Cat.No. Q103-E1-6

CompoBus/S

DATASHEETS

OMRON

Connections to a Wider Range of Slaves Ensured by Upgraded Models

Slave				Master: Conventional models C200HW-SRM21 CQM1-SRM21 SRM1-C01 SRM1-C02 SRM1-C01-V1 SRM1-C02-V1 3G8B3-SRM00 3G8B3-SRM01 C200PC-ISA02-SRM C200PC-ISA12-SRM NKE-made Uniwire CompoBus/S Send Unit SDD-CS1	Master: New models C200HW-SRM21-V1 CQM1-SRM21-V1 SRM1-C01-V2 SRM1-C02-V2 Communications mode: High-speed communications mode	Communications mode: Long-distance communications mode
			SRT1 Series	Yes	Yes	No
			FND-X□-SRT	Yes	Yes	No
Products from other companies	SMC	Solenoid valve for SI manifold use	VQ Series	Yes	Yes	No
			SX Series	Yes	Yes	No
			SY Series	Yes	Yes	No
	CKD	Solenoid valve for saving wiring effort	4TB1 and 4TB2 Series	Yes	Yes	No
			4TB3 and 4TB4 Series	Yes	Yes	No
			4G Series	Yes	Yes	No
			MN4SO Series	Yes	Yes	No
	Koganei	Valve for saving wiring effort	YS1A1, A2	Yes	Yes	No
			YS2A1, A2	Yes	Yes	No
New product			SRT2-AD02	No	Yes	Yes
			SRT2-DA02	No	Yes	Yes
			SRT2-VID08S(-1)	Yes	Yes	Yes
			SRT2-VOD08S(-1)	Yes	Yes	Yes
			SRT2-VID16ML(-1)	Yes	Yes	Yes
			SRT2-VOD16ML(-1)	Yes	Yes	Yes
			SRT2-ID16(-1)	Yes	Yes	Yes
			SRT2-OD16(-1)	Yes	Yes	Yes
			SRT2-ID08(-1)	Yes	Yes	Yes
			SRT2-OD08(-1)	Yes	Yes	Yes
			SRT2-ROC16	Yes	Yes	Yes
			SRT2-ROF16	Yes	Yes	Yes
			CPM1A-SRT21	Yes	Yes	Yes
Products to be released soon			SRT2-ID04(-1)	Yes	Yes	Yes
			SRT2-OD04(-1)	Yes	Yes	Yes
			SRT2-ID16T(-1)	Yes	Yes	Yes
			SRT2-OD16T(-1)	Yes	Yes	Yes
			SRT2-MD16T(-1)	Yes	Yes	Yes
			SRT2-ROC08	Yes	Yes	Yes
			SRT2-ROF08	Yes	Yes	Yes

Note: 1. In high-speed communications mode, the maximum transmission distance is 100 m at a baud rate of 750 kbps. In long-distance communications mode (i.e., a newly available mode), the maximum transmission distance is 500 m at a baud rate of 93.75 kbps.

2. The SRT2-AD04 and SRT2-DA02 are available for 16-bit synchronous communications.

OMRON

Master Control Unit

SRM1-C01-V2/C02-V2

Subminiature, Stand-alone Model with CompoBus/S Master and SYSMAC Controller Functions

- Maximum number of Remote I/O points per Master: 256
- Maximum number of Slaves per Master: 32
- Communications cycle time: 0.5 ms max. (at baud rate 750 kbps).
- Communications distance: Extended to 500 m max. (at baud rate 93.75 kbps).
- Additional instructions (PID, SCL, NEG, ZCP) ensure analog compatibility.
- RS-232C port incorporated (SRM1-C02-V2).

Ordering Information

Specifications		Model
Built-in stand-alone controller functions	Without RS-232C	SRM1-C01-V2
	With RS-232C	SRM1-C02-V2

Specifications

■ Master Specifications

Number of I/O points	256 points (128 inputs/128 outputs) 128 points (64 inputs/64 outputs) Selectable by DM setting. The default setting is 256 points.
Max. number of Slaves per Master	256 points: 32 128 points: 16
I/O words	Input words: 000 to 007 Output words: 010 to 017
Programming language	Ladder diagram
Types of instruction	14 basic and 72 special instructions (123 instructions in total)
Execution time	LD instruction: 0.97 μs MOV instruction: 9.1 μs
Program capacity	4,096 words
Data memory	2,048 + 512 (read-only) words
Timers/Counters	128 timers/counters
Work bits	640 bits
Memory backup	Flash memory (without battery): User programs Super capacitor: Data memory (backed up for 20 days at an ambient temperature of 25°C)
Peripheral port	1 point
RS-232C port	1 point (SRM1-C02-V1 only) Host Link, NT Link, 1:1 Link, or no protocol
Programming tool	Programming Consoles: CQM1-PRO01-E, C200H-PRO27-E SYSMAC-CPT: WS01-CPTB1-E (CD-ROM/FD) SYSMAC Support Software (MS-DOS version): C500-ZL3AT1-E

Note: PID, SCL, NEG, and ZCP instructions are not supported by the SYSMAC-CPT.

■ Communications Specifications

Communications method		CompoBus/S protocol
Coding method		Manchester coding method
Connection method		Multi-drop method and T-branch method (see note 1)
Communications baud rate		750,000 bps/93,750 bps (see note 2)
Communications cycle time	**High-speed communications mode**	0.5 ms with 8 Slaves for inputs and 8 Slaves for outputs
		0.8 ms with 16 Slaves for inputs and 16 Slaves for outputs
	Long-distance communications mode	4.0 ms with 8 Slaves for inputs and 8 Slaves for outputs
		6.0 ms with 16 Slaves for inputs and 16 Slaves for outputs
Communications cable		2-conductor VCTF cable (0.75 x 20) Dedicated flat cable
Communications distance	**High-speed communications mode**	VCTF cable: Main line length: 100 m max. Branch line length: 3 m max. Total branch line length: 50 m max. Flat cable: Main line length: 30 m max. Branch line length: 3 m max. Total branch line length: 30 m max. (When flat cable is used to connect fewer than 16 Slaves, the main line can be up to 100 m long and the total branch line length can be up to 50 m.)
	Long-distance communications mode	VCTF cable: Main line length: 500 m max. Branch line length: 6 m max. Total branch line length: 120 m max.
Max. number of connecting nodes		32
Error control checks		Manchester code check, frame length check, and parity check

Note: 1. A terminator must be connected to the point in the system farthest from the Master.

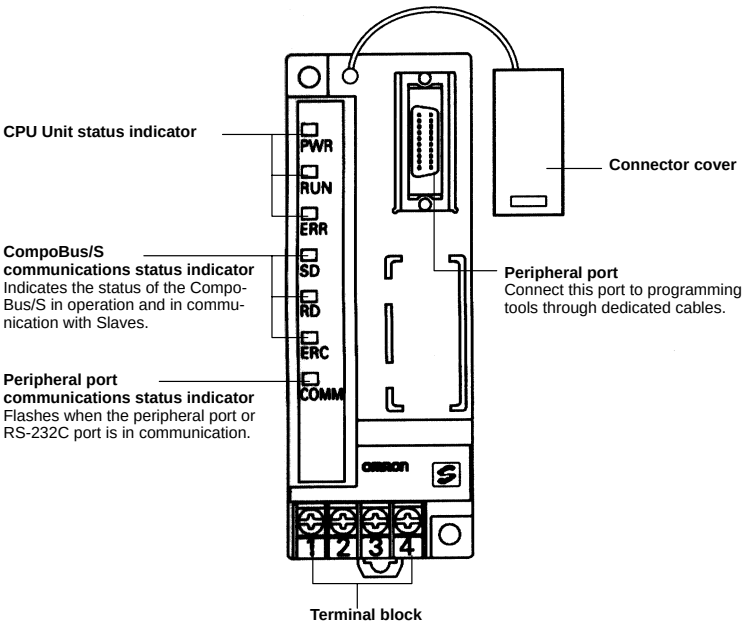
2. The communications baud rate is switched using DM settings (default setting is 750,000 bps).

■ General Specifications

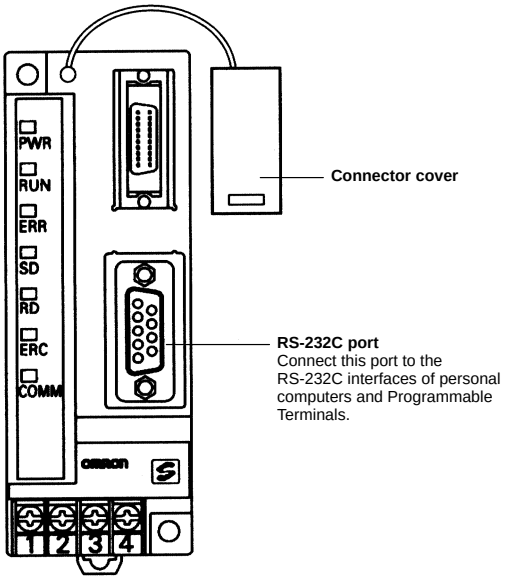
Supply voltage	24 VDC
Allowable supply voltage	20.4 to 26.4 VDC
Power consumption	3.5 W max.
Inrush current	12.0 A max.
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power lines)
Vibration resistance	10 to 57 Hz, 0.075-mm amplitude, 57 to 150 Hz, acceleration: 9.8 m/s^2 in X, Y, and Z directions for 80 minutes each (Time coefficient; 8 minutes × coefficient factor 10 = total time 80 minutes)
Shock resistance	147 m/s^2 three times each in X, Y, and Z directions
Ambient temperature	Operating: 0°C to 55°C Storage: –20°C to 75°C
Humidity	10% to 90% (with no condensation)
Atmosphere	Must be free from corrosive gas.
Terminal screw size	M3
Power interrupt time	DC type: 2 ms min.
Weight	150 g max.

Nomenclature

SRM1-C01-V2



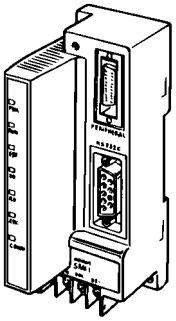
SRM1-C02-V2

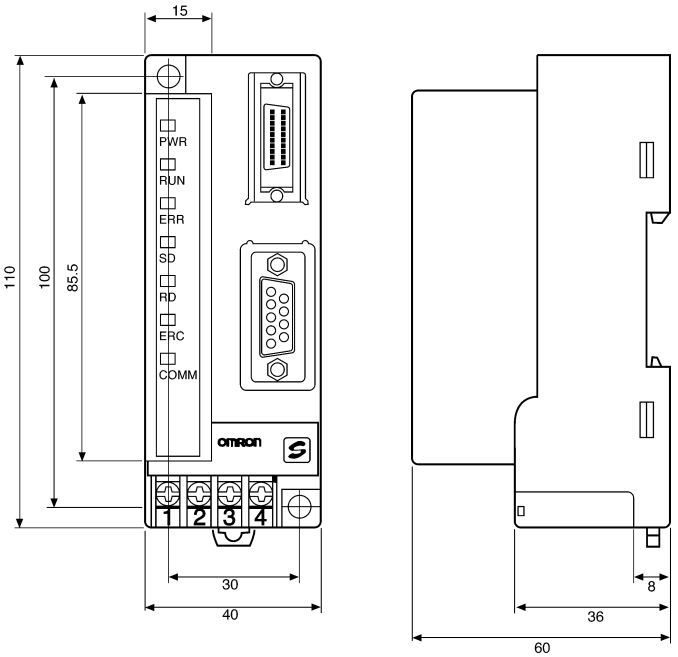


Dimensions

Note: All units are in millimeters unless otherwise indicated.

SRM1-C01/C02-V2





The above dimensions apply to the SRM1-C02-V2. The SRM-C01-V2 has no RS-232C port.

OMRON

Master Unit

C200HW-SRM21-V1

Master Unit for CS1, C200HX, C200HG, C200HE, and C200HS

- A maximum of 256 I/O points available.
- Connects to a maximum of 32 Slaves.
- Communications cycle time: 0.5 ms max. (at baud rate 750 kbps).
- Communications distance: Extended to 500 m max. (at baud rate 93.75 kbps).
- Connection to Analog Terminals now supported.

Ordering Information

PC	Max. number of I/O points	Model
C200HX (-Z), C200HG (-Z), C200HE (-Z), C200HS, CS1	256 points (128 inputs/128 outputs)	C200HW-SRM21-V1

Specifications

■ Communications Specifications

Communications method		CompoBus/S protocol
Coding method		Manchester coding method
Connection method		Multi-drop method and T-branch method (see note 1)
Communications baud rate		750,000 bps, 93,750 bps (see note 2)
Communications cycle time	**High-speed communications mode**	0.5 ms with 8 Slaves for inputs and 8 Slaves for outputs
		0.8 ms with 16 Slaves for inputs and 16 Slaves for outputs
	Long-distance communications mode	4.0 ms with 8 Slaves for inputs and 8 Slaves for outputs
		6.0 ms with 16 Slaves for inputs and 16 Slaves for outputs
Communications cable		2-conductor VCTF cable (0.75 x 20) Dedicated flat cable
Communications distance	**High-speed communications mode**	VCTF cable: Main line length: 100 m max. Branch line length: 3 m max. Total branch line length: 50 m max. Flat cable: Main line length: 30 m max. Branch line length: 3 m max. Total branch line length: 30 m max. (When flat cable is used to connect fewer than 16 Slaves, the main line can be up to 100 m long and the total branch line length can be up to 50 m.)
	Long-distance communications mode	VCTF cable: Main line length: 500 m max. Branch line length: 6 m max. Total branch line length: 120 m max.
Max. number of connecting nodes		32
Error control checks		Manchester code check, frame length check, and parity check

Note: 1. A terminator must be connected to the point in the system farthest from the Master.

2. The communications baud rate is switched with the DIP switch.

■ Unit Specifications

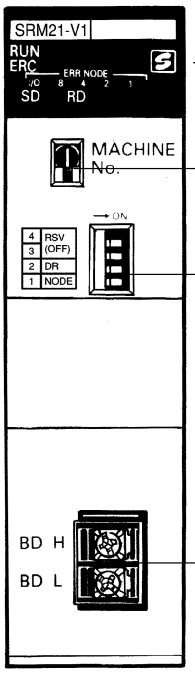
Current consumption	150 mA max. at 5 VDC
Number of I/O points	256 points (128 inputs/128 outputs), 128 points (64 inputs/64 outputs) (switchable)
Number of occupied words	256 points: 20 words (8 input words/8 output words, 4 status data) 128 points: 10 words (4 input words/4 output words, 2 status data)
PC	CS1, C200HX (-ZE), C200HG (-ZE), C200HE (-ZE), C200HS
Number of points per node number	8 points
Max. number of Slaves per Master	32
Status data	Communications Error Flag and Active Slave Node (see note)
Weight	200 g max.
Approved standards	UL 508 (E95399), CSA C22.2 No. 142 (LR51460)

Note: These flags use the AR area.

■ Ratings

The ratings of the Unit are the same as those of the CS1, C200HX, C200HG, C200HE, and C200HS.

Nomenclature



Indicators

Indicates the operating status of the Master Unit and the status of communications with the Slaves.

Rotary Switch

This switch sets the Master's one-digit hexadecimal unit number.

DIP Switch

These pins have the following functions:
Pin 1: Max. number of Slaves setting
Pin 2: Baud rate setting
Pins 3 to 4: Reserved (Always OFF.)

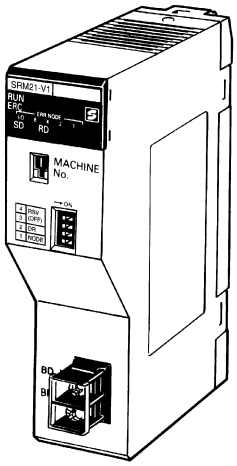
Communications Terminals

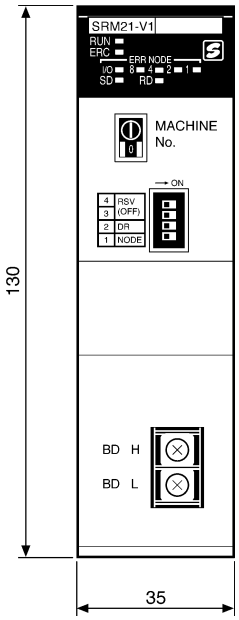
Connect the Slaves' transmission cable to these terminals.

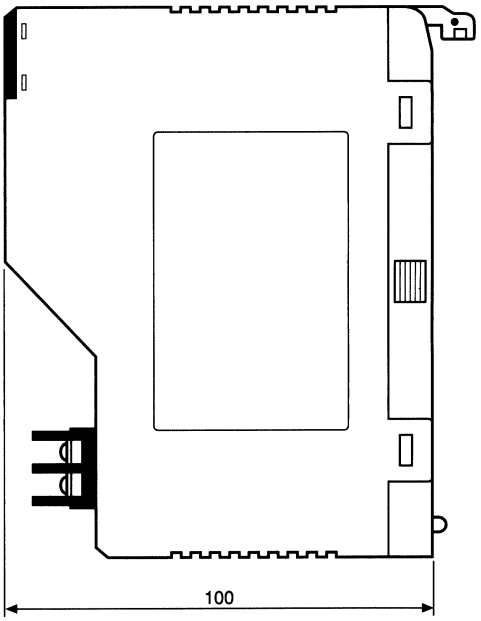
Dimensions

Note: All units are in millimeters unless otherwise indicated.

C200HW-SRM21-V1







Note: Refer to the *C200HX, C200HG, C200HE*, *C200HS*, or *CS1 Operation Manual* for details on the dimensions when the Master Unit is installed in the PC's Backplane.

Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

OMRON

Master Unit

CQM1-SRM21-V1

Master Unit for CQM1

- A maximum of 128 I/O points available (Possible to set 32, 64, or 128 I/O points).
- Connects to a maximum of 16/32 Slaves.
- Communications cycle time: 0.5 ms max. (at baud rate 750 kbps).
- Communications distance: Extended to 500 m max. (at baud rate 93.75 kbps).
- Connection to Analog Terminals now supported.

Ordering Information

PC	Max. number of I/O points	Model
CQM1-series PC	128 points (64 inputs/64 outputs)	CQM1-SRM21-V1

Specifications

■ Communications Specifications

Communications method		CompoBus/S protocol
Coding method		Manchester coding method
Connection method		Multi-drop method and T-branch method (see note 1)
Communications baud rate		750,000 bps, 93,750 bps (see note 2)
Communications cycle time	**High-speed communications mode**	0.5 ms with 8 Slaves for inputs and 8 Slaves for outputs
		0.8 ms with 16 Slaves for inputs and 16 Slaves for outputs
	Long-distance communications mode	4.0 ms with 8 Slaves for inputs and 8 Slaves for outputs
		6.0 ms with 16 Slaves for inputs and 16 Slaves for outputs
Communications cable		2-conductor VCTF cable (0.75 x 20) Dedicated flat cable
Communications distance	**High-speed communications mode**	VCTF cable: Main line length: 100 m max. Branch line length: 3 m max. Total branch line length: 50 m max. Flat cable: Main line length: 30 m max. Branch line length: 3 m max. Total branch line length: 30 m max. (When flat cable is used to connect fewer than 16 Slaves, the main line can be up to 100 m long and the total branch line length can be up to 50 m.)
	Long-distance communications mode	VCTF cable:: Main line length: 500 m max. Branch line length: 6 m max. Total branch line length: 120 m max.
Max. number of connecting nodes		32
Error control checks		Manchester code check, frame length check, and parity check

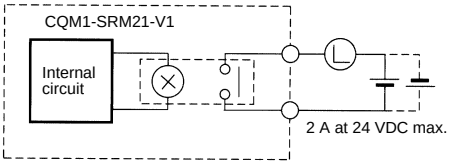
Note: 1. A terminator must be connected to the point in the system farthest from the Master.

2. The communications baud rate is switched with the DIP switch.

■ Unit Specifications

Current consumption	180 mA max. at 5 VDC
Number of I/O points	128 points (64 inputs/64 outputs), 64 points (32 inputs/32 outputs), 32 points (16 inputs/16 outputs) (switchable)
Number of occupied words	128 points: 4 input words/4 output words 64 points: 2 input words/2 output words 32 points: 1 input word/1 output word
PC	128 points: CQM1-CPU41-EV1/CPU42-EV1/CPU43-EV1/CPU44-EV1 64 points: CQM1-CPU11-E/CPU21-E/CPU41-EV1/CPU42-EV1/CPU43-EV1/CPU44-EV1 32 points: CQM1-CPU11-E/CPU21-E/CPU41-EV1/CPU42-EV1/CPU43-EV1/CPU44-EV1
Number of points per node number	4/8 points (switchable)
Max. number of Slaves per Master	32 (4 points per node number)
Status data	Alarm terminal output
Weight	200 g max.
Approved standards	UL 508 (E95399), CSA C22.2 No. 142 (LR51460)

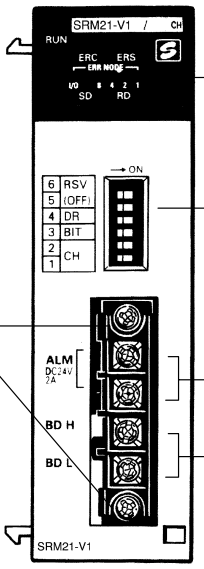
■ Alarm Output Specifications

Maximum switching capacity	2 A at 24 VDC
Minimum switching capacity	10 mA at 5 VDC
Relay	G6D-1A
Minimum ON time	100 ms
Circuit configuration	

■ Ratings

The ratings of the Unit are the same as those for the CQM1.

