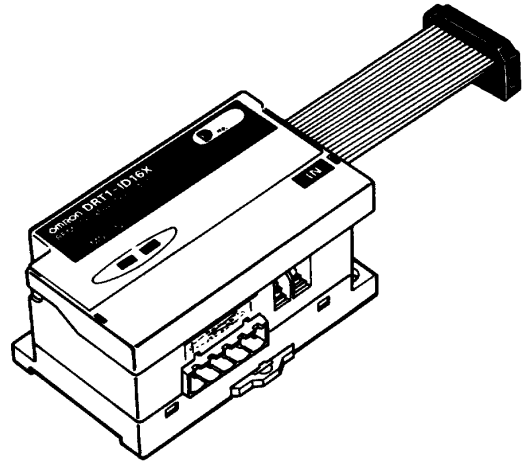


Remote Adapter

DRT1-ID16X/OD16X

Compact Remote Adapter with Sixteen I/O Points

- As compact as 85 (W) x 40 (H) x 50 (D) mm.
- Relay and power MOS FET Relay outputs are available in combination with the G70D or other I/O Terminals.
- Two independent power supplies can be used because the I/O terminals are insulated from the internal circuits.
- DIN track mounting and screw mounting are available.



Ordering Information

I/O classification	Internal I/O circuit common	I/O points	Terminal	Rated voltage	I/O rated voltage	Model
Input	NPN (+ common)	16	MIL socket flat cable connector	24 VDC	24 VDC	DRT1-ID16X
Output	NPN (- common)					DRT1-OD16X

Specifications

■ Ratings

Input

Item	DRT1-ID16X
Input current	10 mA max./point
ON delay time	9 ms max.
OFF delay time	14.5 ms max.
ON voltage	15 VDC min. between each input connector pin and V
OFF voltage	5 VDC max. between each input connector pin and V
OFF current	0.8 mA max.
Insulation method	Photocoupler
Input indicators	LED (yellow)

Note: The number of inputs must be 8 on average for each five-minute period.

Output

Item	DRT1-OD16X
Rated output current	30 mA/point
Residual voltage	1.2 V max.
Leakage current	0.1 mA max.
Insulation method	Photocoupler
Output indicators	LED (yellow)

■ Characteristics

Physical layer power supply voltage	11 to 25 VDC (supplied from the communications connector)
Internal power supply voltage	24 VDC $+10\%$ / -15%
I/O power supply voltage	24 VDC $+10\%$ / -15%
Current consumption (see note)	Communications: 80 mA max. at 24 VDC Internal circuit: 60 mA max. at 24 VDC
Dielectric strength	500 VAC for 1 min (1-mA sensing current between insulated circuits)
Noise immunity	Power supply normal: ± 600 V for 10 minutes with a pulse width of 100 ns to 1 μ s Power supply common: $\pm 1,500$ V for 10 minutes with a pulse width of 100 ns to 1 μ s
Vibration resistance	10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Malfunction: 200 m/s ² (approx. 20G) Destruction: 300 m/s ² (approx. 30G)
Mounting strength	No damage when 50 N (approx. 5 kgf) pull load was applied for 10 s in all directions (10 N min. (approx. 1 kgf) in the DIN Track direction)
Terminal strength	No damage when 50 N (approx. 5 kgf) pull load was applied for 10 s
Screw tightening torque	0.6 to 1.18 N \cdot m (6.2 to 12 kgf \cdot cm)
Ambient temperature	Operating: 0°C to 55°C (with no icing or condensation) Storage: -20°C to 65°C (with no icing or condensation)
Ambient humidity	Operating: 35% to 85%
Weight	95 g max.

Note: The above current consumption is a value with all the points turned ON excluding the current consumption of the external sensor connected to the input Remote Terminal and the current consumption of the load connected to the output Remote Terminal.

■ Connecting DRT1-OD16X to I/O Terminals

I/O terminals		Remote Adapter
Output terminal	G70D-SOC16, G70D-FOM16, G7TC-OC16, G7TC-OC08, G70A-ZOC16-3	DRT1-OD16X

