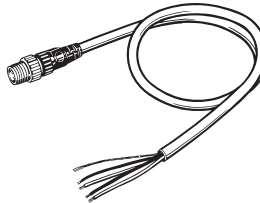


Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

Cables with Connector on Single End (Plug)

DCA1-5CN□□H1

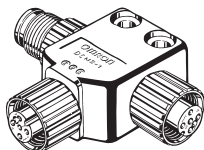


Wiring

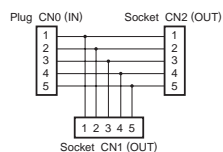
Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

T-branch Connector

DCN2-1

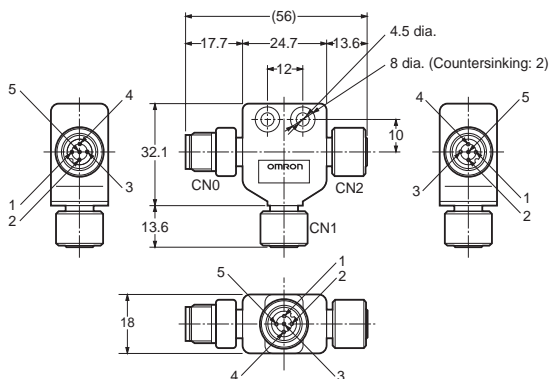


Connections Diagram



Wiring

Terminal No.	Name
1	SHIELD
2	V+
3	V-
4	CAN H
5	CAN L



Connectors with Terminating Resistance

DRS2-1 (Plug)

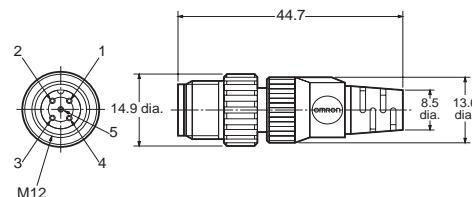
DRS2-2 (Socket)



Wiring

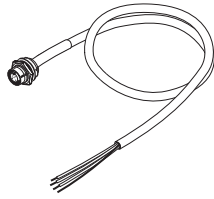
Terminal No.	Name
1	DRAIN : NC
2	V+ : NC
3	V- : NC
4	CAN H : 121 Ω
5	CAN L : 121 Ω

Note: Terminating resistance (121 Ω) is connected between terminals 4 and 5.



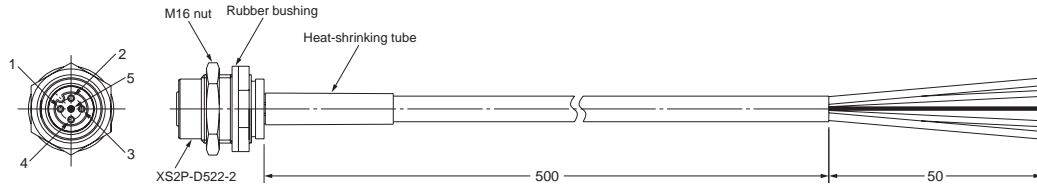
Note: The diagram shows the DRS2-1 (plug).

Panel-mounting Connector (Socket) with 0.5 m Cable
DCA1-5CNC5P1



Wiring

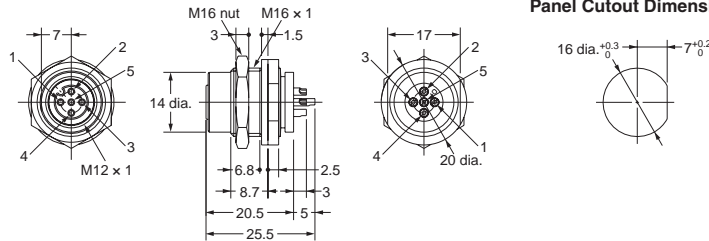
Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L



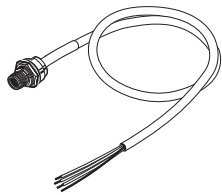
Panel-mounting Connector (Socket), Solder-cup Terminals
XS2P-D522-2