Nomenclature



Indicators

Indicates the operating status of the Master Unit and the status of communications with the Slaves.

DIP Switch

These pins have the following functions:
Pins 1 and 2: PC word allocation setting
Pin 3: Number of points setting
Pin 4: Baud rate setting
Pins 5 to 6: Reserved (Always OFF.)

Alarm Output Terminals

These terminals are shorted when an error occurs. Connect to a warning device.

Communications Terminals

Connect the Slaves' transmission cable to these terminals.

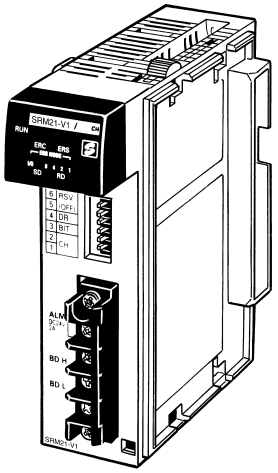
Terminal block screws

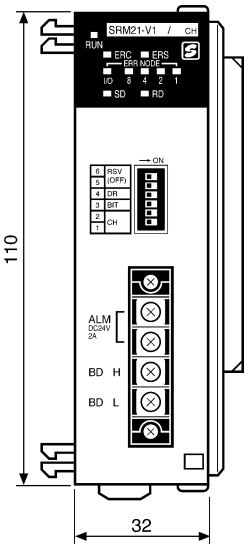
These screws attach the terminal block. The terminal block can be removed when these screws are loosened.

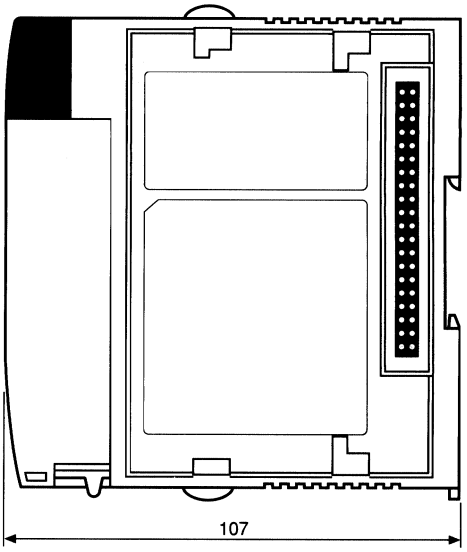
Dimensions

Note: All units are in millimeters unless otherwise indicated.

CQM1-SRM21-V1







Note: Refer to the *CQM1 Operation Manual* for details on the dimensions when the Master Unit is installed in the PC's Backplane.

Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

OMRON

SYSMAC Board

C200PC-ISA□2-SRM

SYSMAC C200HX/HG/HE and CompoBus/S Master Functions Integrated into a Single PCB

- Operates as a Programmable Controller to be built into personal computers.
- Programming is possible through Programming Devices like the programming on C200HX/HG.
- An optional Expansion Board is available for serial communications.
- Dedicated library in C is available for control.
- Driver for Windows use is available.
- Connects to a maximum of three Expansion I/O Racks.
- CompoBus/S Slave data is automatically read.

Ordering Information

PC	Max. number of I/O points	Model
C200HG-CPU43	256 points (128 inputs/128 outputs)	C200PC-ISA02-SRM
C200HX-CPU64		C200PC-ISA12-SRM

Specifications

■ Communications Specifications

Communications method	CompoBus/S protocol
Coding method	Manchester coding method
Connection method	Multi-drop method and T-branch method (see note)
Communications baud rate	750,000 bps
Communications cycle time	0.5 ms with 8 Slaves for inputs and 8 Slaves for outputs 0.8 ms with 16 Slaves for inputs and 16 Slaves for outputs
Communications cable	2-conductor VCTF cable (0.75 x 20) Dedicated flat cable
Communications distance	VCTF cable: Main line length: 100 m max. Branch line length: 3 m max. Total branch line length: 50 m max. Flat cable: Main line length: 30 m max. Branch line length: 3 m max. Total branch line length: 30 m max. (When flat cable is used to connect fewer than 16 Slaves, the main line can be up to 100 m long and the total branch line length can be up to 50 m.)
Max. number of connecting nodes	32
Error control checks	Manchester code check, frame length check, and parity check

Note: A terminator must be connected to the point in the system farthest from the Master.

■ Unit Specifications

Power supply voltage	4.875 to 5.25 VDC
Current consumption	0.5 A max. (see note 1)
Number of I/O points	256 points (128 inputs/128 outputs), 128 points (64 inputs/64 outputs), (switchable)
Number of occupied words	256 points: 20 words (8 input words, 8 output words, and 4 status data words) (see note 2) 128 points: 10 words (4 input words, 4 output words, and 2 status data words)
Number of points per node number	8 points
Max. number of Slaves per Master	32
Status data	Communications Error Flag and Active Slave Node (see note 2)
Weight	200 g max.

Note: 1. The current consumption will be 0.8 A max. if the Programming Console is connected through the optional Expansion Board.
2. The occupied words are in the IR area.

OMRON

I/O Link Unit

CPM1A-SRT21

I/O Link Unit for CPM2A/CPM1A

- Operates as a Slave of the CompoBus/S Master Unit.
- Exchanges eight inputs and eight outputs with the Master.
- Approved by UL and CSA standards, and bears the CE marking.

Ordering Information

■ CPU Units

I/O configuration	Power supply	Output method	Input	Output	Model
30-point I/O model	AC	Relay	18	12	CPM1A-30CDR-A*
	DC	Relay			CPM1A-30CDR-D*
		Transistor (sink)			CPM1A-30CDT-D
		Transistor (source)			CPM1A-30CDT1-D
	AC	Relay			CPM2A-30CDR-A
	DC	Relay			CPM2A-30CDR-D
		Transistor (sink)			CPM2A-30CDT-D
		Transistor (source)			CPM2A-30CDT1-D
40-point I/O model	AC	Relay	24	16	CPM1A-40CDR-A*
	DC	Relay			CPM1A-40CDR-D*
		Transistor (sink)			CPM1A-40CDT-D
		Transistor (source)			CPM1A-40CDT1-D
	AC	Relay			CPM2A-40CDR-A
	DC	Relay			CPM2A-40CDR-D
		Transistor (sink)			CPM2A-40CDT-D
		Transistor (source)			CPM2A-40CDT1-D
60-point I/O model	AC	Relay	36	24	CPM2A-60CDR-A
	DC	Relay			CPM2A-60CDR-D
		Transistor (sink)			CPM2A-60CDT-D
		Transistor (source)			CPM2A-60CDT1-D

Note: Models marked with asterisks do not bear CE markings.

■ Expansion Units

Product	Number of connectable Units per CPU Unit	Output method	Input	Output	Model
Expansion I/O Units	3 max. (see note)	Relay	12	8	CPM1A-20EDR1
		Transistor (sink)			CPM1A-20EDT
		Transistor (source)			CPM1A-20EDT1
		---	8	---	CPM1A-8ED
		Relay	---	8	CPM1A-8ER
		Transistor (sink)	---	8	CPM1A-8ET
		Transistor (source)			CPM1A-8ET1
Analog I/O Unit	3 max. (see note)	Analog	2	1	CPM1A-MAD01
CompoBus/S I/O Link Unit	3 max. (see note)	---	8 I/O link points	8 I/O link points	CPM1A-SRT21

Note: Only a single Unit will be connectable if the NT-AL001 is connected to the RS-232C port.

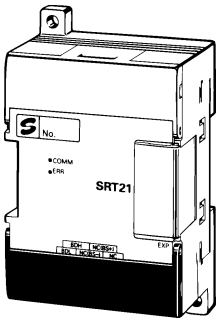
Specifications

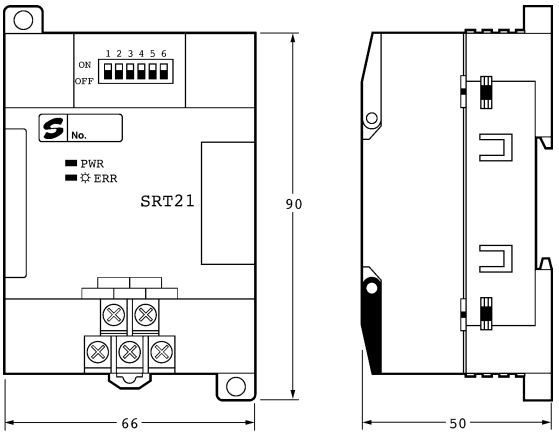
Slave	CompoBus/S Slave
Number of I/O points	8 inputs and 8 outputs
Number of occupied I/O memory words of CPM2A	1 input word and 1 output word (same as other Expansion Units in allocation)
Node address setting	DIP switch

Dimensions

Note: All units are in millimeters unless otherwise indicated.

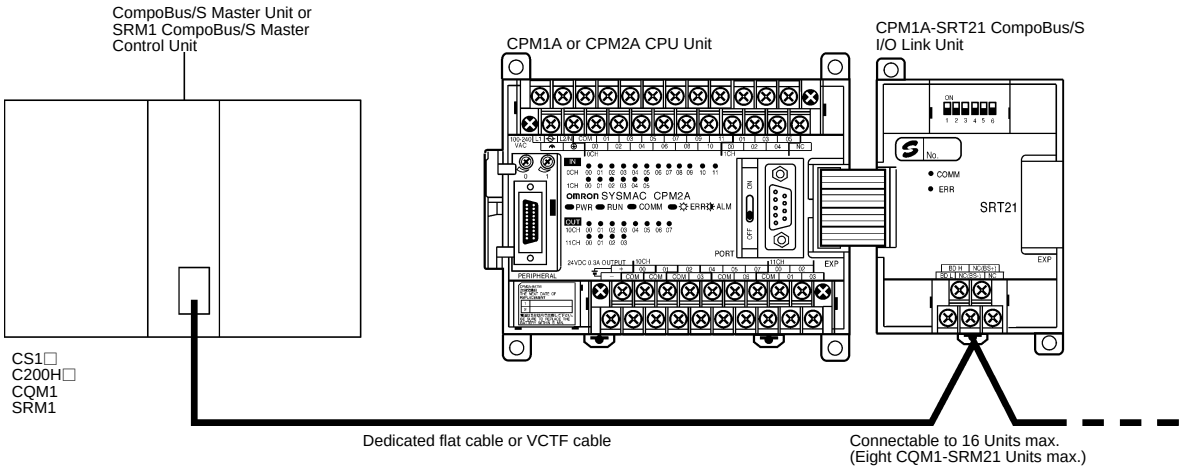
CPM1A-SRT21





Installation

■ Connection Examples



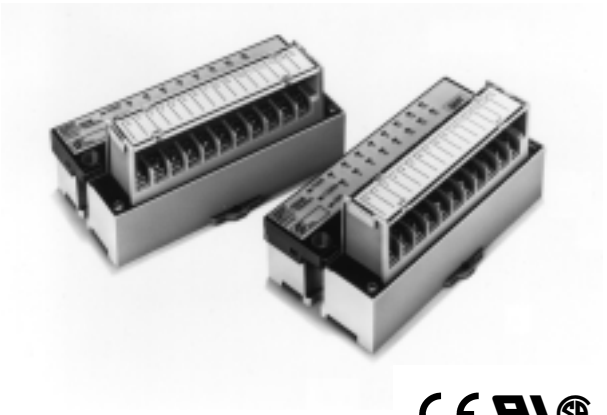
Note: A single CompoBus/S I/O Link Unit together with a maximum of two other Expansion I/O Units can be connected to the CPM1A or CPM2A CPU Unit.

OMRON

Transistor Remote Terminal

SRT□-ID/OD

Long-distance Communications Supported by SRT2 Models (Long-distance/High-speed Communications Selection)



- SRT1 models support high-speed communications only.
  SRT2 models support long-distance communications and high-speed communications.
- Ultra-compact at 80 x 48 x 50 (W x H x D) mm for 4-point and 8-point terminals and 105 x 48 x 50 (W x H x D) mm for 16-point 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 both supported.

Ordering Information

I/O classification	Internal I/O circuit common	I/O points	Rated voltage	I/O rated voltage	Model
Input	NPN (+ common)	4	24 VDC	24 VDC	SRT1-ID04
	PNP (– common)				SRT1-ID04-1
Output	NPN (– common)				SRT1-OD04
	PNP (+ common)				SRT1-OD04-1
Input	NPN (+ common)	8			SRT2-ID08
	PNP (– common)				SRT2-ID08-1
Output	NPN (– common)				SRT2-OD08
	PNP (+ common)				SRT2-OD08-1
Input	NPN (+ common)	16			SRT2-ID16
	PNP (– common)				SRT2-ID16-1
Output	NPN (– common)				SRT2-OD16
	PNP (+ common)				SRT2-OD16-1

Note: For more details about connections supported by the Master Unit, refer to page 2.

Specifications

■ Ratings

Inputs

Input current	6 mA max./point
ON delay time	1.5 ms max.
OFF delay time	1.5 ms max.
ON voltage	15 VDC min. between each input terminal and V
OFF voltage	5 VDC max. between each input terminal and V
OFF current	1 mA max.
Insulation method	Photocoupler
Input indicators	LED (yellow)

Outputs

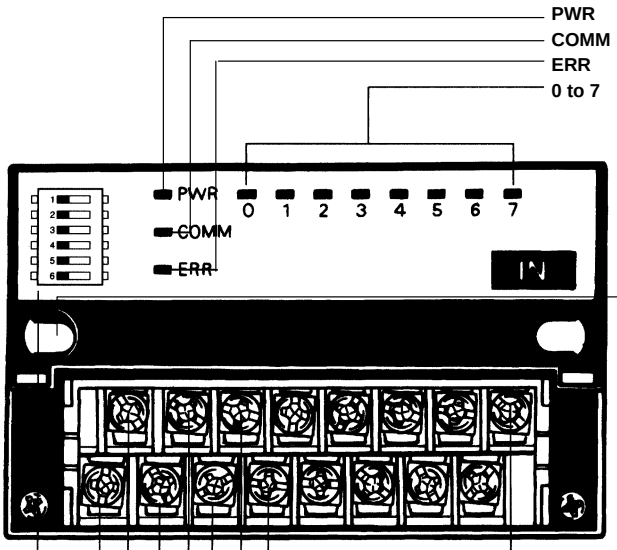
Rated output current	0.3 A/point
Residual voltage	0.6 V max.
Leakage current	0.1 mA max.
Insulation method	Photocoupler
Output indicators	LED (yellow)

■ Characteristics

Communications power supply voltage	14 to 26.4 VDC
I/O power supply voltage	24 VDC $^{+10\%}/_{-15\%}$
I/O power supply current	1 A max.
Current consumption (see note)	50 mA max. at 24 VDC
Connection method	Multi-drop method and T-branch method Secondary branches cannot be connected to T-branch lines.
Connecting Units	4-point and 8-point Terminals: 16 Input Terminals and 16 Output Terminals per Master 16-point Terminals: 8 Input Terminals and 8 Output Terminals per Master
Dielectric strength	500 VAC for 1 min (1-mA sensing current between insulated circuits)
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power lines)
Vibration resistance	10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Malfunction: 200 m/s^2 Destruction: 300 m/s^2
Mounting strength	No damage when 50 N pull load was applied for 10 s in all directions
Terminal strength	No damage when 50 N pull load was applied for 10 s
Screw tightening torque	0.6 to 1.18 N • m
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	4-point and 8-point Terminals: 80 g max. 16-point Terminals: 110 g max.
Approved standards (4/8 points)	UL 508, CSA C22.2 No. 14

Note: The above current consumption is the value with all 4 and 8 and 16 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.

Nomenclature



Indicators

Indicator	Display	Color	Meaning
PWR	Lit	Green	The communications power supply is ON.
	Not lit		The communications power supply is OFF.
COMM	Lit	Yellow	Normal communications
	Not lit		A communications error has occurred or the Unit is in standby status.
ERR	Lit	Red	A communications error has occurred.
	Not lit		Normal communications or the Unit is in standby status.
0 to 7	Lit	Yellow	The corresponding I/O signal is ON.
	Not lit		The corresponding I/O signal is OFF.

Output HOLD/CLEAR Mode

Mode	Pin 1	Setting
HOLD	ON	Output status is maintained.
CLEAR	OFF	Output status is cleared when a communications error occurs.

Note: 1. Pin 1 is factory-set to OFF.
2. This function is available to Output Terminals only.

Node Number Settings

Node number	Pin 3	Pin 4	Pin 5	Pin 6
	8	4	2	1
0	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	ON
2	OFF	OFF	ON	OFF
3	OFF	OFF	ON	ON
4	OFF	ON	OFF	OFF
5	OFF	ON	OFF	ON
6	OFF	ON	ON	OFF
7	OFF	ON	ON	ON
8	ON	OFF	OFF	OFF
9	ON	OFF	OFF	ON
10	ON	OFF	ON	OFF
11	ON	OFF	ON	ON
12	ON	ON	OFF	OFF
13	ON	ON	OFF	ON
14	ON	ON	ON	OFF
15	ON	ON	ON	ON

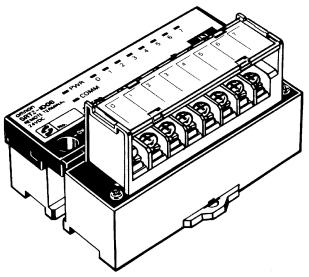
Note: 1. The node number is factory-set to 0.

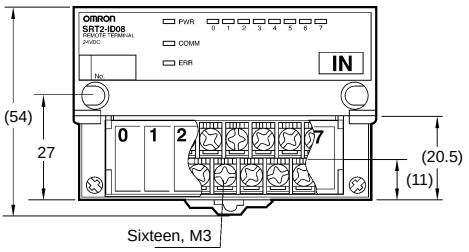
2. For node number settings, refer to the *CompoBus/S Operation Manual (W266).*

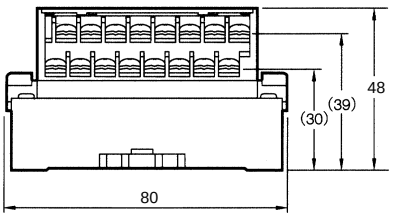
Dimensions

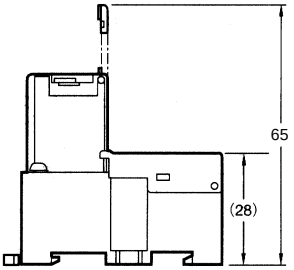
Note: All units are in millimeters unless otherwise indicated.