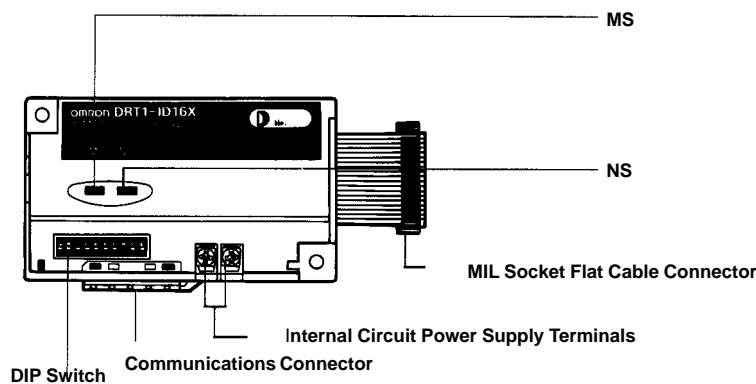
Note: A combination other than the above is not available. Do not connect the DRT1-OD16X to Input Terminals or PNP-type Terminals. Doing so may result in damage to the DRT1-OD16X due to polarity difference.

MIL Socket Flat Cable Connector (Order Separately)

XG4A9-2031	DIP straight terminal connector plug
XG4A-2034	DIP L terminal connector plug

Nomenclature

DRT1-□D16X

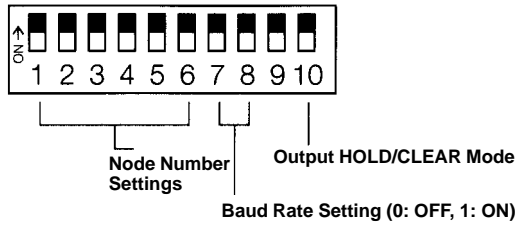


Used for node number setting, baud rate settings, and holding or clearing outputs for communications error.

- Note:**
1. Always turn OFF the Unit and the communications power supply before changing DIP switch settings.
 2. Pin 9 is not used. Always set pin 9 to OFF.

Indicators

Indicator	Display	Color	Meaning
MS	Lit	Green	The Unit is normal.
	Flashes		No node number has been set.
	Lit	Red	The Unit has a fatal error.
	Flashes		The Unit has a nonfatal error.
	Not lit		No power is supplied to the Unit.
NS	Lit	Green	The communications path is complete.
	Flashes		The communications path is incomplete.
	Lit	Red	A fatal communications error has occurred.
	Flashes		A nonfatal communications error has occurred.
	Not lit		The communications power supply is OFF.



Baud Rate Settings

	Pin 8	Pin 7
125,000 bps	OFF	OFF
250,000 bps	OFF	ON
500,000 bps	ON	OFF

- Note:**
- Setting both pins 7 and 8 to OFF is not allowed.
 - Pins 7 and 8 are factory-set to OFF.

Output HOLD/CLEAR Mode

Mode	Pin 10
HOLD	ON
CLEAR	OFF

- Note:**
- Pin 9 is NC.
 - Pin 10 of the DRT1-ID16X is not used.
 - Pin 10 is factory-set to OFF.