Panel Cutout Dimensions

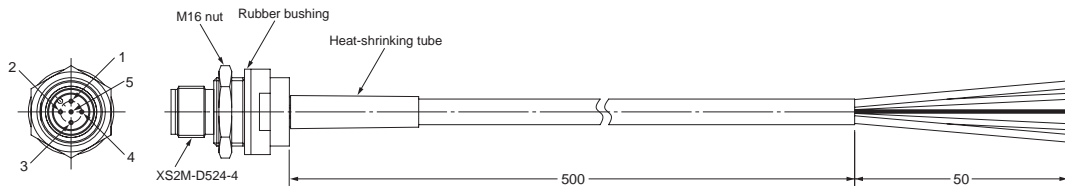


Panel-mounting Connector (Plug) with 0.5 m Cable
DCA1-5CNC5M1



Wiring

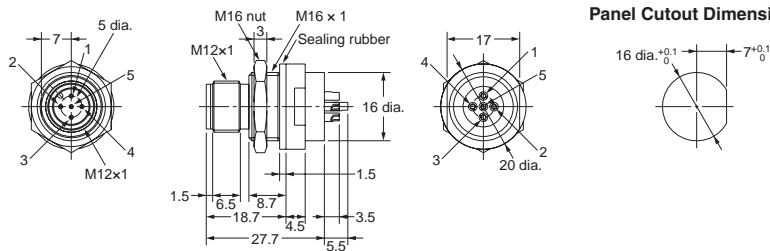
Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L



Panel-mounting Connector (Socket), Solder-cup Terminals
XS2M-D524-4

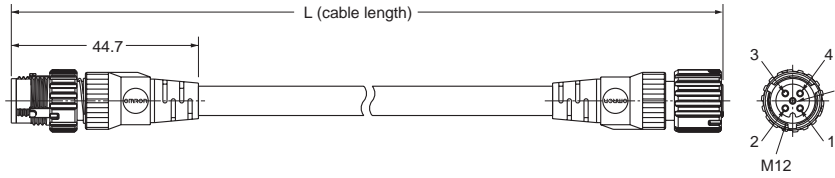
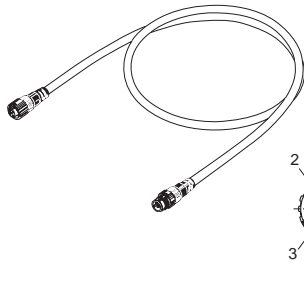


Panel Cutout Dimensions



● Environment-resistive Models (for Thin Wires and M12 Micro Connectors)

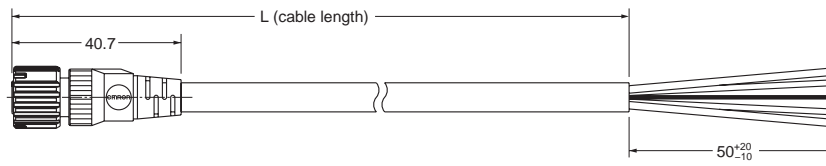
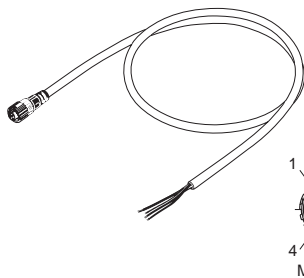
Cables with Connectors on Both Ends
DCA1-5CS□□W1



Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

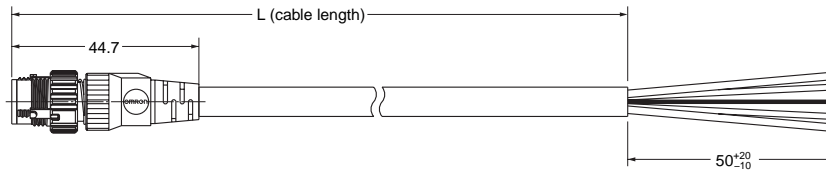
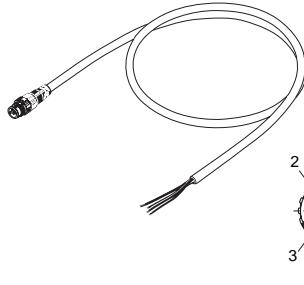
Cables with Connector on Single End (Socket)
DCA1-5CS□□F1



Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

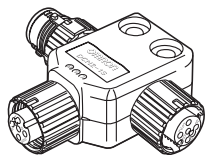
Cables with Connector on Single End (Plug)
DCA1-5CS□□H1



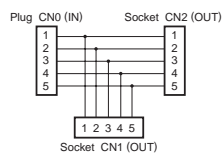
Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

T-branch Connector
DCN2-1S

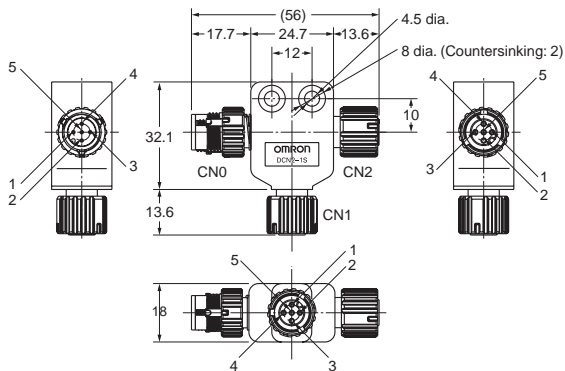


Connections Diagram



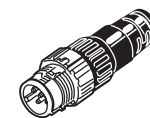
Wiring

Terminal No.	Name
1	SHIELD
2	V+
3	V-
4	CAN H
5	CAN L



Connectors with Terminating Resistance

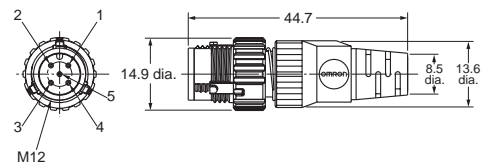
DRS2-1S (Plug)
DRS2-2S (Socket)



Wiring

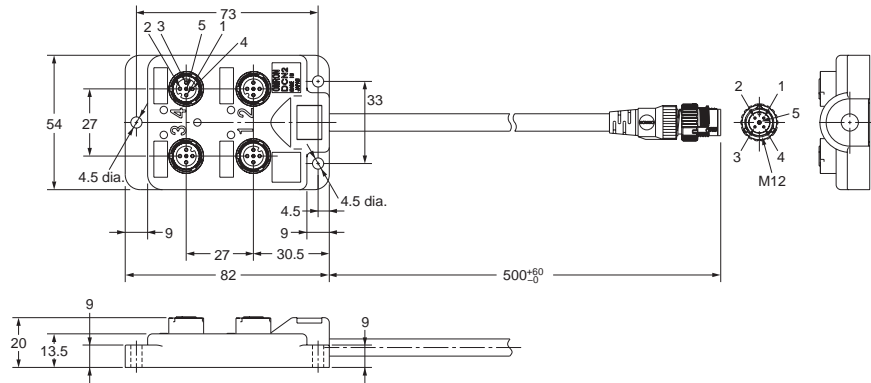
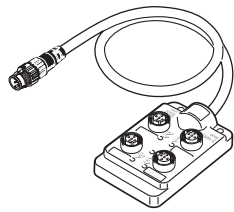
Terminal No.	Name
1	DRAIN : NC
2	V+ : NC
3	V- : NC
4	CAN H : 121 Ω
5	CAN L : 121 Ω

Note: Terminating resistance (121 Ω) is connected between terminals 4 and 5.

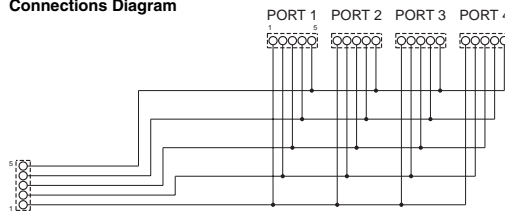


Note: The diagram shows the DRS2-1 (plug).