SRT1-ID04 (-1)
SRT1-OD04 (-1)
SRT2-ID08 (-1)
SRT2-OD08 (-1)

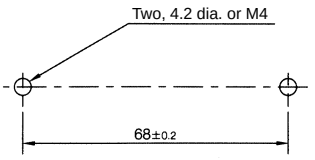




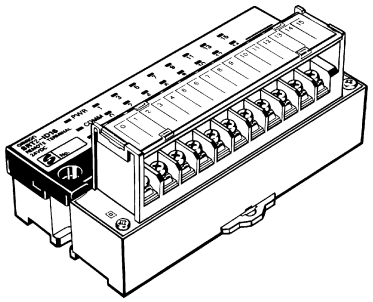


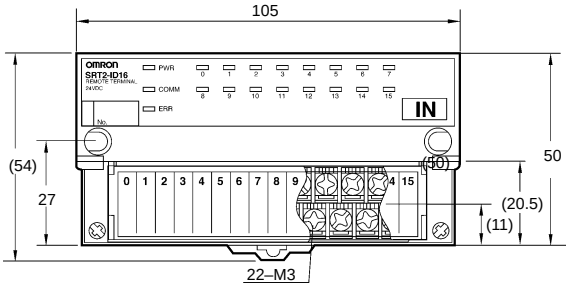


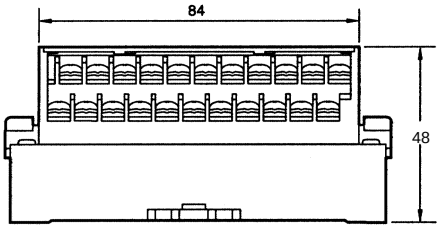
Mounting Holes

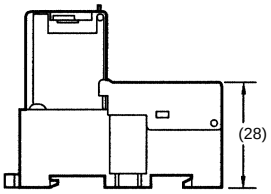


SRT2-ID16 (-1)
SRT2-OD16 (-1)

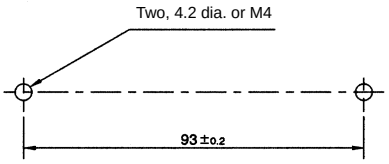








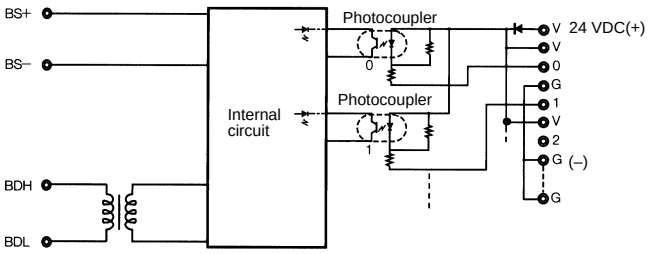
Mounting Holes



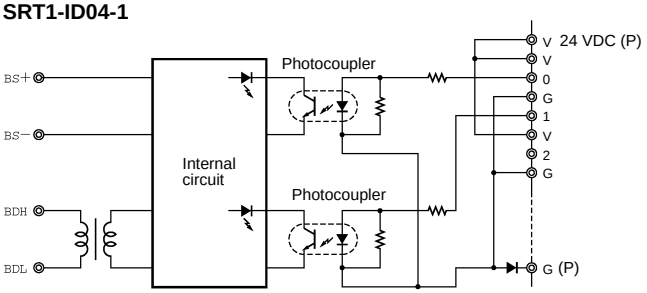
Installation

■ Internal Circuit Configuration

SRT1-ID04



SRT1-ID04-1



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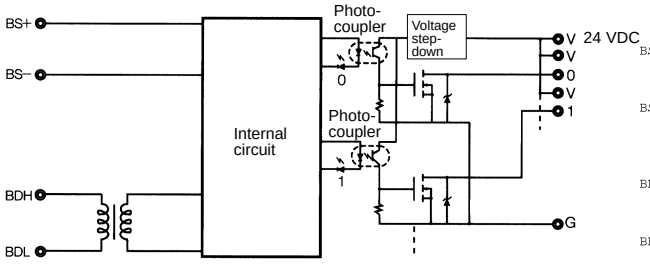

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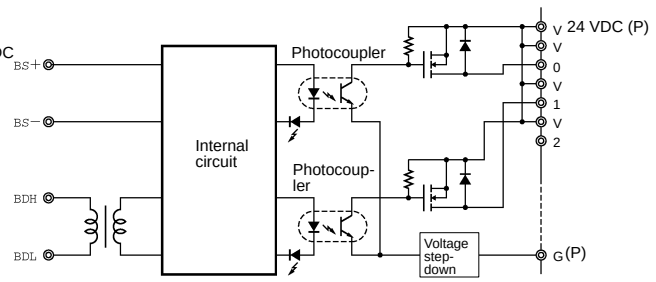
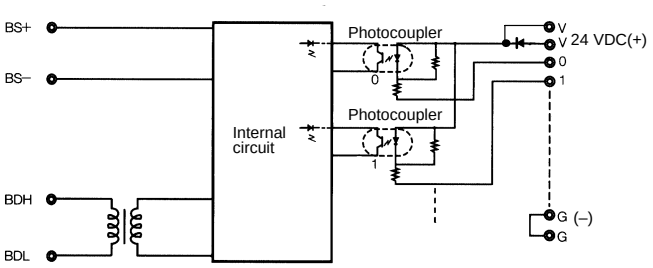
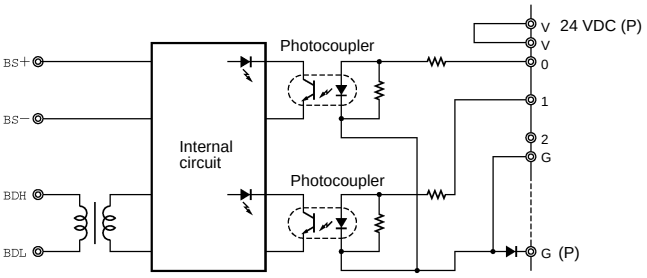


SRT2-ID08



SRT2-ID08-1



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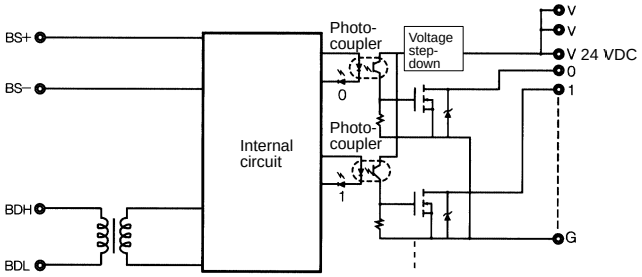
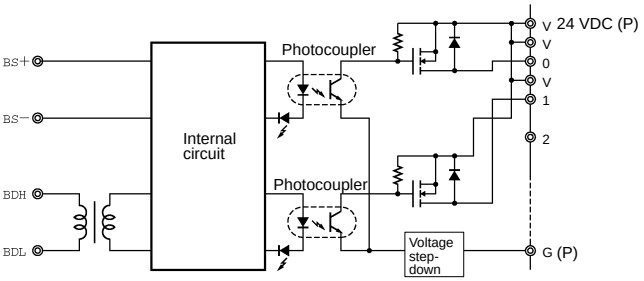
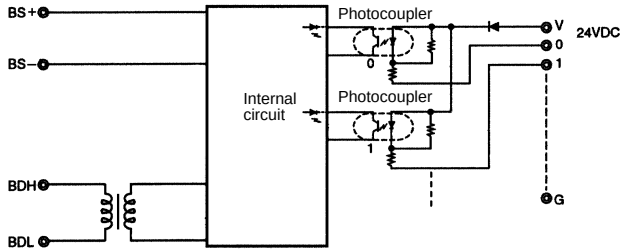


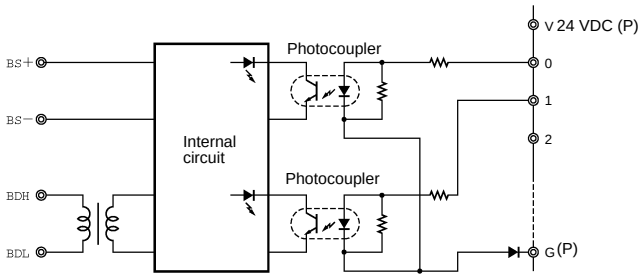
SRT2-OD08-1



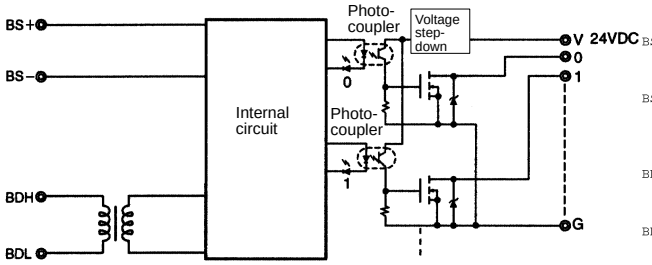
SRT2-ID16



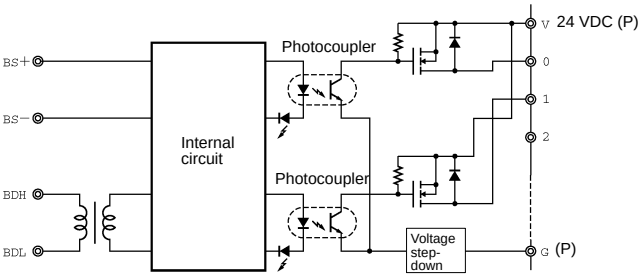
SRT2-ID16-1



SRT2-OD16



SRT2-OD16-1

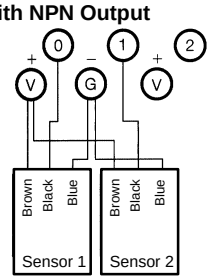


■ External Connections (NPN Models)

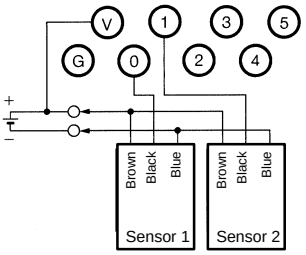
Input

Three-wired Sensors

SRT1-ID04 with NPN Output

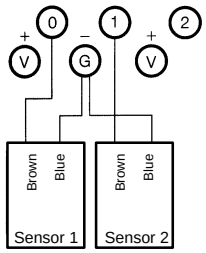


SRT2-ID08 and SRT2-ID16 with NPN Output

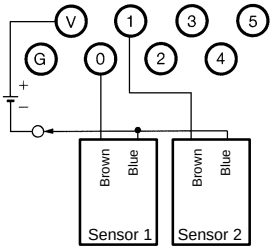


Two-wired Sensors

SRT1-ID04

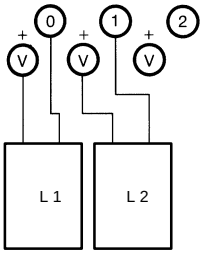


SRT2-ID08 and SRT2-ID16

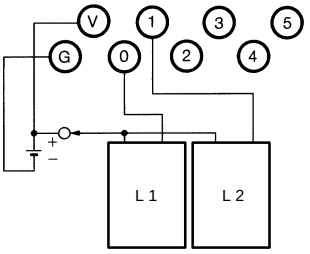


Output

SRT1-OD04



SRT2-OD08 and SRT2-ID16

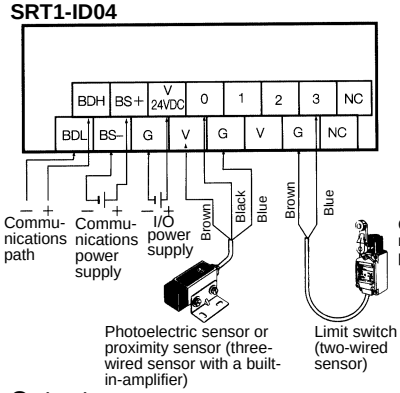


■ Terminal Arrangement and I/O Device Connection Example (PNP Models)

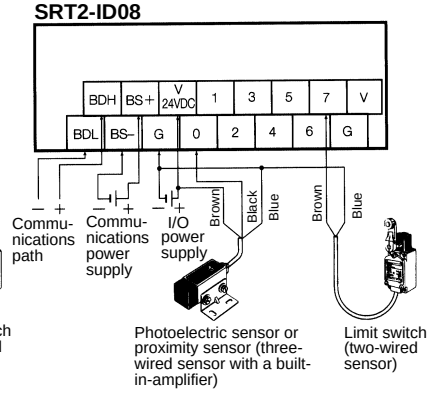
Note: The connections examples shown are for PNP models.

Input

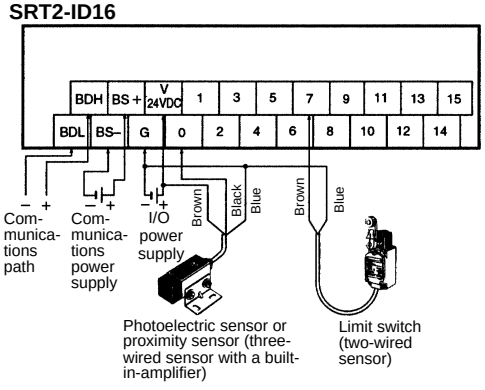
SRT1-ID04



SRT2-ID08

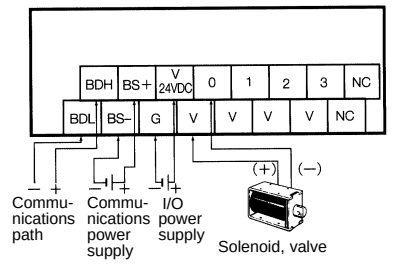


SRT2-ID16

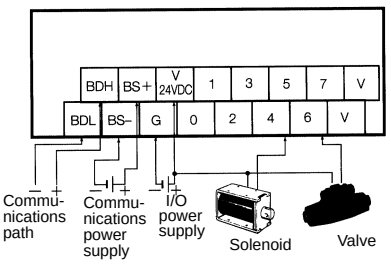


Output

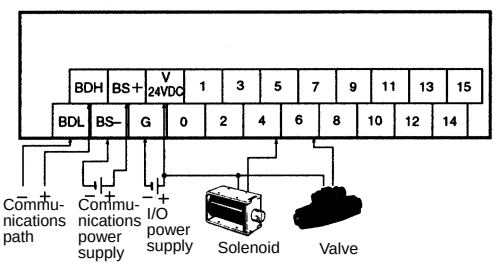
SRT1-OD04



SRT2-OD08



SRT2-OD16

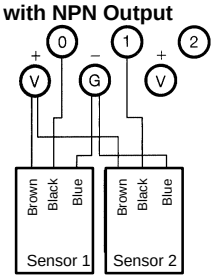


■ External Connections (PNP Models)

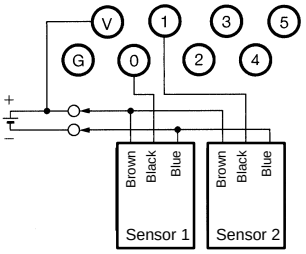
Input

Three-wired Sensors

SRT1-ID04-1 with NPN Output

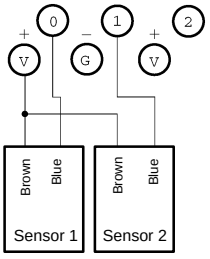


SRT2-ID08-1 and SRT2-ID16-1 with NPN Output

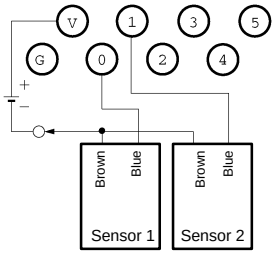


Two-wired Sensors

SRT1-ID04-1

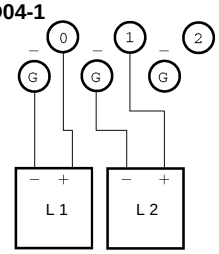


SRT2-ID08-1 and SRT2-ID16-1

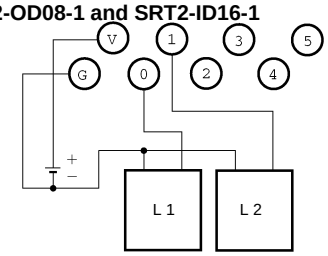


Output

SRT1-OD04-1



SRT2-OD08-1 and SRT2-ID16-1

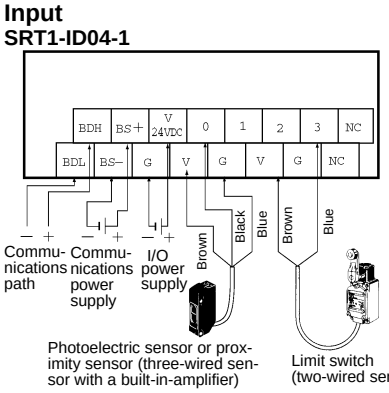


■ Terminal Arrangement and I/O Device Connection Example (PNP Models)

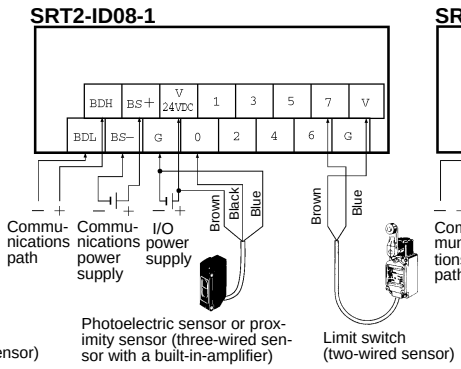
Note: The connections examples shown are for NPN models.

Input

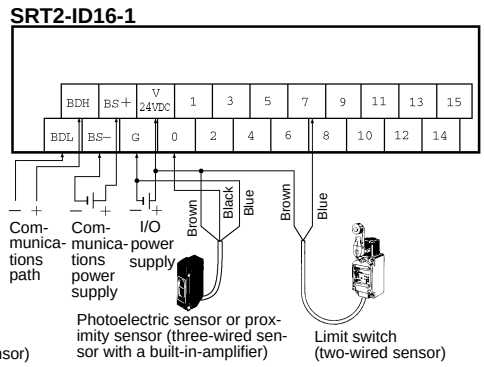
SRT1-ID04-1



SRT2-ID08-1

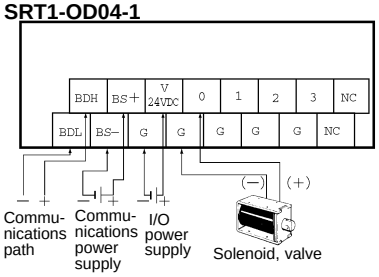


SRT2-ID16-1

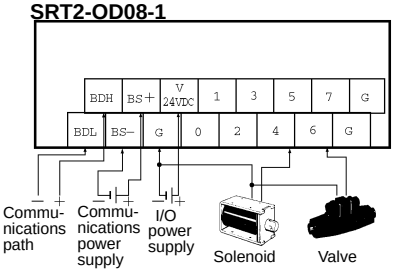


Output

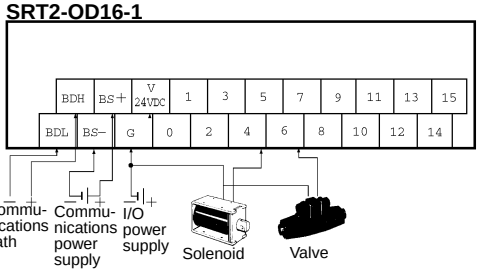
SRT1-OD04-1



SRT2-OD08-1



SRT2-OD16-1



Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

For general precautions refer to page 72.

OMRON

Remote I/O Terminal

SRT1-□D16T(-1)

Models with 3-tier Terminals (16 Points) are Added to the Remote I/O Terminal Series.

Six Models are Available Depending on the NPN or PNP Configuration, Input Points, I/O Points, or Output Points.

- Incorporates easy-to-wire terminals each connecting to a single wire.
- Reduces designing and wiring effort.
- Incorporates a removable circuit block of cassette construction.

Ordering Information

I/O classification	Internal I/O circuit common	I/O points	I/O connection method	Model
Digital input	NPN (+ common)	16	M3 terminal block	SRT1-ID16T
	PNP (– common)			SRT1-ID16T-1
Digital I/O	NPN (+ common)			SRT1-MD16T
	PNP (– common)			SRT1-MD16T-1
Digital output	NPN (– common)			SRT1-OD16T
	PNP (+ common)			SRT1-OD16T-1

Specifications

■ Ratings

Inputs

Input current	6 mA max./point at 24 V and 3 mA min./point at 17 V
ON delay time	1.5 ms max.
OFF delay time	1.5 ms max.
ON voltage	NPN: 15 VDC min. between V terminals and each input terminal PNP: 15 VDC min. between G terminals and each input terminal
OFF voltage	NPN: 5 VDC max. between V terminals and each input terminal PNP: 5 VDC max. between G terminals and each input terminal
OFF current	1 mA max.
Insulation method	Photocoupler

Outputs

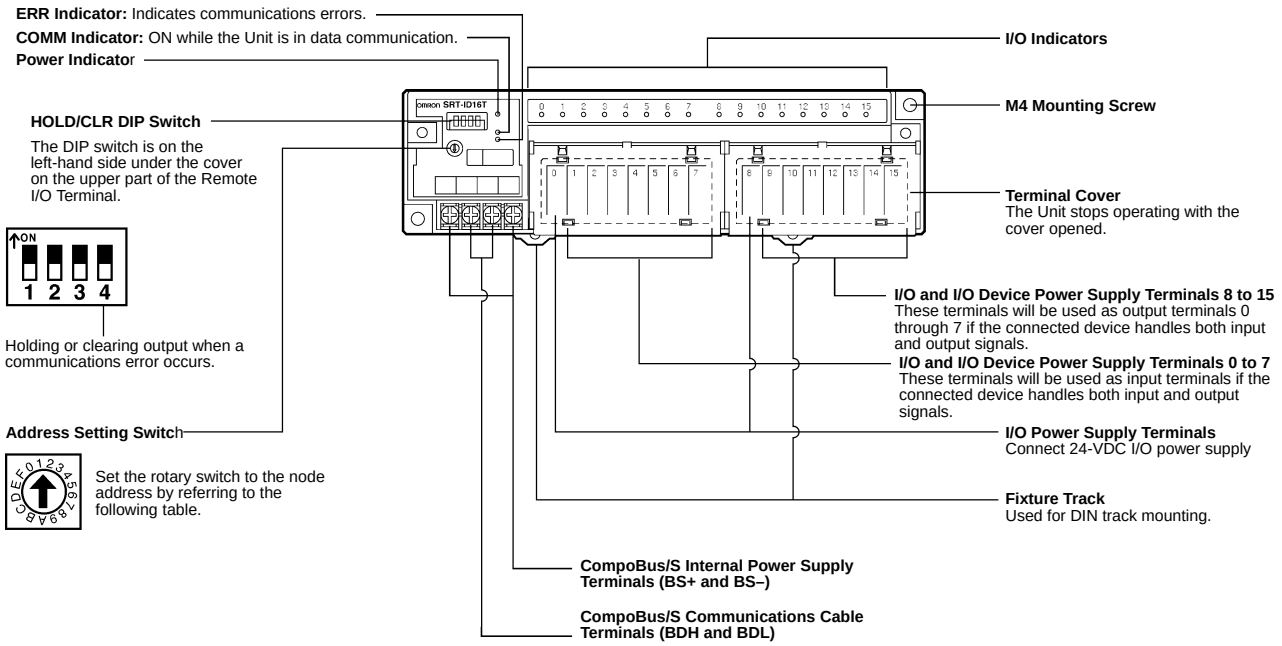
Rated output current	0.5 A max./point
Residual voltage	1.2 V max.
ON delay time	0.5 ms max.
OFF delay time	1.0 ms max.
Leakage current	0.1 mA max.
Insulation method	Photocoupler

■ Characteristics

Communications power supply voltage	14 to 26.4 VDC
I/O power supply voltage	24 VDC $^{+10\%}/_{-15\%}$
I/O power supply current	4 A max./common
Current consumption (see note)	50 mA max. at 24 VDC
Connection method	Multi-drop method and T-branch method Secondary branches cannot be connected to T-branch lines.
Dielectric strength	500 VAC between insulated circuits
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power lines)
Vibration resistance	10 to 150 Hz, 1.0-mm double amplitude or 70 m/s^2
Shock resistance	200 m/s^2
Mounting strength	No damage with 100 N pull load applied in all directions.
Terminal strength	No damage with 100 N pull load applied
Screw tightening torque	0.3 to 0.5 N • m
Ambient temperature	Operating: –10°C to 55°C Storage: –25°C to 65°C
Ambient humidity	Operating: 25% to 85% (with no condensation)
Weight	300 g max.