Node Number Settings

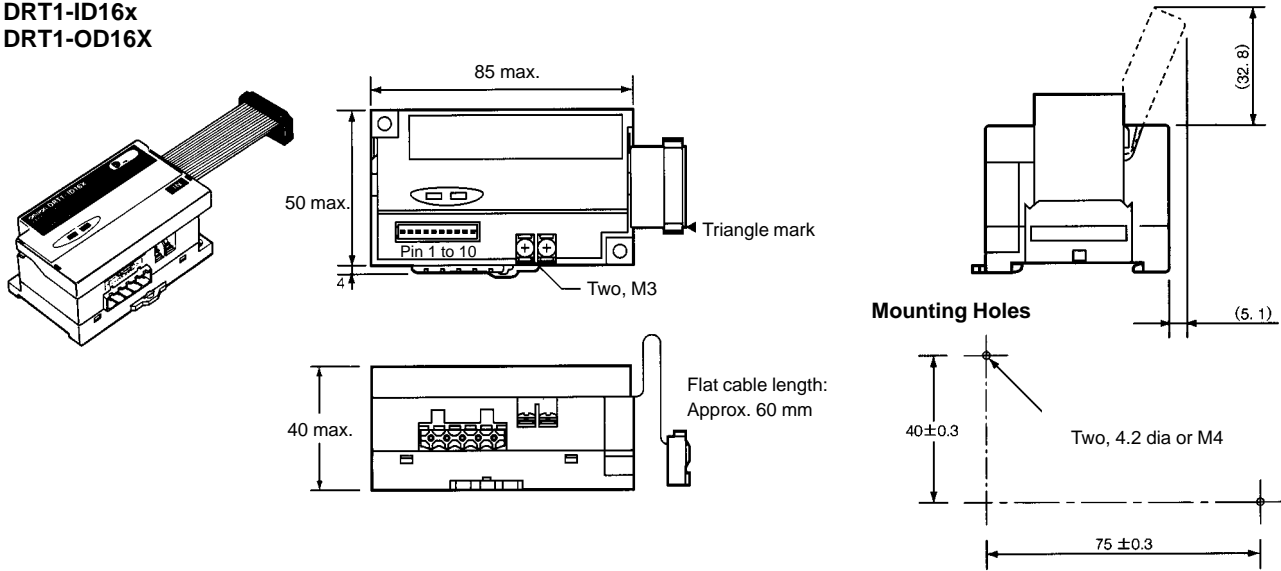
Node number	Pin 6	Pin 5	Pin 4	Pin 3	Pin 2	Pin 1	Node number	Pin 6	Pin 5	Pin 4	Pin 3	Pin 2	Pin 1
	32	16	8	4	2	1		32	16	8	4	2	1
0	OFF	OFF	OFF	OFF	OFF	OFF	32	ON	OFF	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	OFF	OFF	ON	33	ON	OFF	OFF	OFF	OFF	ON
2	OFF	OFF	OFF	OFF	ON	OFF	34	ON	OFF	OFF	OFF	ON	OFF
3	OFF	OFF	OFF	OFF	ON	ON	35	ON	OFF	OFF	OFF	ON	ON
4	OFF	OFF	OFF	ON	OFF	OFF	36	ON	OFF	OFF	ON	OFF	OFF
5	OFF	OFF	OFF	ON	OFF	ON	37	ON	OFF	OFF	ON	OFF	ON
6	OFF	OFF	OFF	ON	ON	OFF	38	ON	OFF	OFF	ON	ON	OFF
7	OFF	OFF	OFF	ON	ON	ON	39	ON	OFF	OFF	ON	ON	ON
8	OFF	OFF	ON	OFF	OFF	OFF	40	ON	OFF	ON	OFF	OFF	OFF
9	OFF	OFF	ON	OFF	OFF	ON	41	ON	OFF	ON	OFF	OFF	ON
10	OFF	OFF	ON	OFF	ON	OFF	42	ON	OFF	ON	OFF	ON	OFF
11	OFF	OFF	ON	OFF	ON	ON	43	ON	OFF	ON	OFF	ON	ON
12	OFF	OFF	ON	ON	OFF	OFF	44	ON	OFF	ON	ON	OFF	OFF
13	OFF	OFF	ON	ON	OFF	ON	45	ON	OFF	ON	ON	OFF	ON
14	OFF	OFF	ON	ON	ON	OFF	46	ON	OFF	ON	ON	ON	OFF
15	OFF	OFF	ON	ON	ON	ON	47	ON	OFF	ON	ON	ON	ON
16	OFF	ON	OFF	OFF	OFF	OFF	48	ON	ON	OFF	OFF	OFF	OFF
17	OFF	ON	OFF	OFF	OFF	ON	49	ON	ON	OFF	OFF	OFF	ON
18	OFF	ON	OFF	OFF	ON	OFF	50	ON	ON	OFF	OFF	ON	OFF
19	OFF	ON	OFF	OFF	ON	ON	51	ON	ON	OFF	OFF	ON	ON
20	OFF	ON	OFF	ON	OFF	OFF	52	ON	ON	OFF	ON	OFF	OFF
21	OFF	ON	OFF	ON	OFF	ON	53	ON	ON	OFF	ON	OFF	ON
22	OFF	ON	OFF	ON	ON	OFF	54	ON	ON	OFF	ON	ON	OFF
23	OFF	ON	OFF	ON	ON	ON	55	ON	ON	OFF	ON	ON	ON
24	OFF	ON	ON	OFF	OFF	OFF	56	ON	ON	ON	OFF	OFF	OFF
25	OFF	ON	ON	OFF	OFF	ON	57	ON	ON	ON	OFF	OFF	ON
26	OFF	ON	ON	OFF	ON	OFF	58	ON	ON	ON	OFF	ON	OFF
27	OFF	ON	ON	OFF	ON	ON	59	ON	ON	ON	OFF	ON	ON
28	OFF	ON	ON	ON	OFF	OFF	60	ON	ON	ON	ON	OFF	OFF
29	OFF	ON	ON	ON	OFF	ON	61	ON	ON	ON	ON	OFF	ON
30	OFF	ON	ON	ON	ON	OFF	62	ON	ON	ON	ON	ON	OFF
31	OFF	ON	ON	ON	ON	ON	63	ON	ON	ON	ON	ON	ON

Note: The node number is factory-set to 0.