Shielded Branch Relay Box with Four Ports
DCN2-S4C5H1



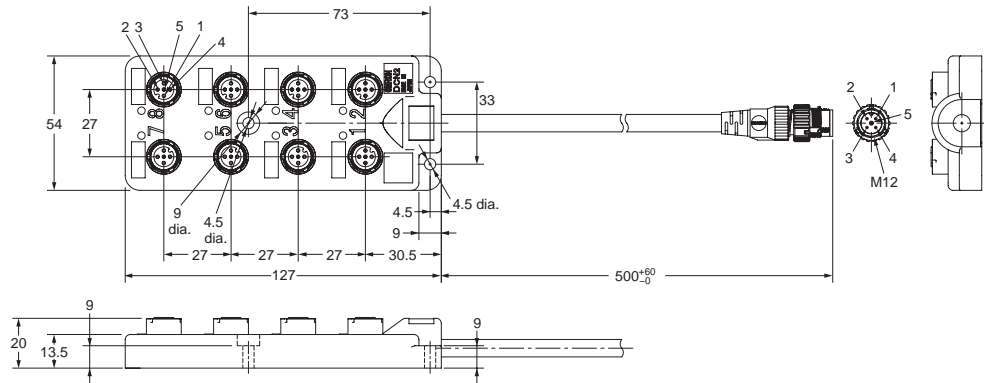
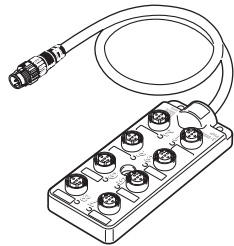
Connections Diagram



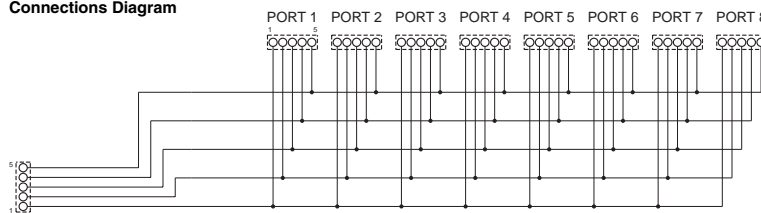
Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

Shielded Branch Relay Box with Eight Ports
DCN2-S8C5H1



Connections Diagram



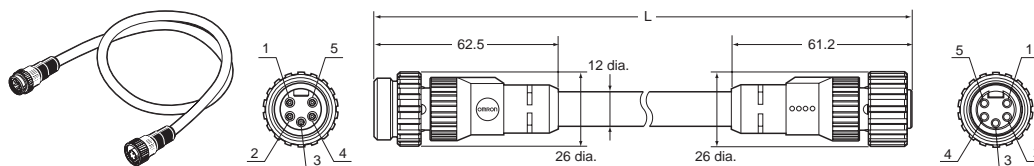
Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

● Environment-resistive Models for Thick Wires with 7/8-16UN Mini Connectors

Thick Cable with Connectors on Both Ends (5 Conductors for Communications)

DCA2-5CN□□W1

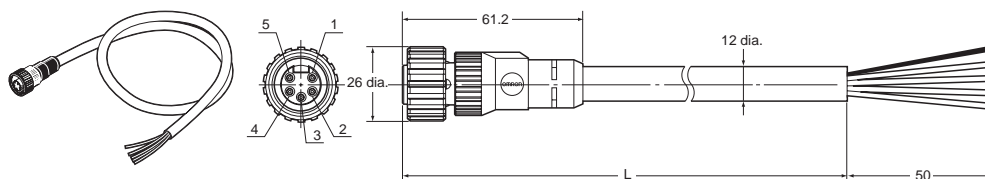


Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

Thick Cable with Connector Socket on One End (5 Conductors for Communications)