Note: The above current consumption is the value with all 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.

Nomenclature



Address Setting Switch

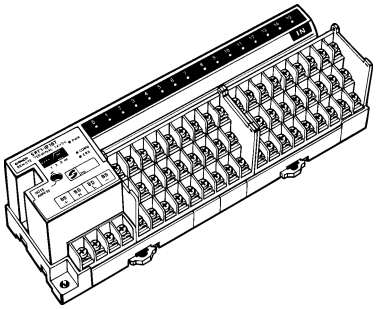
Node address	Setting (Hex)
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7

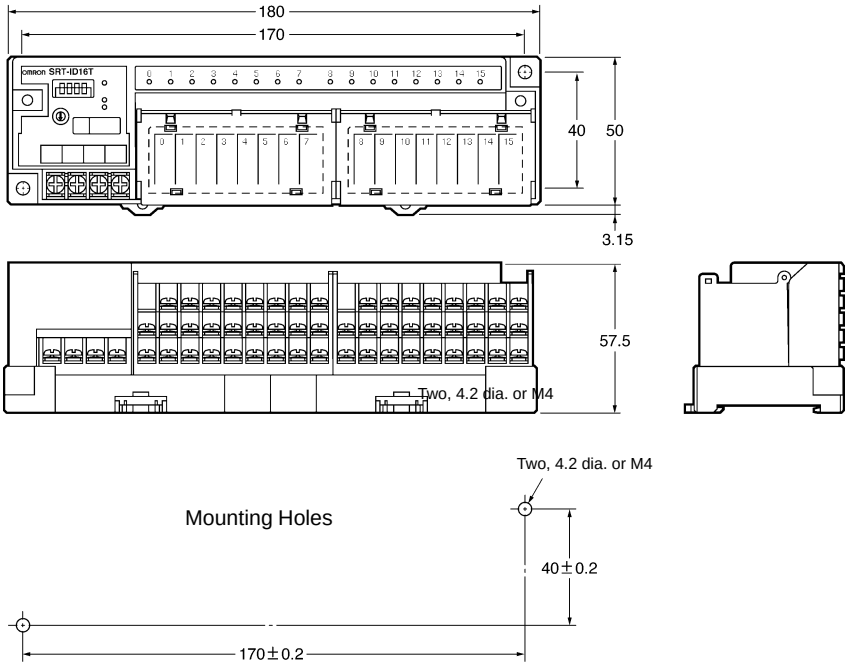
Node address	Setting (Hex)
8	8
9	9
10	A
11	B
12	C
13	D
14	E
15	F

Dimensions

Note: All units are in millimeters unless otherwise indicated.

SRT1-ID16T (-1)
SRT1-MD16T (-1)
SRT1-OD16T (-1)

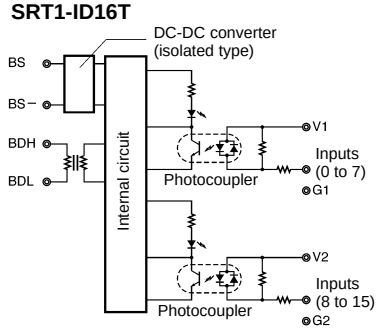




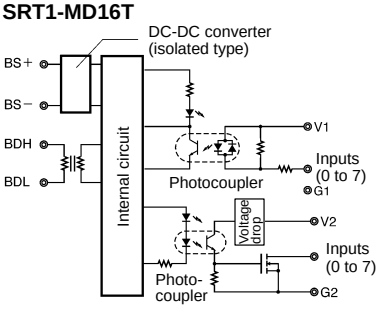
Installation

■ Internal Circuit Configuration

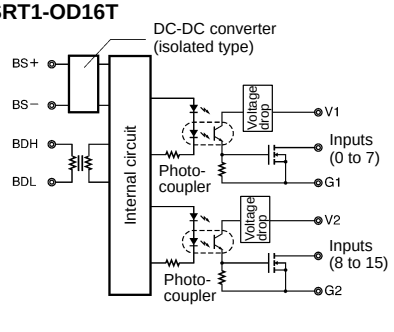
SRT1-ID16T



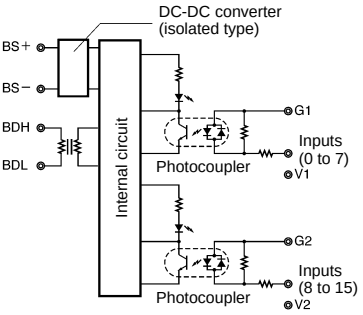
SRT1-MD16T



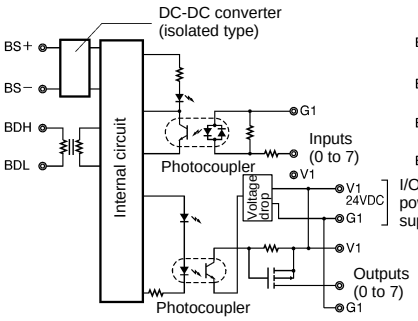
SRT1-OD16T



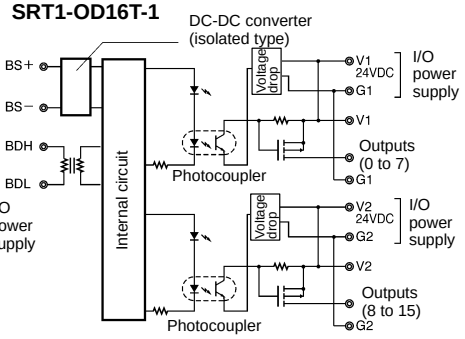
SRT1-ID16T-1



SRT1-MD16T-1



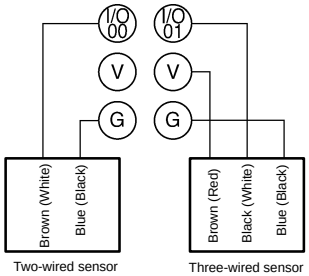
SRT1-OD16T-1



■ External Connections

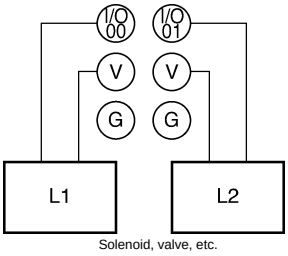
Input (NPN Models)

SRT1-ID16T
SRT1-MD16T



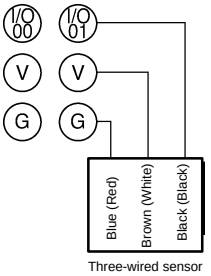
Output (NPN Models)

SRT1-OD16T
SRT1-MD16T



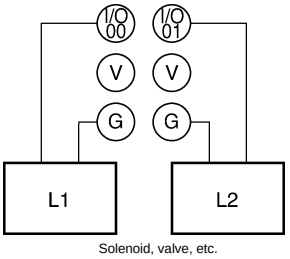
Input (PNP Models)

SRT1-ID16T-1
SRT1-MD16T-1



Output (PNP Models)

SRT1-OD16T-1
SRT1-MD16T-1

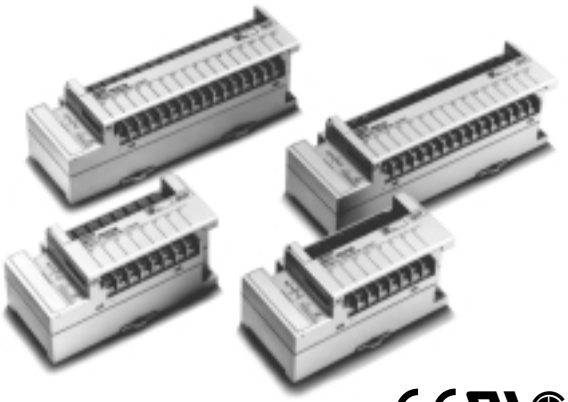


OMRON

Relay-mounted Remote Terminal | SRT□-R

Ultra-miniature 8-point and 16-point Relay-mounted Terminals

- Ultra-compact
  (8-point models: 101 x 51 x 51 mm (W x H x D);
  16-point models: 156 x 51 x 51 mm (W x H x D))
- Power MOS FET Relay and Relay models.
- DIN track mounting and screw mounting are available.



Ordering Information

Classification	I/O points	Rated voltage	Relay coil rating	Model	Applicable relay
Relay output	8 points	24 VDC	24 VDC	SRT1-ROC08	G6D-1A
	16 points			SRT2-ROC16	
Power MOS FET relay output	8 points			SRT1-ROF08	G3DZ-2R6PL
	16 points			SRT2-ROF16	

Note: For details about connections to the Master Unit, refer to page 2.

Specifications

■ Ratings

Relay Output

Item	SRT1-ROC08, SRT2-ROC16
Applicable relay	G6D-1A (one for each output point)
Rated load	3 A at 250 VAC, 3 A at 30 VDC (resistive load)
Rated carry current	3 A (see note 1)
Max. contact voltage	250 VAC, 30 VDC
Max. contact current	3 A
Max. switching capacity	730 VA (AC), 90 W (DC)
Min. permissible load (see note 2)	10 mA at 5 VDC
Life expectancy	Electrical: 100,000 operations min. (rated load, at 1,800 operations/h) Mechanical: 20,000,000 operations min. (at 18,000 operations/h)

Note: 1. The maximum permissible current of COM0 to COM7 is 3 A.

2. This value fulfills the P reference value of opening/closing at a rate of 120 times per min (ambient operating environment and determination criteria according to JIS C5442).

Power MOS FET Relay Output

Item	SRT1-ROF08, SRT2-ROF16
Applicable relay	G3DZ-2R6PL (one for each output point)
Load voltage	3 to 264 VAC, 3 to 125 VDC
Load current	100 μA to 0.3 A
Inrush current	6 A (10 ms)

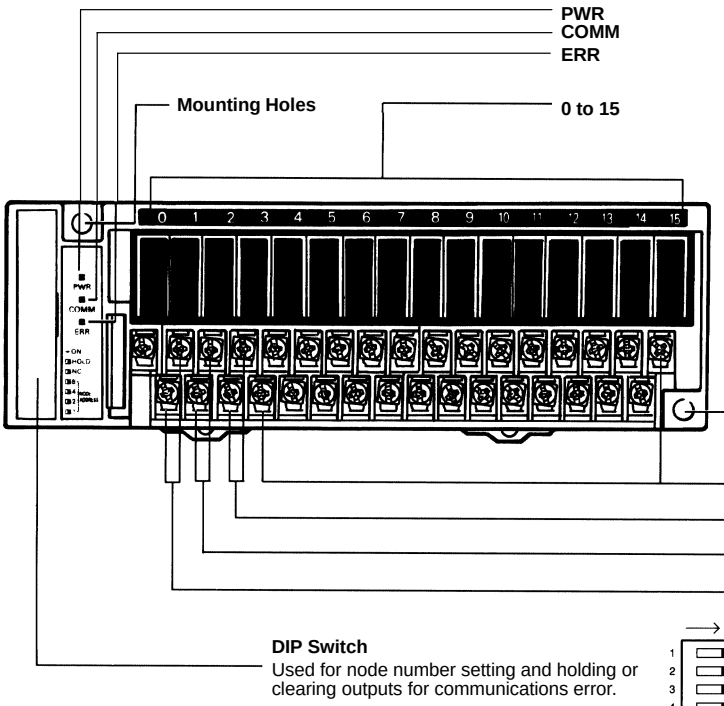
■ Characteristics

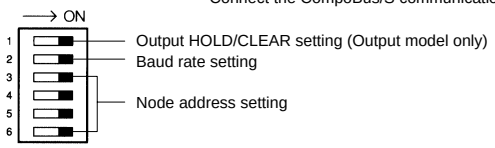
Power supply voltage	24 VDC $^{+10\%}/_{-15\%}$
Current consumption (see note)	350 mA max. at 24 VDC
Connection method	Multi-drop method and T-branch method Secondary branches cannot be connected to T-branch lines.
Connecting Units	8-point Units: 16 per Master 16-point Units: 8 per Master
Dielectric strength	2,000 VAC for 1 min (1-mA sensing current) between all output terminals and power supply, between communication terminals, and between contacts of different polarities 500 VAC for 1 min (1-mA sensing current) between all output terminals and power supply, between communication terminals, and between all power supply terminals and communications terminals
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power lines)
Vibration resistance	10 to 55 Hz, 0.75-mm double amplitude
Shock resistance	Malfunction: 100 m/s^2 Destruction: 300 m/s^2
Mounting strength	No damage when 50 N pull load was applied for 10 s in all directions
Terminal strength	No damage when 50 N pull load was applied for 10 s
Screw tightening torque	0.6 to 1.18 N • m
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	8-point models: 145 g max., 16-point models: 240 g max.
Approved standards	UL 508, CSA C22.2 No. 14

Note: The above current consumption is a value with all the points turned ON including the current consumption of the G6D coil for the Remote Output Terminal.

Nomenclature

SRT2-ROC16
SRT2-ROF16





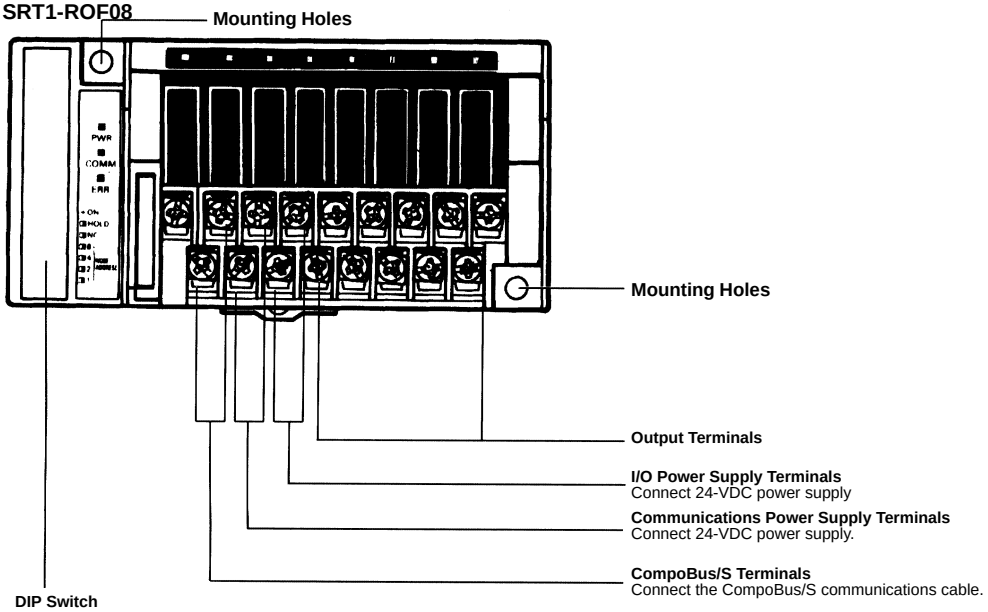
Note: Always turn off the Unit before changing DIP switch settings.

Indicators

Indicator	Display	Color	Meaning
PWR	Lit	Green	The communications power supply is ON.
	Not lit		The communications power supply is OFF.
COMM	Lit	Yellow	Normal communications
	Not lit		A communications error has occurred or the Unit is in standby status.
ERR	Lit	Red	A communications error has occurred.
	Not lit		Normal communications or the Unit is in standby status.
0 to 15 (see note)	Lit	Yellow	The corresponding I/O signal is ON.
	Not lit		The corresponding I/O signal is OFF.

Note: The SRT1-RO□08 does not have indicators 8 to 15.

SRT1-ROC08
SRT1-ROF08



Output HOLD/CLEAR Mode

Mode	Pin 1	Setting
HOLD	ON	Output status is maintained when a communications error occurs.
CLEAR	OFF	Output status is cleared when a communications error occurs.

Note: 1. Pin 1 is factory-set to OFF.
2. This function is available to the Output Terminal only.

Node Number Settings

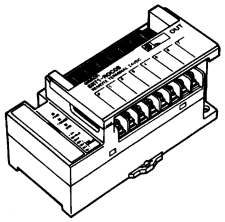
Node number	Pin 3	Pin 4	Pin 5	Pin 6
	8	4	2	1
0	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	ON
2	OFF	OFF	ON	OFF
3	OFF	OFF	ON	ON
4	OFF	ON	OFF	OFF
5	OFF	ON	OFF	ON
6	OFF	ON	ON	OFF
7	OFF	ON	ON	ON
8	ON	OFF	OFF	OFF
9	ON	OFF	OFF	ON
10	ON	OFF	ON	OFF
11	ON	OFF	ON	ON
12	ON	ON	OFF	OFF
13	ON	ON	OFF	ON
14	ON	ON	ON	OFF
15	ON	ON	ON	ON

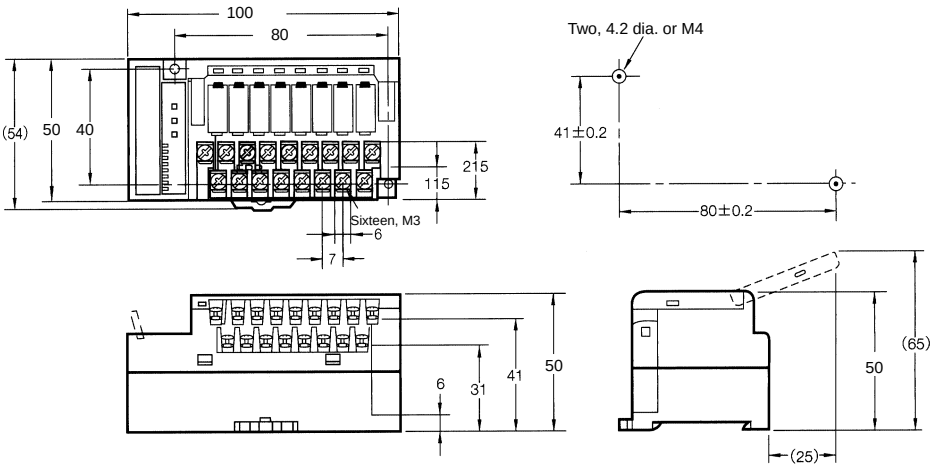
Note: 1. The node number is factory-set to 0.
2. For node number setting, refer to the *CompoBus/S Operation Manual (W266).*

Dimensions

Note: All units are in millimeters unless otherwise indicated.

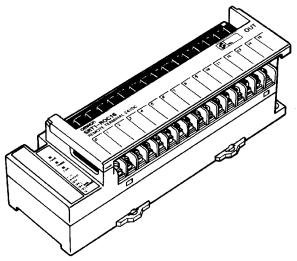
SRT1-ROC08
SRT1-ROF08

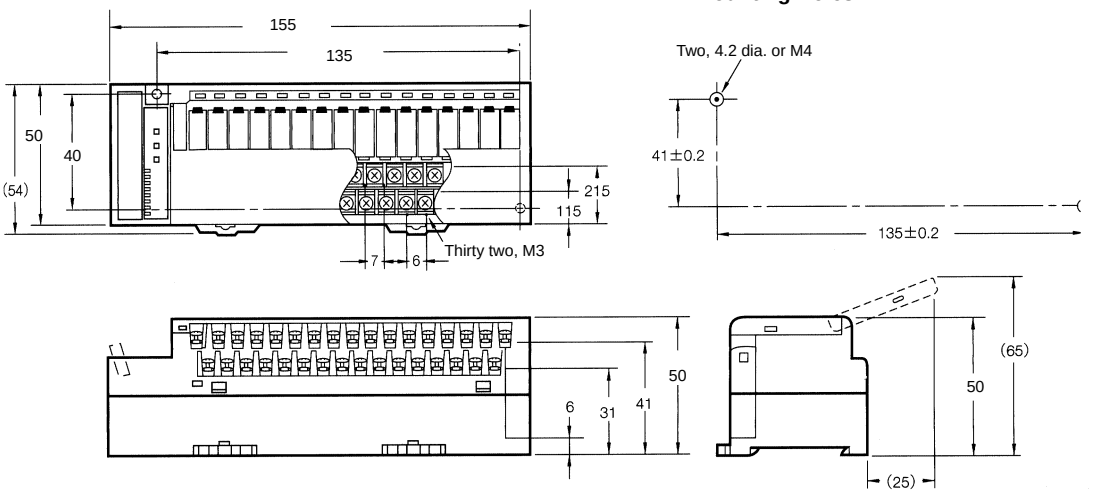




Mounting Holes

SRT2-ROC16
SRT2-ROF16



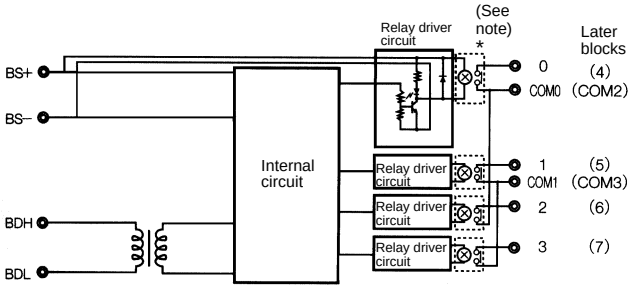


Mounting Holes

Installation

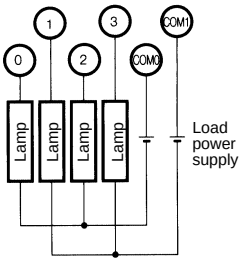
■ Internal Circuit Configuration

SRT1-ROC08
SRT2-ROC16



Note: The G3DZ-2R6PL Power MOS FET Relay is inserted into this portion of the SRT1-ROF08 and SRT2-ROF16.