Dimensions

Note: All units are in millimeters unless otherwise indicated.

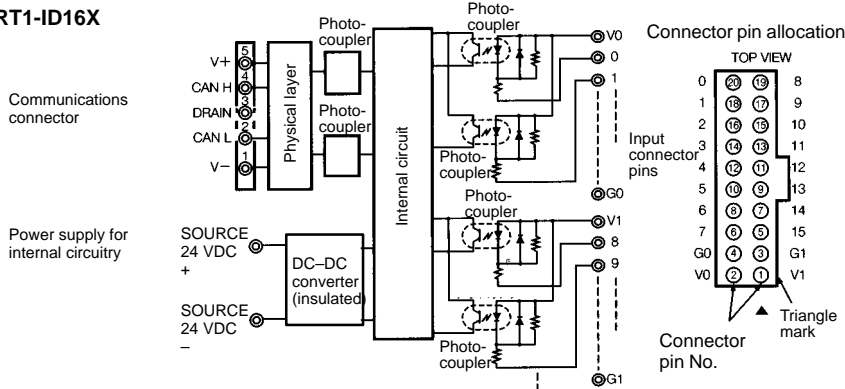
DRT1-ID16x
DRT1-OD16X



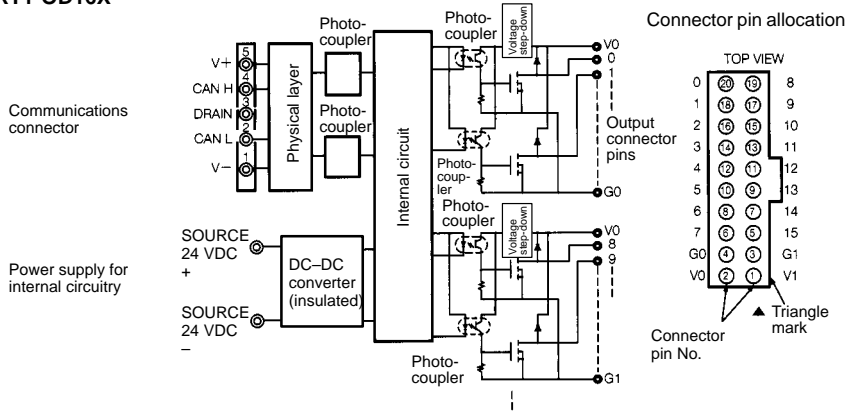
Installation

Internal Circuit Configuration

DRT1-ID16X



DRT1-OD16X



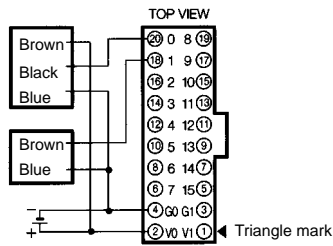
Wiring

Input

DRT1-ID16X

Three-wired Sensors

(photoelectric or proximity sensor)

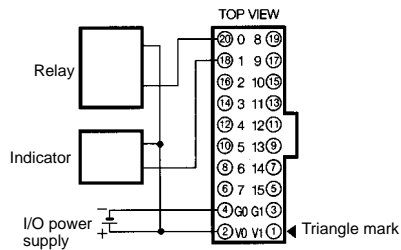


Two-wired Sensors

(limit switch)