DCA2-5CN□□F1

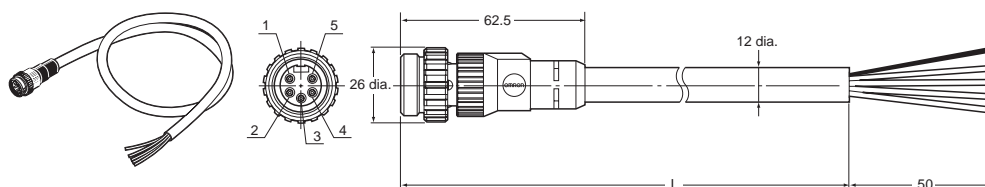


Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

Thick Cable with Connector Plug on One End (5 Conductors for Communications)

DCA2-5CN□□H1

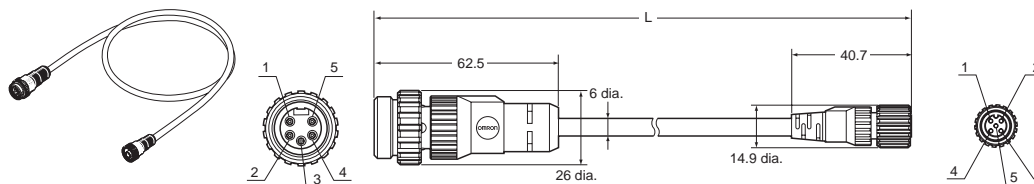


Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

Thin Cable with Connectors on Both Ends (5 Conductors for Communications)

DCA1-5CN□□W5

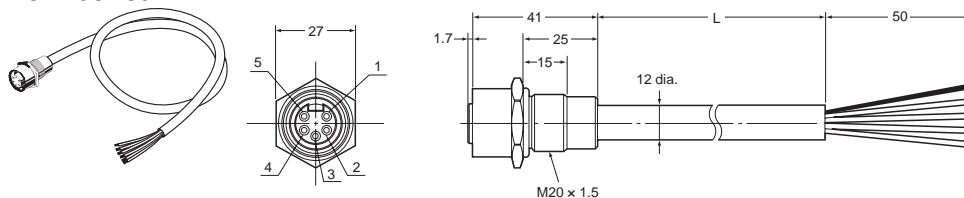


Wiring

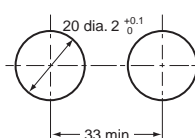
Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

Thin Cable with Panel-mounting Connector Socket on One End (5 Conductors for Communications)

DCA2-5CNC5P1



Panel Cutout Dimensions

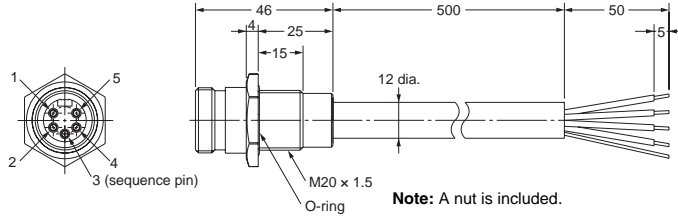
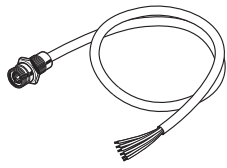


Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

Note: A rubber seal and nut for panel mounting are included.

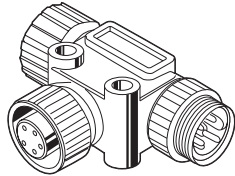
Panel-mounting Connector (Plug) with 0.5 m Cable
DCA2-5CNC5M1



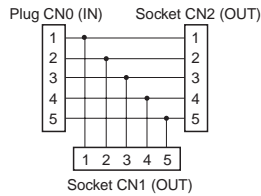
Wiring

Terminal No.	Color	Name
1	-	DRAIN
2	Red	V+
3	Black	V-
4	White	CAN H
5	Blue	CAN L

T-branch Connector (5 Conductors for Communications, Thick Wire Branch Line)
DCN3-11