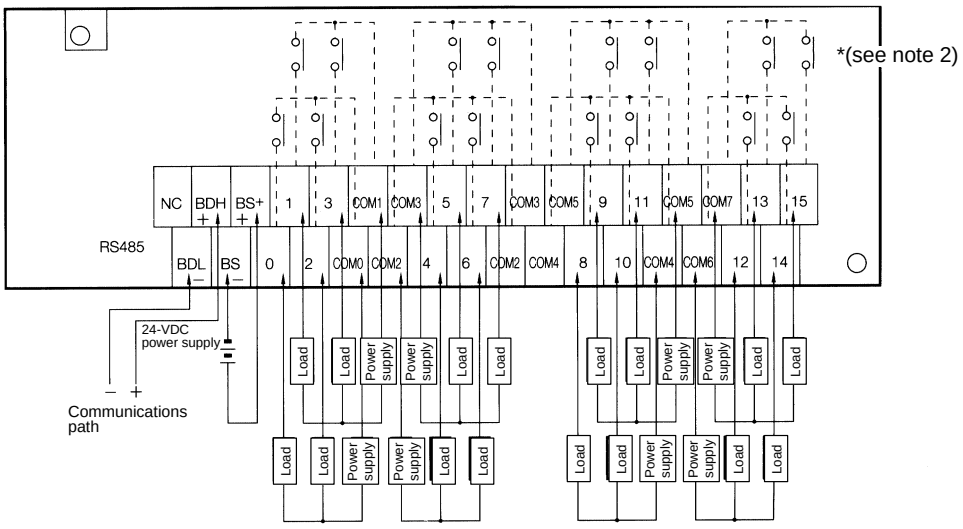
■ External Connections



■ Terminal Arrangement and I/O Device Connection Example

Output

SRT2-ROC16
SRT2-ROF16



Note: 1. Dotted lines indicate internal connections.
SRT1-ROC08 and SRT1-ROF08 have the 0 to 7 and COM0 to COM3 terminals only.

2. The above is a connection example of the SRT2-ROC16 with G6D Relays mounted.
G3DZ Power MOS FET Relays are mounted to the SRT1-ROF08 and SRT2-ROF16.

Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

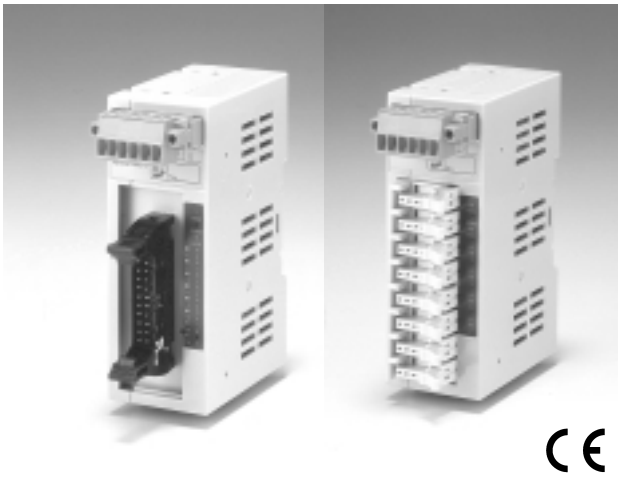
Refer to page 72 for details.

OMRON

Connector Terminal

SRT2-VID/VOD

Compact Connector Terminals Save Wiring Effort and Enable Long-distance Communications

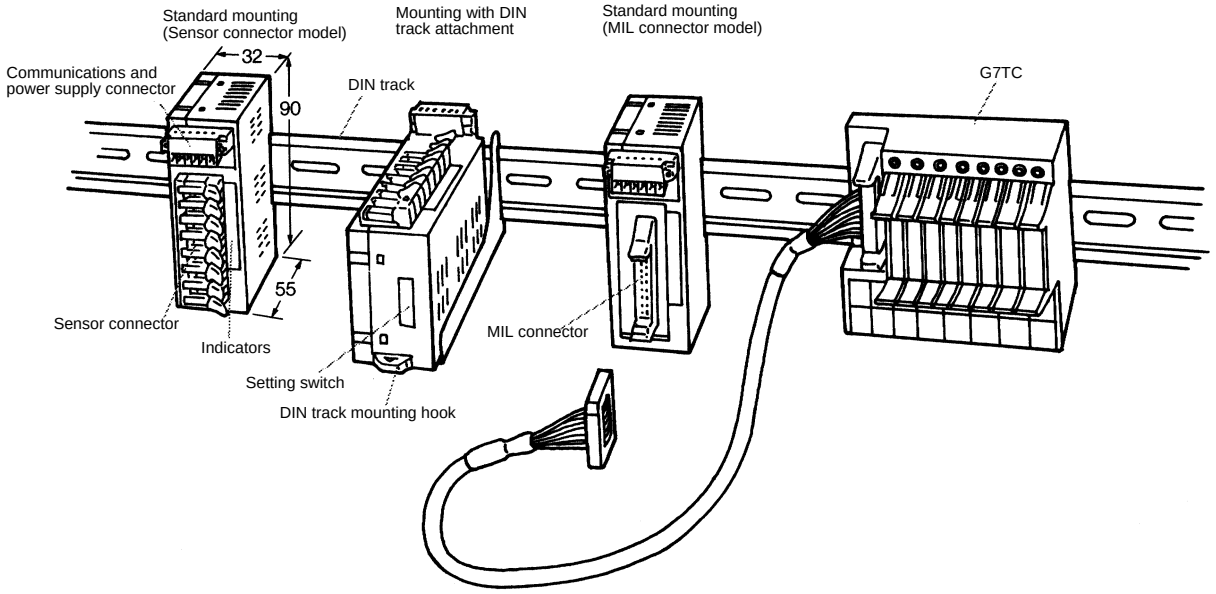


- Long-distance or high-speed communications mode is selectable.
- Incorporates I/O connectors making it possible to minimize the size.
- I/O connectors save wiring effort.
- Flexible DIN track mounting is possible through a DIN track attachment.
- Eight-point sensor connector models and 16-point MIL connector models are the same size.

■ Features

Vertical or horizontal DIN track mounting according to the available space is possible.

Saves space and easily connects to other devices without wiring effort.



Ordering Information

I/O classification	Internal I/O circuit common	I/O points	I/O connection method	Model
Digital input	NPN (+ common)	8	Sensor connector	SRT2-VID08S
	PNP (– common)			SRT2-VID08S-1
Digital output	NPN (– common)			SRT2-VOD08S
	PNP (+ common)			SRT2-VOD08S-1
Digital input	NPN (+ common)	16	MIL connector	SRT2-VID16ML
	PNP (– common)			SRT2-VID16ML-1
Digital output	NPN (– common)			SRT2-VOD16ML
	PNP (+ common)			SRT2-VOD16ML-1
Mounting hook A				SRT2-ATT01
Mounting hook B				SRT2-ATT02

Note: For details about connecting the SRT2-VID or SRT2-VOD to the Master Unit, refer to page 2.

Specifications

■ Ratings

Inputs

Item	SRT2-VID08S SRT2-VID08S-1	SRT2-VID16ML SRT2-VID16ML-1
Input current	6 mA max./point at 24 V, 3 mA max./point at 17 V	
ON delay time	1.5 ms max.	
OFF delay time	1.5 ms max.	
ON voltage	15 VDC min. (Between each input terminal and V: NPN. Between each input and G: PNP.)	
OFF voltage	5 VDC max. (Between each input terminal and V: NPN. Between each input and G: PNP.)	
OFF current	1 mA max.	
Insulation method	Photocoupler	
Maximum number of inputs	8	12
Number of circuits	8 points/common, 1 circuit	16 points/common, 1 circuit

Outputs

Item	SRT2-VID08S SRT2-VID08S-1	SRT2-VID16ML SRT2-VID16ML-1
Rated output current	0.3 A/point	0.3 A/point (2-A common) (See note.)
Residual voltage	1.2 V max.	
ON delay time	0.5 ms max.	
OFF delay time	1.5 ms max.	
Leakage current	0.1 mA max.	
Insulation method	Photocoupler	
Number of circuits	8 points/common, 1 circuit	16 points/common, 1 circuit

Note: When using V/G terminals in an MIL connector, ensure that the current per terminal for the V/G terminals does not exceed 1 A.

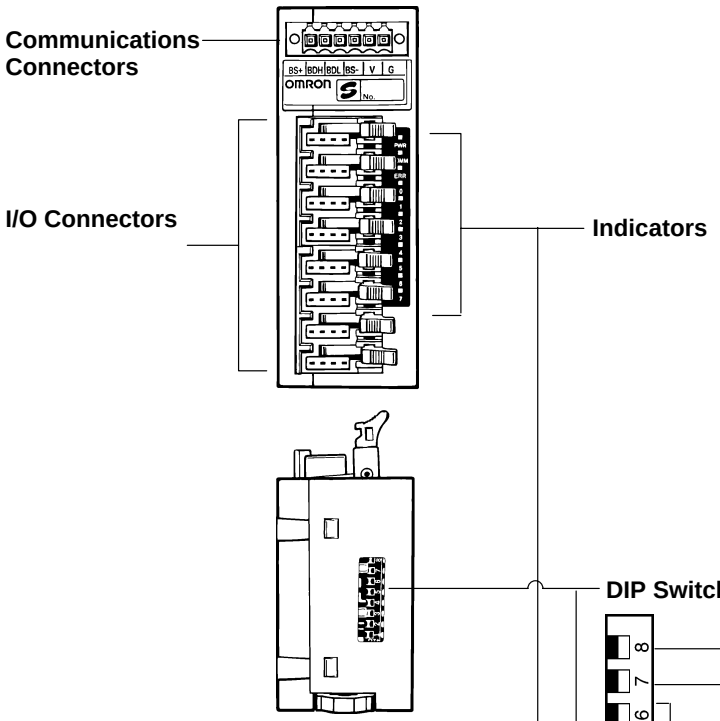
■ Characteristics

Communications power supply voltage	14 to 26.4 VDC
I/O power supply voltage	20.4 to 26.4 VDC (24 VDC $^{+10\%}/_{-15\%}$)
I/O power supply current	Sensor connector: 2.4 A max., MIL connector: 2.0 A max.
Current consumption (see note)	50 mA max. at 24 VDC
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power lines)
Vibration resistance	10 to 150 Hz, 1.0-mm double amplitude or 70 m/s^2 (50 m/s^2 for SRT2-ATT02)
Shock resistance	200 m/s^2
Dielectric strength	500 VAC (between insulated circuits)
Ambient temperature	Operating: –10°C to 55°C (with no icing or condensation) Storage: –25°C to 65°C
Ambient humidity	Operating: 25% to 85% (with no condensation) Storage: 25% to 85%
Mounting strength	No damage when 100 N pull load was applied in all directions (40 N load for SRT2-ATT02)
Terminal strength	No damage when the following loads were applied: Communications connector: 100 N Sensor connector: 40 N MIL connector: 100 N
Screw tightening torque	Communications connector: 0.25 N • m
Node address setting	Settings made at DIP switch (set before supplying power for Slave communications)
Weight	Approx. 75 g max.

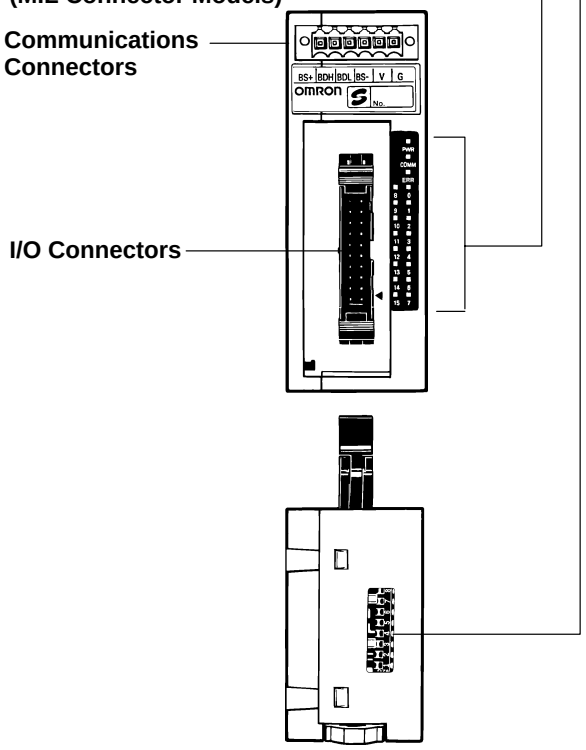
Note: The above current consumption is the value with all points turned ON excluding the current consumption of the external sensor connected to the input Remote Terminal and the current consumption of the load connected to the output Remote Terminal.

Nomenclature

SRT2-VID08S/SRT2-VID08S-1
SRT2-VOD08S/SRT2-VOD08S-1
(Sensor Connector Models)



SRT2-VID16ML/SRT2-VID16ML-1
SRT2-VOD16ML/SRT2-VOD16ML-1
(MIL Connector Models)



Indicators

Indicator	Name	Color	Display	Meaning
PWR	Power	Green	Lit	The communications power supply is ON.
			Not lit	The communications power supply is OFF.
COMM	Communications	Yellow	Lit	Normal communications
			Not lit	A communications error has occurred or the Unit is in standby status.
ERR	Communications error	Red	Lit	A communications error has occurred.
			Not lit	Normal communications or the Unit is in standby status.
0 to 7 (for 8-point I/O) 0 to 15 (for 16-point I/O)	Input (output)	Yellow	Lit	The corresponding I/O signal is ON.
			Not lit	The corresponding I/O signal is OFF.

Output HOLD/CLEAR Mode Setting
Output HOLD/CLEAR Mode

SW8 (HOLD)	Setting
OFF	Output status is cleared.
ON	Output status is maintained.

Communications Mode Setting
Communications Mode

SW7 (HOLD)	Setting
OFF	High-speed communications mode
ON	Long-distance communications mode

Reserved for System Use (Always OFF)
Node Address Setting
Node Number Settings

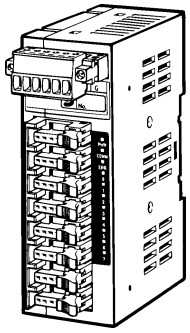
Node number	Pin 4	Pin 3	Pin 2	Pin 1
	8	4	2	1
0	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	ON
2	OFF	OFF	ON	OFF
3	OFF	OFF	ON	ON
4	OFF	ON	OFF	OFF
5	OFF	ON	OFF	ON
6	OFF	ON	ON	OFF
7	OFF	ON	ON	ON
8	ON	OFF	OFF	OFF
9	ON	OFF	OFF	ON
10	ON	OFF	ON	OFF
11	ON	OFF	ON	ON
12	ON	ON	OFF	OFF
13	ON	ON	OFF	OFF
14	ON	ON	ON	OFF
15	ON	ON	ON	ON

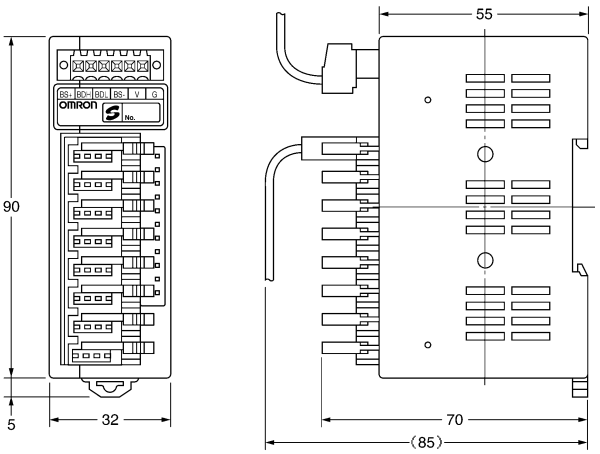
Note: Be sure to perform settings with the Slave power supply OFF.

Dimensions

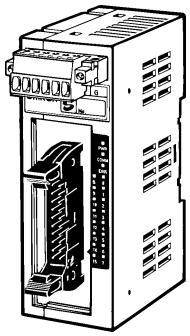
Note: All units are in millimeters unless otherwise indicated.

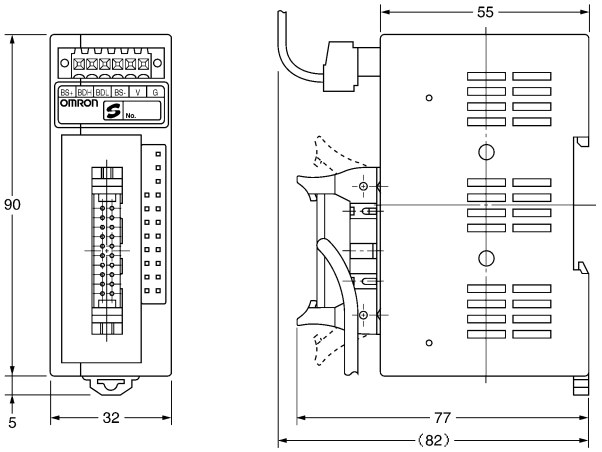
SRT2-VID08S
SRT2-VID08S-1
SRT2-VOD08S
SRT2-VOD08S-1





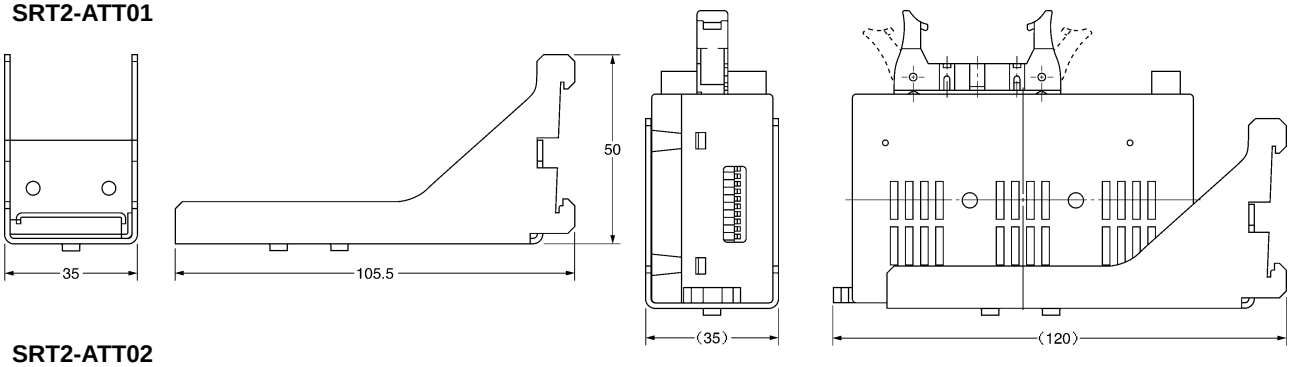
SRT2-VID16ML
SRT2-VID16ML-1
SRT2-VOD16ML
SRT2-VOD16ML-1



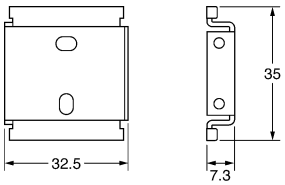


SRT2-ATT01

Dimensions when Unit is mounted.