Output

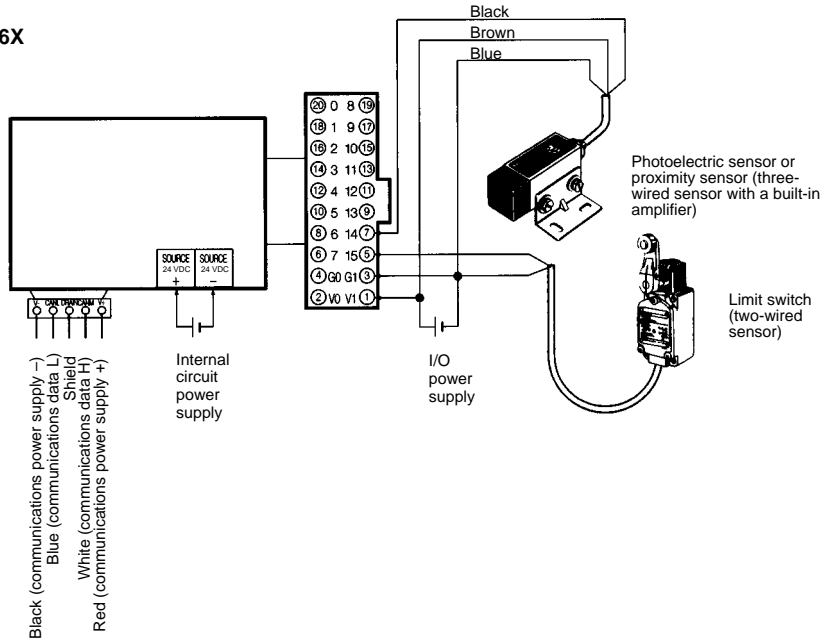
DRT1-OD16X



Terminal Arrangement and I/O Device Connection Example

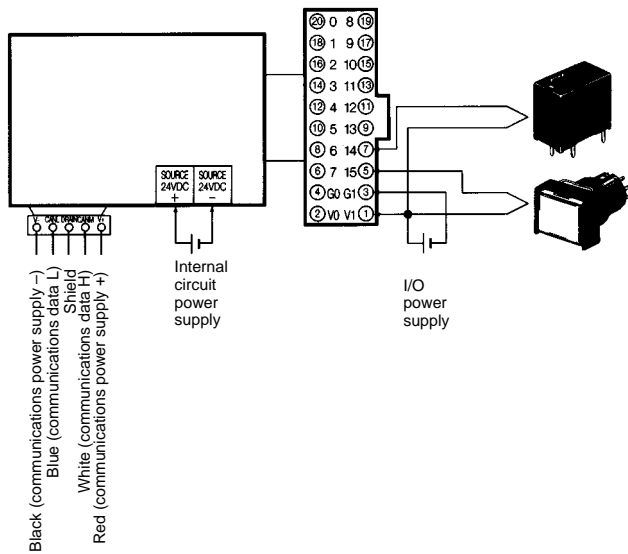
Input

DRT1-ID16X



Output

DRT1-OD16X



Precautions

Refer to the *CompoBus/D Operation Manual (W267)* before using the Unit.

These precautions are also for the DRT1-ID/OD.

General Safety Precautions

Wiring

Turn OFF the Unit before wiring the Unit and do not remove the terminal block cover or touch the terminal block while the Unit is turned ON, otherwise an electric shock may occur.

Do not impose any voltage other than the rated voltage on the input terminal. Doing so may result in damage to the Unit or cause the Unit to malfunction.

Do not connect the Unit to loads consuming a total current exceeding the rated output current of the Unit. Doing so may damage the output element and a short- or open-circuit malfunction may result.

If the Unit is connected to a DC inductive load, connect a diode to the Unit to protect the Unit from counter-electromotive voltage, otherwise the counter-electromotive voltage may damage the output element and a short- or open-circuit malfunction may result.

Correct Use

Cable Locks

Before turning on the Unit, make sure that the connector of each cable connected to the Unit is locked.

Do not connect or disconnect the connectors while the Unit is turned ON. Doing so may cause the Unit to malfunction.

Installation Environment

Do not install the Unit in the following places. Doing so may result in damage to the Unit or cause the Unit to malfunction.

- Places with direct sunlight.
- Places with ambient temperature ranges not within 0°C to 55°C.
- Places with rapid temperature changes resulting in condensation or relative humidity ranges not within 10% to 90%.
- Places with corrosive or inflammable gas.
- Places with excessive dust, salinity, or metal powder.
- Places with vibration or shock affecting the Unit.
- Places with water, oil, or chemical sprayed on the Unit.

Screw Tightening Torques

Tighten all screws of the Unit properly, otherwise the Unit may malfunction.

- Tighten each terminal screw to a torque of 0.6 to 1.18 N·m (6.2 to 12.0 kgf·cm).
- Tighten each mounting screw to a torque of 0.6 to 0.98 N·m (6.2 to 10.0 kgf·cm) if the Unit is mounted to a panel.

Cleaning

Use alcohol or benzine to clean the surface of the Unit. Do not use paint thinner to clean the surface, otherwise the surface will be damaged or discolored.

Handling

Do not drop the Unit or shock or vibrate the Unit excessively. Doing so may result in damage to the Unit or cause the Unit to malfunction.

Disassembling, Repairing, and Modifying

Do not disassemble, repair, or modify the Unit, otherwise an electric shock may occur or the Unit may malfunction.

NOTE: ALL DIMENSIONS SHOWN ARE IN MILLIMETERS. TO CONVERT MILLIMETERS TO INCHES DIVIDE BY 25.4.