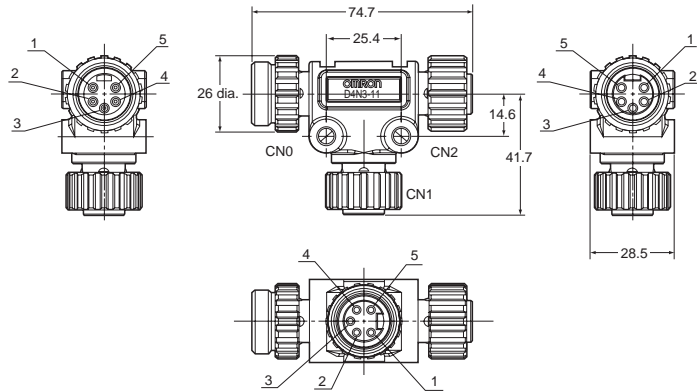


Connections Diagram

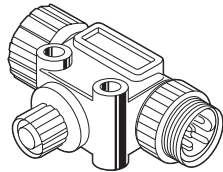


Wiring

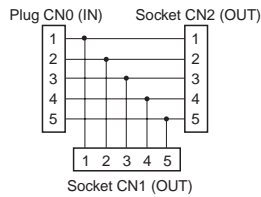
Terminal No.	Name
1	DRAIN
2	V+
3	V-
4	CAN H
5	CAN L



T-branch Connector (5 Conductors for Communications, Thin Wire Branch Line)
DCN3-12

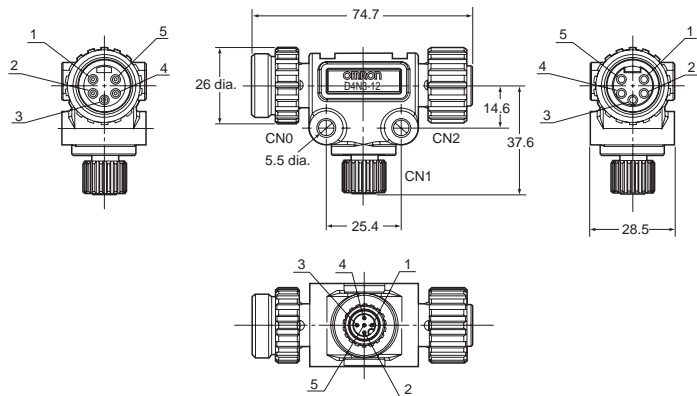


Connections Diagram

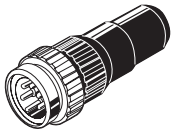


Wiring

Terminal No.	Name
1	DRAIN
2	V+
3	V-
4	CAN H
5	CAN L



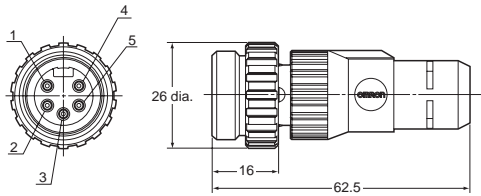
**Connector (Plug) with Terminating Resistance
DRS3-1**



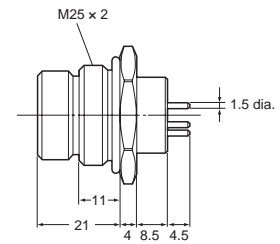
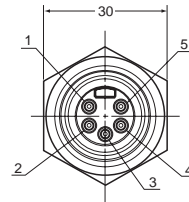
Wiring

Terminal No.	Name
1	DRAIN : NC
2	V+ : NC
3	V- : NC
4	CAN H : 121 Ω
5	CAN L : 121 Ω

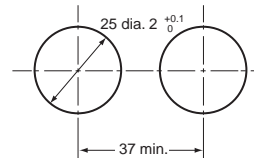
Note: Terminating resistance (121 Ω) is connected between terminals 4 and 5.



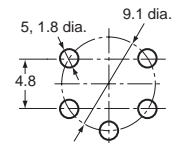
**Panel-mounting Connector (5 Pins for Communications)
XS4M-D521-1**



Panel Cutout Dimensions



PCB Processing Dimensions



Note: A rubber seal and nut for panel mounting are included.

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