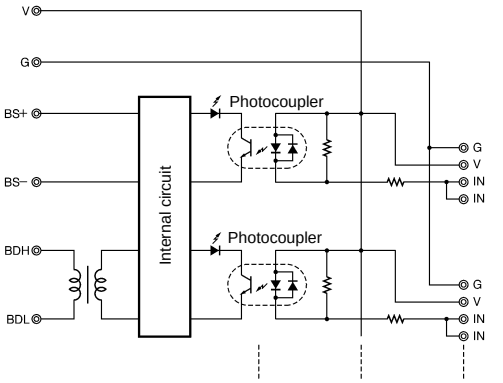
SRT2-ATT02



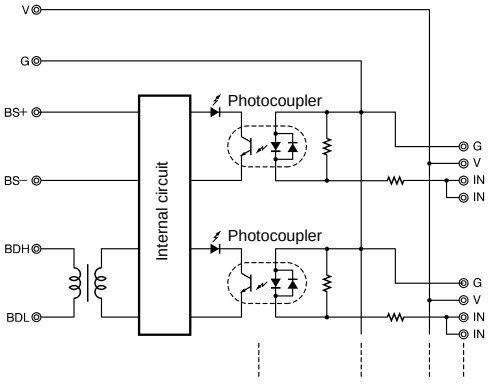
Installation

■ Internal Circuit Configuration

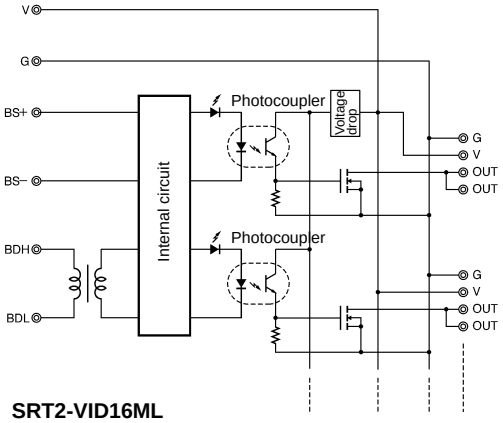
SRT2-VID08S



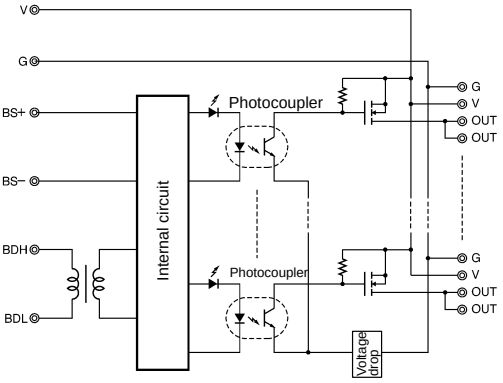
SRT2-VID08S-1



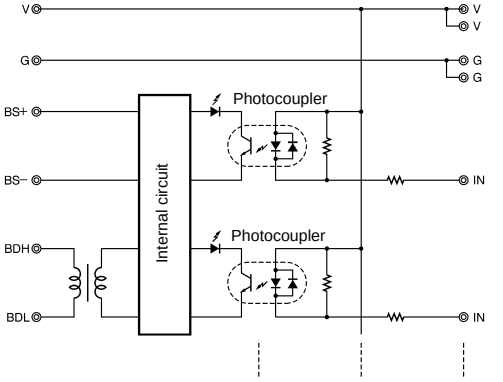
SRT2-VOD08S



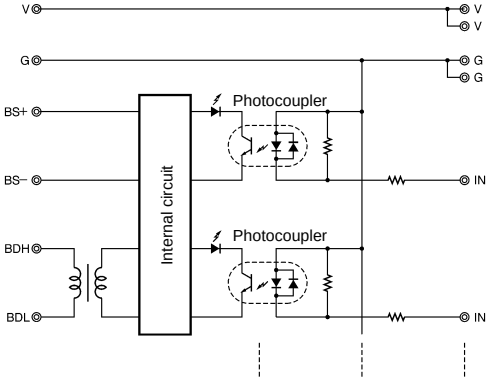
SRT2-VOD08S-1



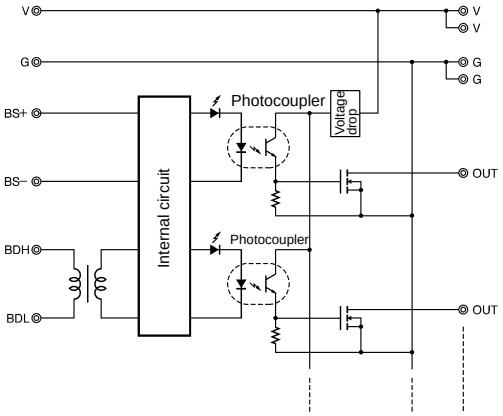
SRT2-VID16ML



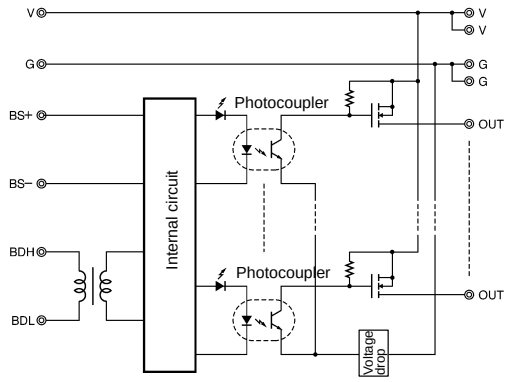
SRT2-VID16ML-1



SRT2-VOD16ML

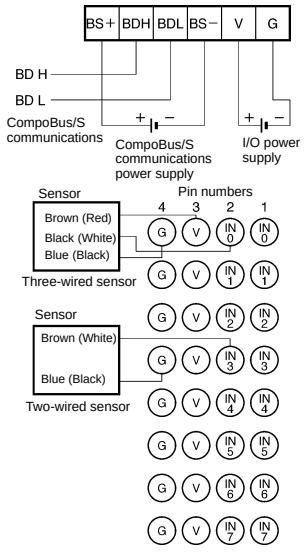


SRT2-VOD16ML-1

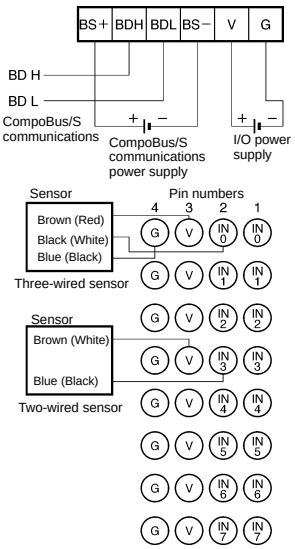


■ Terminal Arrangement and I/O Device Connection Examples

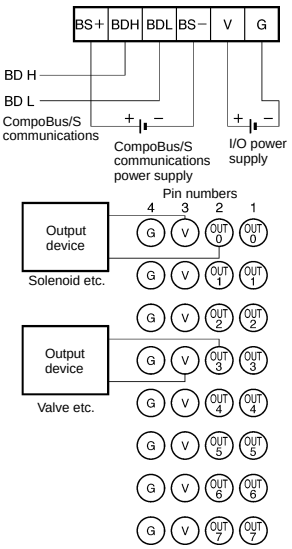
SRT2-VID08S



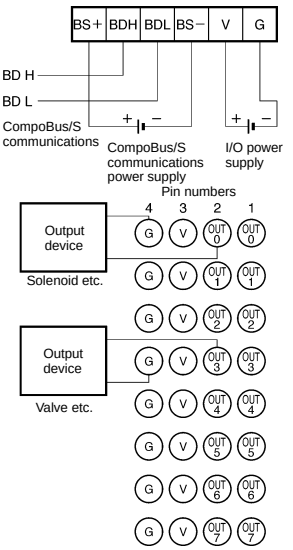
SRT2-VID08S-1



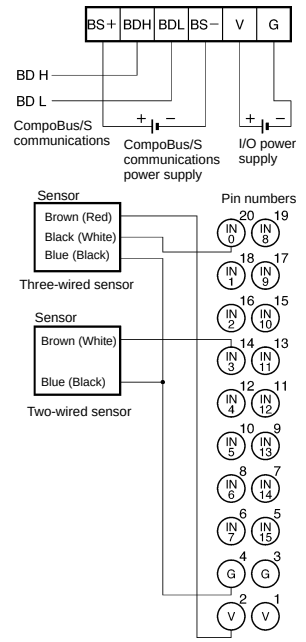
SRT2-VOD08S



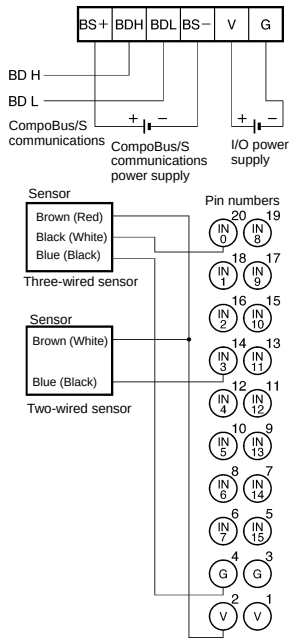
SRT2-VOD08S-1



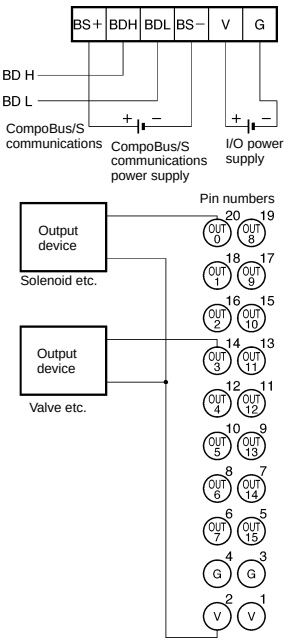
SRT2-VID16ML



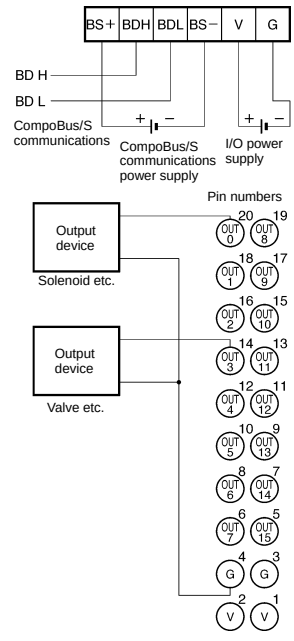
SRT2-VID16ML-1



SRT2-VOD16ML



SRT2-VOD16ML-1



Note: 1. V terminals and G terminals are respectively connected internally.
When supplying power for I/O from communications connectors, power can be supplied to the sensor output devices from V and G terminals.

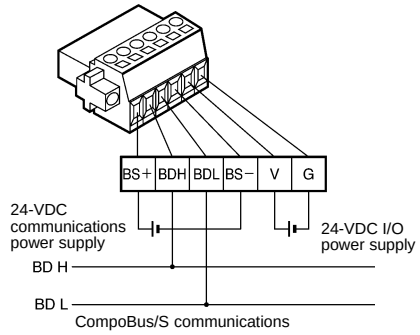
2. When using an inductive load (solenoid, valve etc.), either use one with an internal reverse electromotive force absorption diode or attach a diode externally.

Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

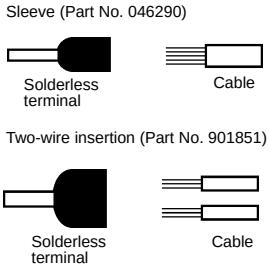
Refer to page 72 for common precautions.

Communications Connector Pin Arrangement



The following solderless terminals are recommended.

- Manufacturer: Weidmuller

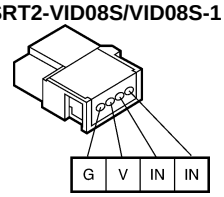


The following product is a dedicated tool.

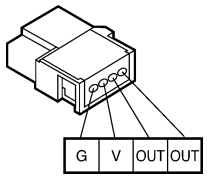
- Manufacturer: Weidmuller
  PZ1.5 Crimper (Part No. 900599)

Sensor Connector Pin Arrangement

SRT2-VID08S/VID08S-1



SRT2-VOD08S/VOD08S-1



Model	Cable conductor size
XS8A-0441	0.3 to 0.5 mm^2
XS8A-0442	0.14 to 0.2 mm^2

Note: The XS8A-0441 or XS8A-0442 Connector is not provided with the SRT-VID or SRT2-VOD. Place an order for the connector separately.

Calculate the cable conductor size as follows.

The following information is given on each sensor cable:

Cable dia. (Number of conductors/Conductor dia.)

Conductor size (mm^2) =
(Conductor dia./2)^2 x π x Number of conductors

Example: E3S-A
4 dia. (18/0.12)
Conductor size (mm^2) = (0.12/2)^2 x 3.14 x 18 0.20

The conductor size is 0.2 mm^2. Therefore, use the XS8A-0442.

MIL Connector Pin Arrangement

SRT2-VID16ML/VID16ML-1

Function	Pin No.
IN0	20
IN1	18
IN2	16
IN3	14
IN4	12
IN5	10
IN6	8
IN7	6
G	4
V	2

Function	Pin No.
19	IN8
17	IN9
15	IN10
13	IN11
11	IN12
9	IN13
7	IN14
5	IN15
3	G
1	V

SRT2-VOD16ML/VOD16ML-1

Function	Pin No.
OUT0	20
OUT1	18
OUT2	16
OUT3	14
OUT4	12
OUT5	10
OUT6	8
OUT7	6
G	4
V	2

Function	Pin No.
19	OUT8
17	OUT9
15	OUT10
13	OUT11
11	OUT12
9	OUT13
7	OUT14
5	OUT15
3	G
1	V

Note: 1. No cable connector is provided. Order the connector separately.

- Applicable Connector
  XG4M-2030-T
- Applicable Connector Cables
  G79-O50C
  G79-O25C
  G79-I50C
  G79-I25C

2. Refer to the following table for ordering information on the applicable Cables.

Applicable Cables

Connectable product	Model		Applicable Cable
I/O Block	G7TC-OC16 G7TC-OC08 G7TC-ID16-5 G7TC-IA16-5 G7VC Series G70A Series G70D Series	↔	G79-O50C (L = 500 mm)
			G79-O25C (L = 250 mm)
Connector-Terminal Conversion Unit	XW2B Series		
Digital Display Unit	M7F		
I/O Block	G7TC-ID16 G7TC-IA16 G7TC-OC16-1	↔	G79-I50C (L = 500 mm)
			G79-I25C (L = 250 mm)

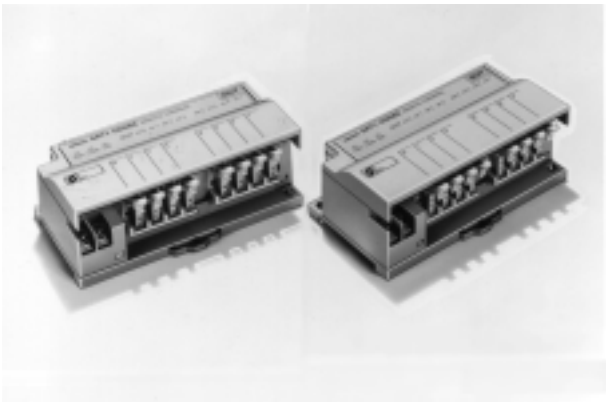
OMRON

Sensor Terminal

SRT1-□D08S

Connector Connection Models that Allows Easy Connection to Sensors and Output Devices

- Sensors with easy-to-wire connectors are easily attached or detached.
- Connects to 2-wired sensors.
- Remote teaching of the Sensor Terminal is possible with the PC by using output signals of the Sensor Terminal.
- DIN track mounting and screw mounting are available.



Ordering Information

Classification	Internal I/O circuit common	I/O points	Model
For input	NPN (– common)	8 input points	SRT1-ID08S
For I/O	NPN (– common)	4 input/4 output points	SRT1-ND08S
For output	NPN (– common)	8 output points	SRT1-OD08S

Specifications

■ Ratings

Input

Item	SRT1-ID08S/-ND08S
Input current	10 mA max./point
ON delay time	1 ms max.
OFF delay time	1.5 ms max.
ON voltage	12 VDC min. between each input terminal and V_{CC}, the external sensor power supply
OFF voltage	4 VDC max. between each input terminal and V_{CC}, the external sensor power supply
OFF current	1 mA max.
Insulation method	Photocoupler
Input indicator	LED (yellow)

Output

Item	SRT1-ND08S	SRT1-OD08S
Rated output current	20 mA/point	30 mA/point
Residual voltage	1 V max.	0.6 V max.
ON delay time	1 ms max.	---
OFF delay time	1.5 ms max.	---
Leakage current	0.1 mA max.	
Insulation method	Photocoupler	
Output indicator	LED (yellow)	

■ Characteristics

Communications power supply voltage (see note 1)	14 to 26.4 VDC
Current consumption (see note 2)	50 mA max. at 24 VDC
Connection method	Multi-drop method and T-branch method Secondary branches cannot be connected to T-branch lines.
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 μs Power supply common: ±1,500 V for 10 minutes with a pulse width of 100 ns to 1 μs
Vibration resistance	10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Malfunction: 200 m/s^2 Destruction: 300 m/s^2
Mounting method	M4 screw mounting or 35-mm DIN track mounting
Mounting strength	No damage when 50 N pull load was applied for 10 s in all directions (except the DIN track directions and a pulling force of 10 N
Terminal strength	No damage when 50 N pull load was applied for 10 s in all directions Tighten each screw to a torque of 0.6 to 1.18 N • m
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	SRT1-ID08S/OD08S: 100 g max., SRT1-ND08S: 80 g max.

Note: 1. The communications power supply voltage must be 20.4 to 26.4 VDC if the Unit is connected to 2-wired proximity sensors.

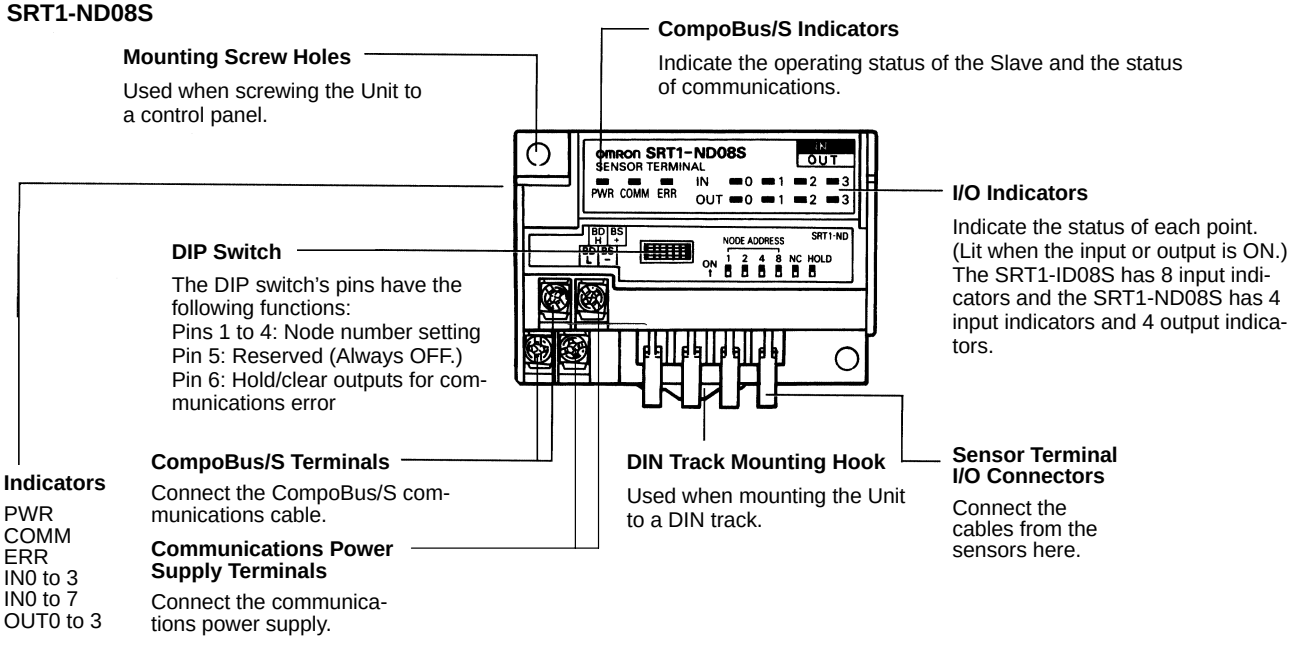
2. The above current consumption is a value with all the points turned OFF excluding the current consumption of the sensor connected to the Sensor Terminal.

■ External Sensor Power Supply

Power supply voltage	13.5 to 26.4 VDC
Current consumption	500 mA max. in total

Nomenclature

SRT1-ID08S
SRT1-ND08S

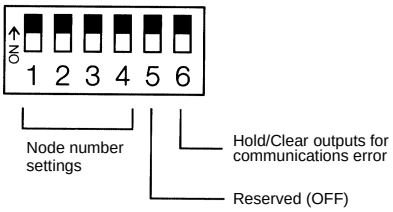


Indicators

Indicator	Name	Display	Color	Meaning
PWR	Power supply	Lit	Green	The communications power supply is ON.
		Not lit		The communications power supply is OFF.
COMM	Communication	Lit	Yellow	Normal communications
		Not lit		A communications error has occurred or the Unit is in standby status.
ERR	Communication error	Lit	Red	A communications error has occurred.
		Not lit		Normal communications or the Unit is in standby status.
0 to 3 (4 inputs/outputs) 0 to 7 (8 inputs)	Input	Lit	Yellow	The corresponding input is ON.
		Not lit		The corresponding input is OFF or the Unit is in standby status.
0 to 3 (4 inputs/outputs)	Output	Lit	Yellow	The corresponding output is ON.
		Not lit		The corresponding output is OFF or the Unit is in standby status.

Switch Setting

All pins are factory-set to OFF.



Pin 5 (Reserved)

Always set pin 5 to OFF.

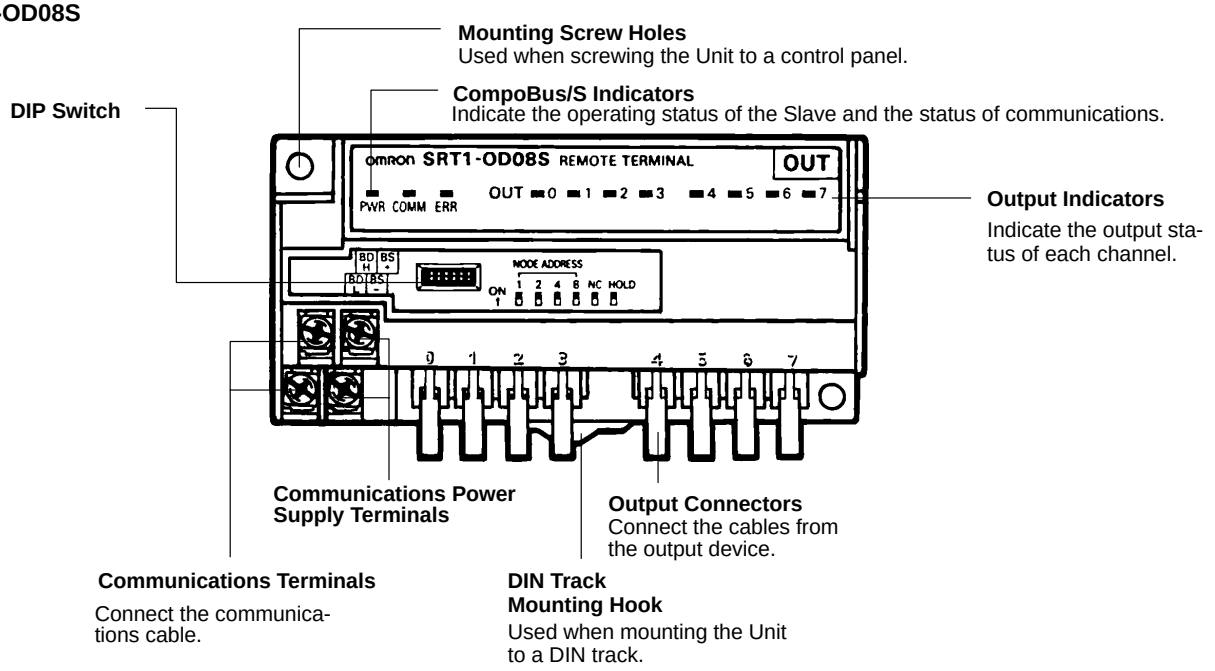
Output HOLD/CLEAR Mode (SRT-ND16S)

HOLD	Function
OFF	Output status is cleared when a communications error occurs.
ON	Output status is maintained when a communications error occurs.

Node Number Settings

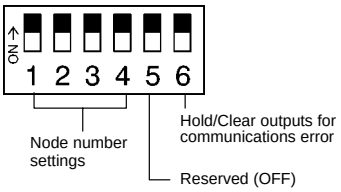
Node number	1	2	4	8
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON

SRT1-OD08S



Switch Setting

All pins are factory-set to OFF.



Pin 5 (Reserved)

Always set pin 5 to OFF.

Output HOLD/CLEAR Mode (SRT-ND16S)

HOLD	Function
OFF	Output status is cleared when a communications error occurs.
ON	Output status is maintained when a communications error occurs.

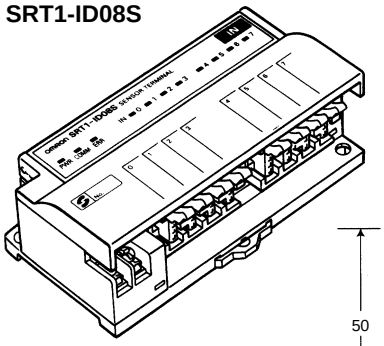
Node Number Settings

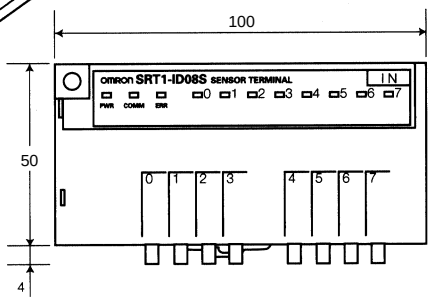
Node number	4	3	2	1
0	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	ON
2	OFF	OFF	ON	OFF
3	OFF	OFF	ON	ON
4	OFF	ON	OFF	OFF
5	OFF	ON	OFF	ON
6	OFF	ON	ON	OFF
7	OFF	ON	ON	ON
8	ON	OFF	OFF	OFF
9	ON	OFF	OFF	ON
10	ON	OFF	ON	OFF
11	ON	OFF	ON	ON
12	ON	ON	OFF	OFF
13	ON	ON	OFF	ON
14	ON	ON	ON	OFF
15	ON	ON	ON	ON

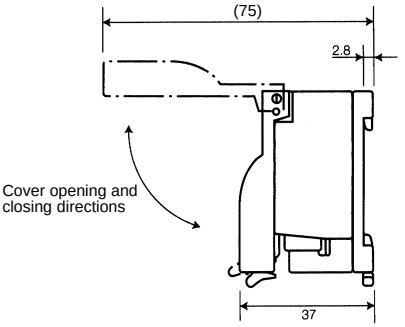
Dimensions

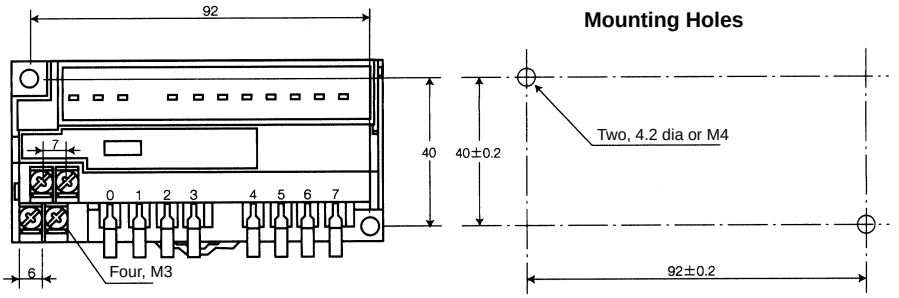
Note: All units are in millimeters unless otherwise indicated.

SRT1-ID08S



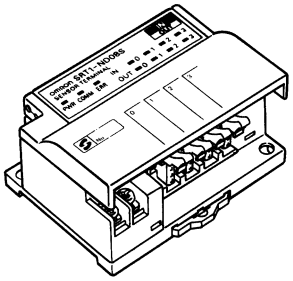


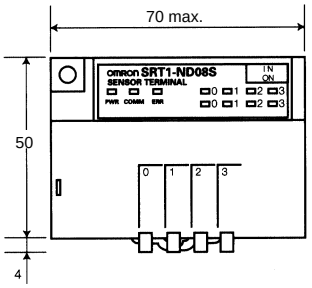


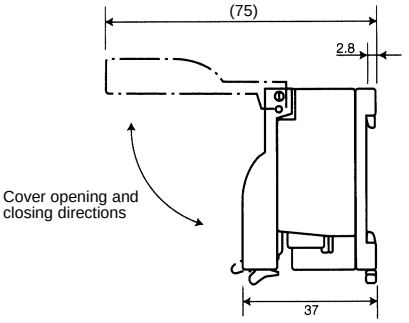


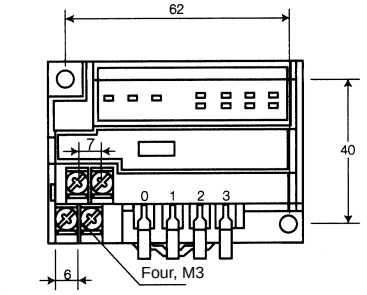
Mounting Holes

SRT1-ND08S

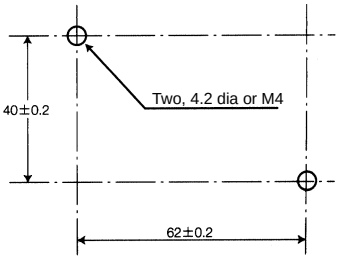








Mounting Holes



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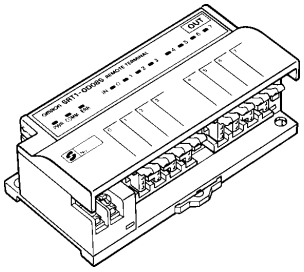
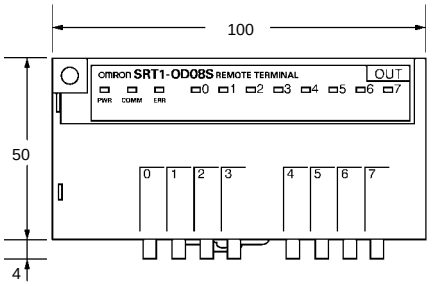
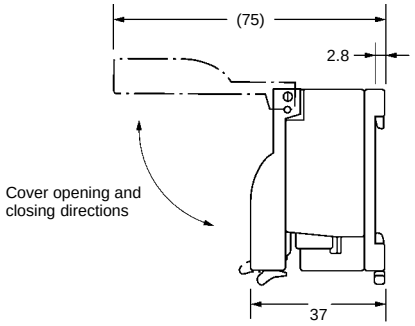
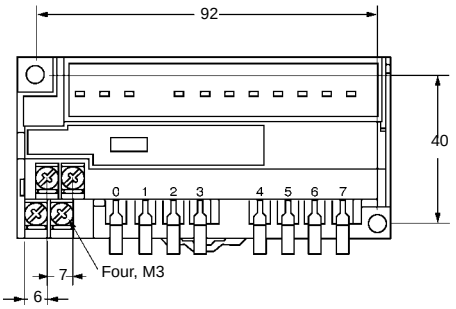
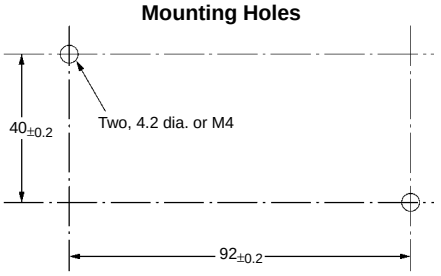








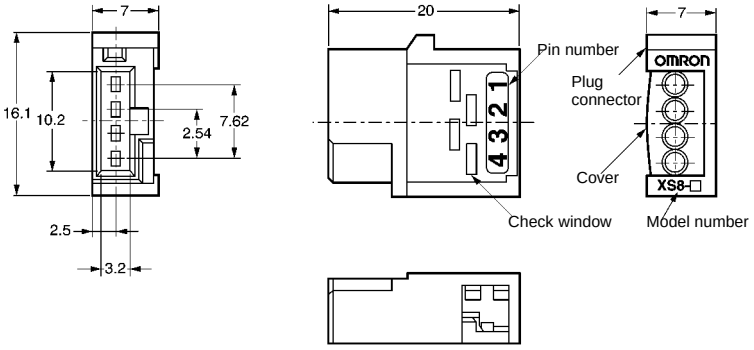
Mounting Holes



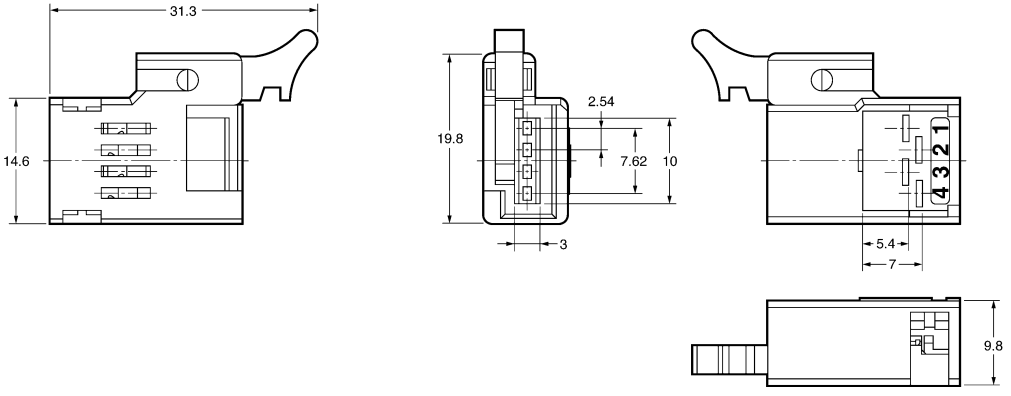
Cable Connector for SRT1-OD08S

Applicable conductor size (mm^2)	Model
0.3 to 0.5	XS8A-0441
0.14 to 0.2	XS8A-0442
0.3 to 0.5	XS8B-0443

XS8A-044□
(Cable Connector)



XS8B-0443
(Relay Socket)



Calculate the cable conductor size as explained below.
The following information is given on each sensor cable:

Cable dia. (Number of conductors/Conductor dia.)

Conductor size (mm^2) = (Conductor dia./2)^2 x π x Number of conductors

Example: E3S-A

4 dia. (18/0.12)

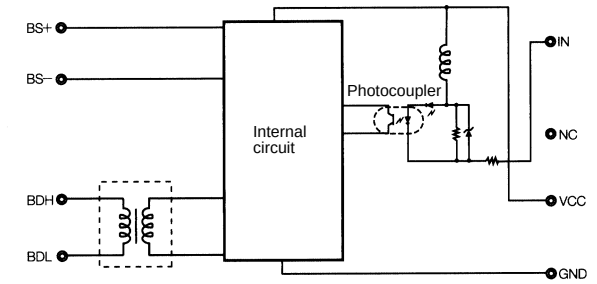
Conductor size (mm^2) = (0.12/2)^2 x 3.14 x 18 0.20

The conductor size is 0.2 mm^2. Therefore, use the XS8A-0442.

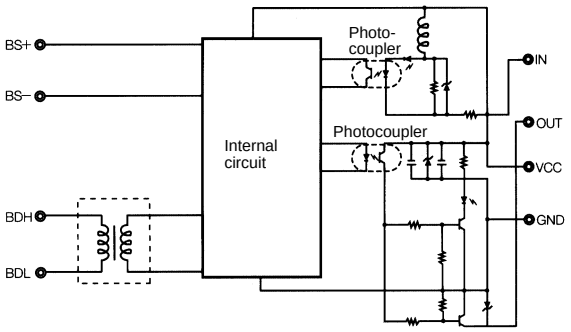
Installation

■ Internal Circuit Configuration

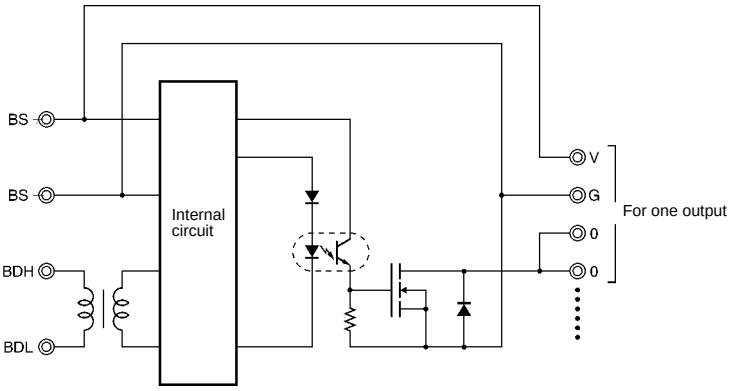
SRT1-ID08S



SRT1-ND08S



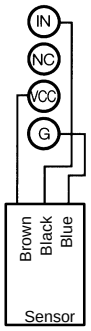
SRT1-OD08S



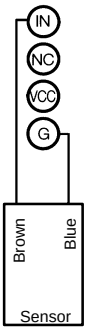
■ External Connections

SRT1-ID08S

Three-wired Sensor

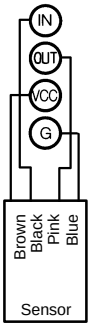


Two-wired Sensor

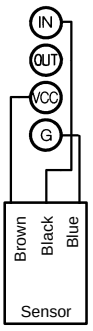


SRT1-ND08S

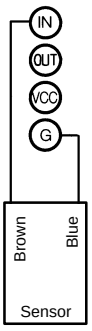
Sensor with Teaching Function
Sensor with External Diagnostic function
Sensor with Bank-switching Function



Three-wired Sensor



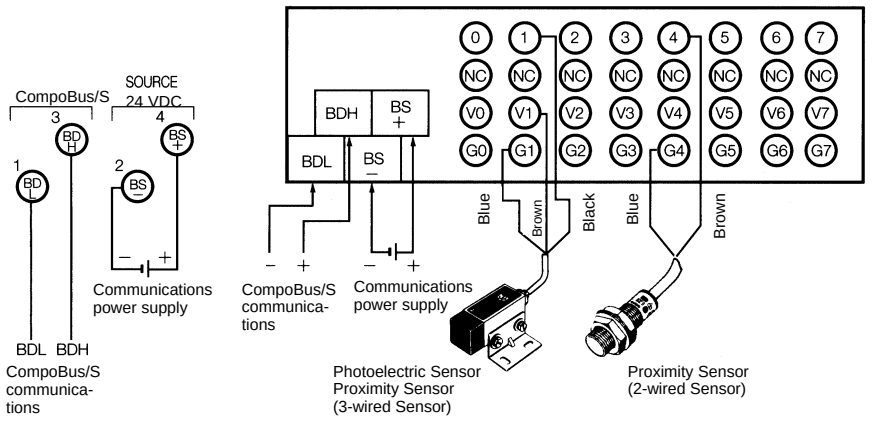
Two-wired Sensor



■ Terminal Arrangement and I/O Device Connection Example

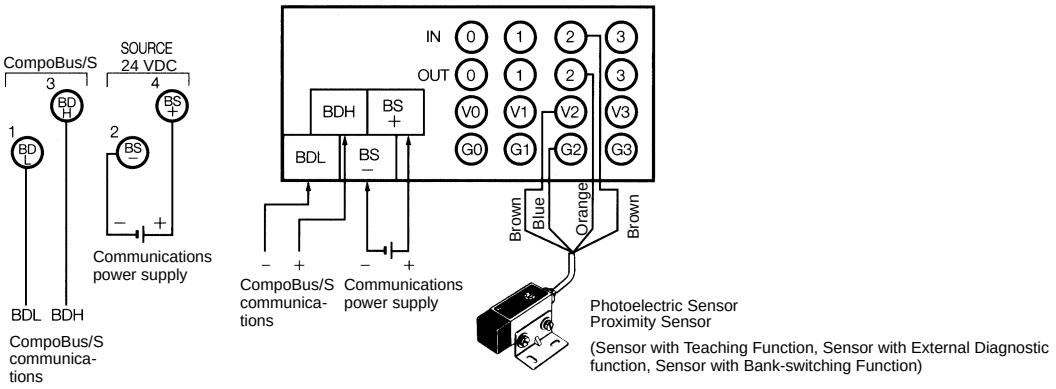
Input

SRT1-ID08S



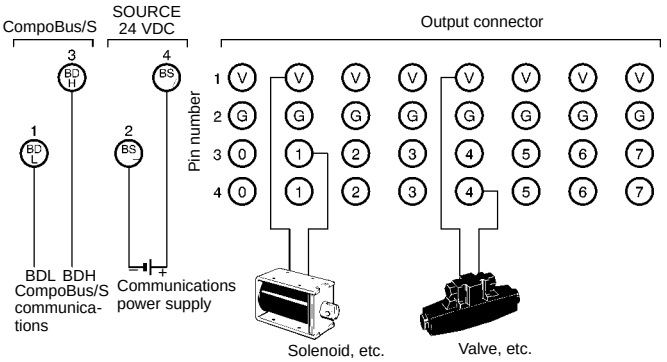
I/O

SRT1-ND08S



Output

SRT1-OD08S



Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

General Safety Precautions

Installation Environment

Do not install the Unit in the following places.

- Places with water, oil, or chemical sprayed on the Unit.
- Places with rapid temperature changes.
- Places with high humidity resulting in condensation.
- Places with intense electric and magnetic fields.
- Places with excessive vibration or shock.

Wiring

To prevent inductive noise, do not wire power lines or high-tension lines along with or near the cables.

Make sure that the polarity of each terminal is correct.

Make sure that the communications path and power line are connected correctly.

Secure the cables properly. Do not pull the cables with strong force, otherwise the cables may be disconnected from the terminals or connectors of the Unit.

Do not touch the Unit when the Unit is used in places with high ambient temperatures because the surface temperature of the Unit may be high.

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

Correct Use

Use the Unit under its rated conditions.

Mount the Unit with M4 screws or to DIN tracks securely.

Typical Causes of Communications Errors

- The cables are not connected correctly.
- The node number setting is incorrect.
- The baud rate setting is incorrect.
- There is a strong noise source, such as an inverter motor, near the Unit. Install the Unit as far as possible from the noise source or shield the noise source.

Others

Use OMRON's XS8A-0441 or XS8A-0442 Connectors with the Unit.

Insert each connector into the Unit until the connector snaps in place. Make sure that terminal number 1 of the connector is on the lock lever side when inserting the connector.

Refer to the *CompoBus/S Operation Manual (W266)* for wiring the Unit.

OMRON

Sensor Amplifier Terminal

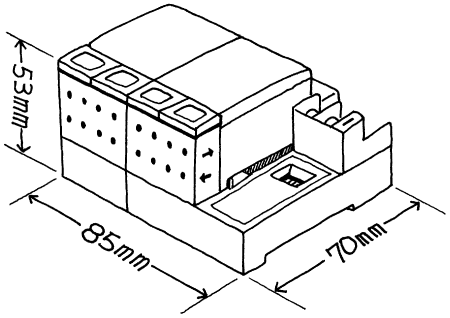
SRT1-□□D04S

Snap On to Connect and Save Wiring Effort

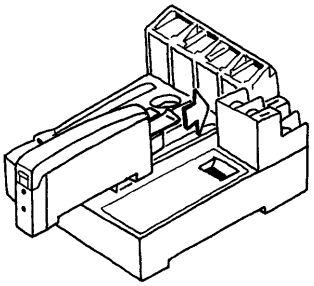
- The 4-channel fiber photoelectric amplifiers in Terminals with connectors offer a low cost and space savings.
- The product lineup included Terminal Block Units for easy connection to sensors with amplifiers, limit switches, etc.
- Connect to up to eight channels of sensors by using Expansion Blocks.

■ Features

Low Cost and Space Savings with Four-channel Fiber Connectors

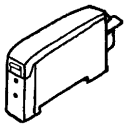


Just Snap On to Connect

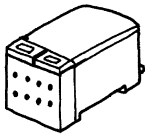


Connector Units

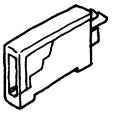
Fiber connector (1 channel)



Fiber connector (4 channels)

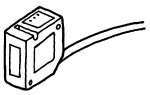


Terminal Block Unit



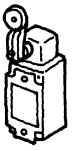
Various input units can be connected.

Photoelectric sensor



Proximity sensor

Basic switch and limit switch



Ordering Information

CompoBus/S Sensor Amplifier Terminals

Classification	I/O points	Model
Communications	4	SRT1-TID04S
		SRT1-TKD04S
Expansion		SRT1-XID04S
		SRT1-XKD04S

Connector Units

Classification	Specifications	Model
E3X-N Connector Type	General-purpose, 1 channel	E3X-NT16
	Multi-functional, 1 channel	E3X-NT26
	Long distance, high accuracy, 1 channel	E3X-NH16
	Multi-functional, 4 channels	E3X-NM16
Terminal Block Unit	One input point	E39-JID01

Specifications

■ Characteristics

CompoBus/S Sensor Amplifier Terminals

Item	Communication Terminals		Expansion Terminals	
Model	SRT1-TID04S	SRT1-TKD04S	SRT1-XID04S	SRT1-XKD04S
Communications power supply voltage	14 to 26.4 VDC (See note 1)		---	---
I/O points	4 input points			
Connected sensors	Total of four E3X-NT□6 or E39-JID01 (See note 2)	One E3X-NM16 (See note 2)	Total of four E3X-NT□6 or E39-JID01	One E3X-NM16
Current consumption	60 mA max. (See note 3)		10 mA max. (See note 3)	
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 μs Power supply common: ±1,500 V for 10 minutes with a pulse width of 100 ns to 1 μs			
Vibration resistance	10 to 55 Hz, 1.5-mm double amplitude			
Shock resistance	Malfunction: 200 m/s^2 Destruction: 300 m/s^2			
Mounting method	M4 screw mounting or 35-mm DIN track mounting			
Mounting strength	No damage when 50 N pull load was applied for 10 s in all directions (except the DIN track directions and a pulling force of 10 N			
Terminal strength	No damage when 49 N pull load was applied for 10 s in all directions. Tighten each screw to a torque of 0.6 to 1.18 N • m.			
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	70 g max.	65 g max.	45 g max.	35 g max.

Note: 1. The communications power supply voltage must be 20.4 to 26.4 VDC if the Terminal is connected to 2-wired proximity sensors.
2. When adding Connector Units, use SRT1-XID04S or SRT1-XKD04S.
3. The value doesn't include the current consumption of Connector Units.

With E3X-N Connectors

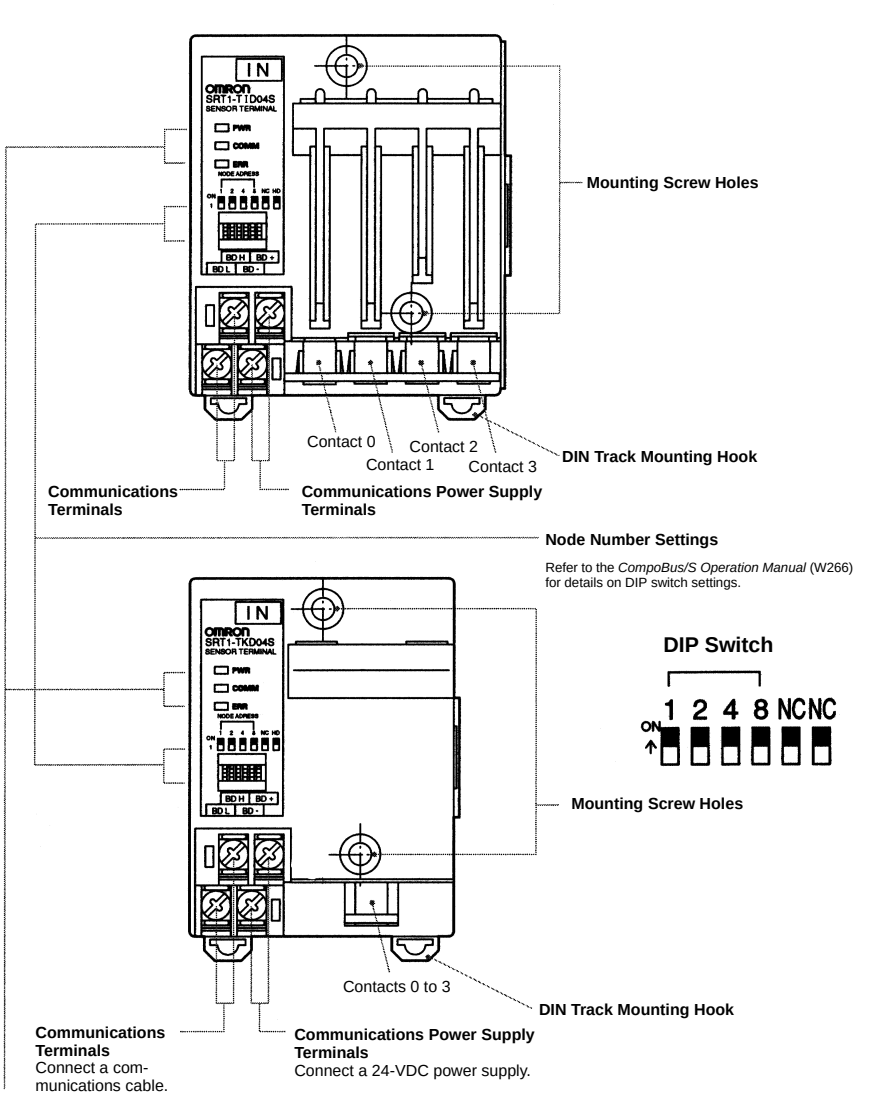
Model	E3X-NH16	E3X-NT16	E3X-NT26	E3X-NM16
Current consumption	75 mA max.	50 mA max.		150 mA
Response time	1 ms max. (4.0 ms max. when connected to the SRM1-□□D04S)	500 μS max. (2.0 ms max. when connected to the SRT1-□□D04S)		
Timer function	Not available		OFF-delay timer (fixed to 40 ms)	
Remote teaching input	Not available		Available (Remote teaching disabled)	
Indicator	Orange LED: Lit during output operation Green LED: Lit with stable light reception or no light			
Teaching confirmation function	Indicators (red/green LED) and buzzer			
Output	Light ON and Dark ON switch selectable			
Ambient illumination	Sunlight: 10,000 lux max.; incandescent lamp: 3,000 lux max.			
Insulation resistance	20 MΩ max. (at 500 VDC)			
Dielectric strength	1,000 VAC at 50/60 Hz for 1 min			
Vibration resistance	Destruction:10 to 55 Hz, 1.5-mm double amplitude			
Shock resistance	Destruction:500 m/s^2			
Mounting method	Connector connection to the SRT1-□□D04S			
Mounting strength	No damage when 49 N pull load was applied for 10 s in all directions			
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	30 g max.	30 g max.	30 g max.	60 g max.

Terminal Block Units

Model	E39-JID01
Input current	10 mA max.
ON voltage	12 VDC min. between input terminal and external sensor power supply
OFF voltage	4 VDC max. between input terminal and external sensor power supply
OFF current	1 mA max.
ON delay time	1 ms max. (connected to SRT1-□□D04S)
OFF delay time	1.5 ms max. (connected to SRT1-□□D04S)
Input indicators	LED (Orange)
External sensor current capacity	50 mA max.
Vibration resistance	10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Malfunction: 200 m/s^2 Destruction: 300 m/s^2
Mounting method	M4 screws or 35-mm DIN track mounting
Mounting strength	No damage when 50 N pull load was applied for 10 s in all directions (except the DIN track directions and a pulling force of 10 N
Terminal strength	No damage when 49 N pull load was applied for 10 s in all directions. Tighten each screw to a torque of 0.6 to 1.18 N • m.
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	25 g max.

Nomenclature

SRT1-TID04S
SRT1-TKD04S



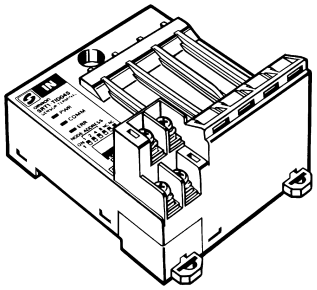
Indicators

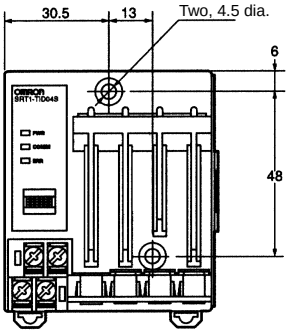
Indicator	Name	Display	Color	Meaning
PWR	Power supply	Lit	Green	The communications power supply is ON.
		Not lit		The communications power supply is OFF.
COMM	Communications	Lit	Yellow	Normal communications.
		Not lit		A communications error has occurred or the Unit is in standby status.
ERR	Communications error	Lit	Red	A communications error has occurred.
		Not lit		Normal communications or the Unit is in standby status.

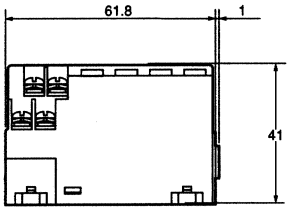
Dimensions

Note: All units are in millimeters unless otherwise indicated.

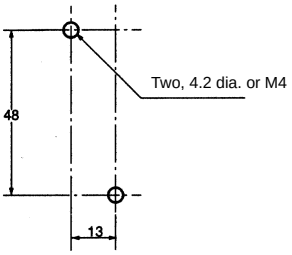
SRT1-TID04

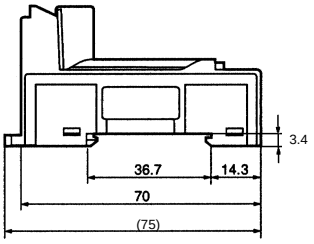




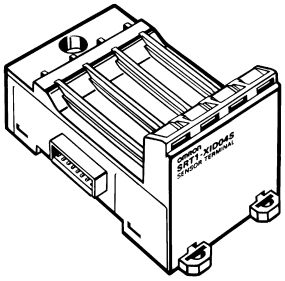


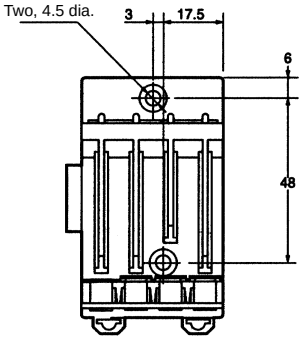
Mounting Holes

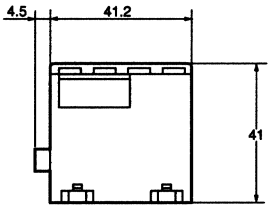




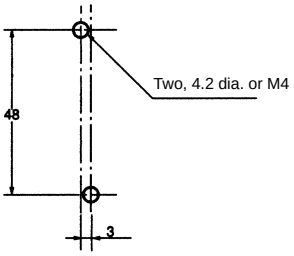
SRT1-XID04S

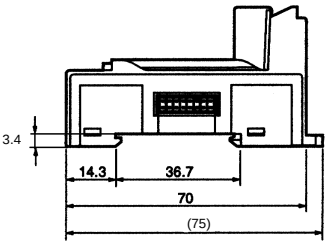




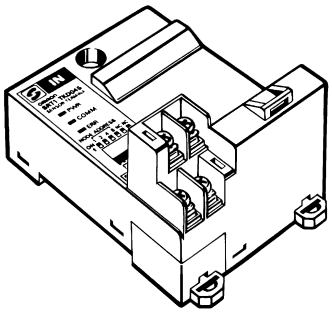


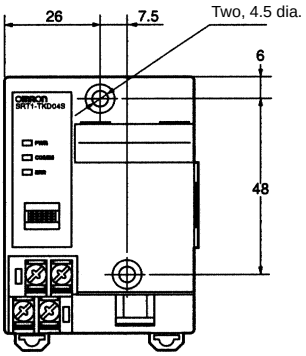
Mounting Holes





SRT1-TKD04S





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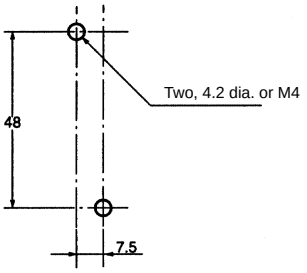
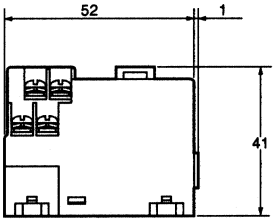
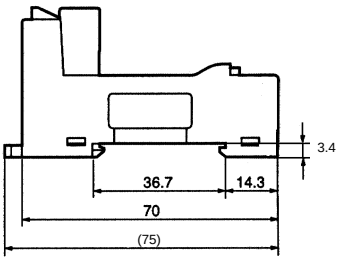
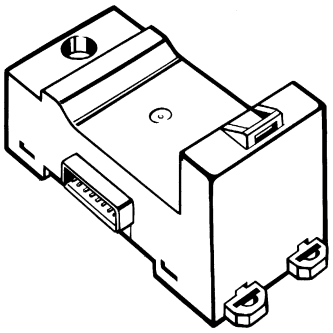
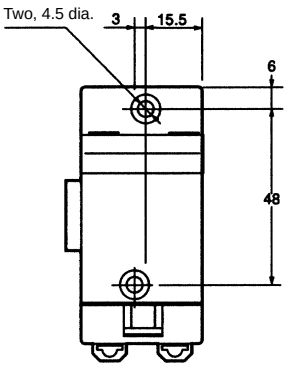




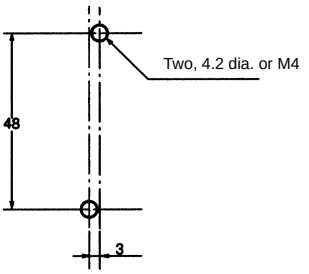


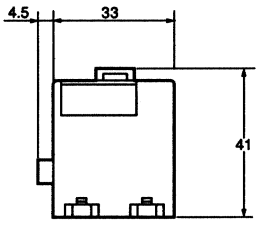
SRT1-XKD04S

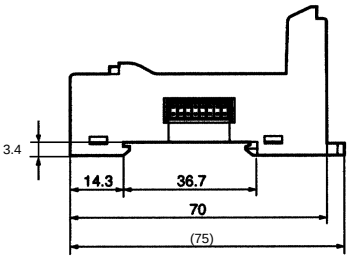




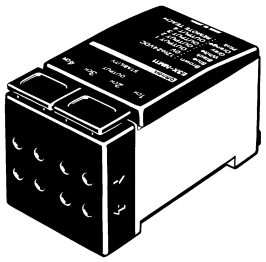
Mounting Holes

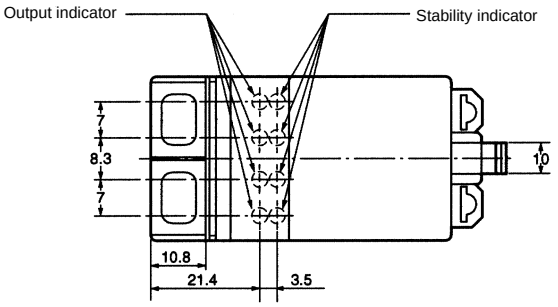


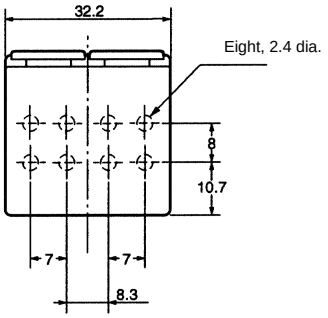


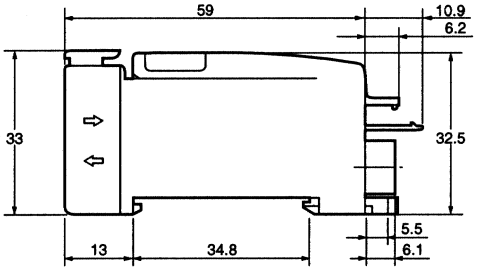


E3X-NM16

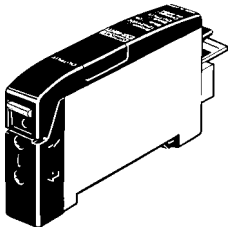


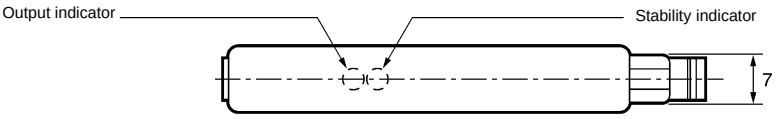


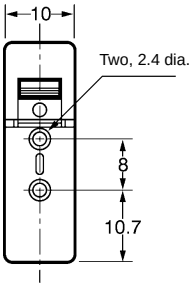


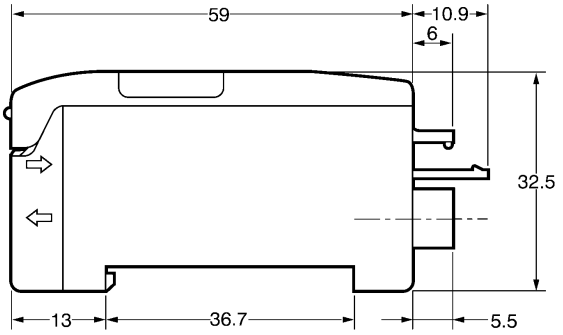


E3X-NT□6

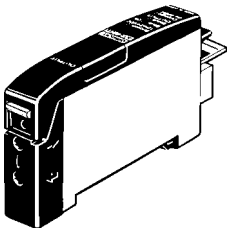


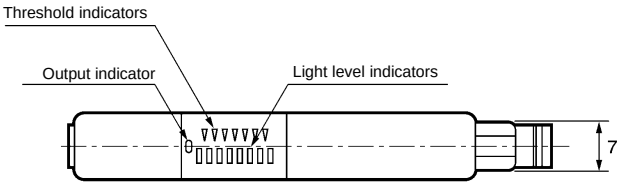


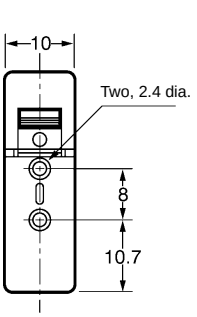


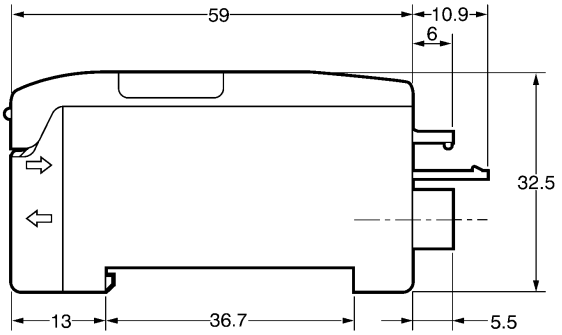


E3X-NH16

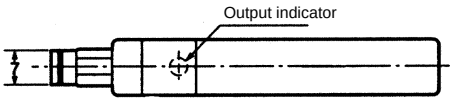


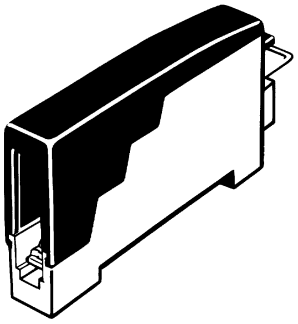


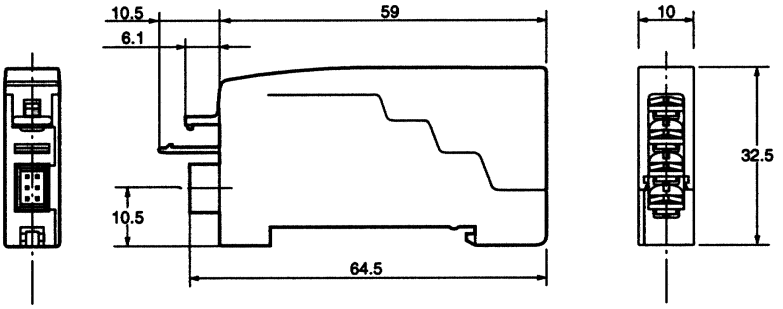




E39-JID01



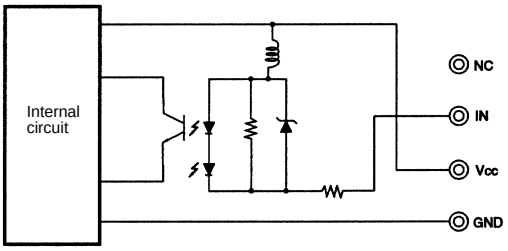




Installation

■ Internal Circuit Configuration

E39-JID01



Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Terminal.

Refer to page 72 for precautions common to all SRT1 Terminals.

General Safety Precautions

Connector Units

Use only the Connector Units listed in this data sheet for the Sensor Amplifier Units.

E39-JID01 Terminal Block Unit

Do not apply any voltage to the Terminal Block Unit.

Correct Use

Expanding Sensor Amplifier Terminals

1. Remove the cover from the side of the SRT1-T□D04S. (See Figure 1.)
2. When the cover is removed, you can see the expansion connector inside.
3. Connect this expansion connector to the connector located on the side of the SRT1-X□D04S. (See Figure 2.)

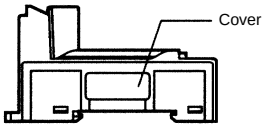


Figure 1

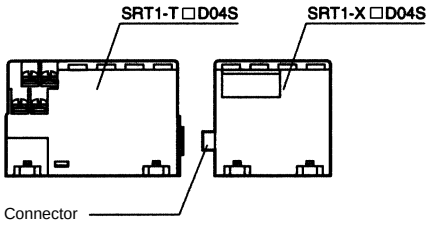


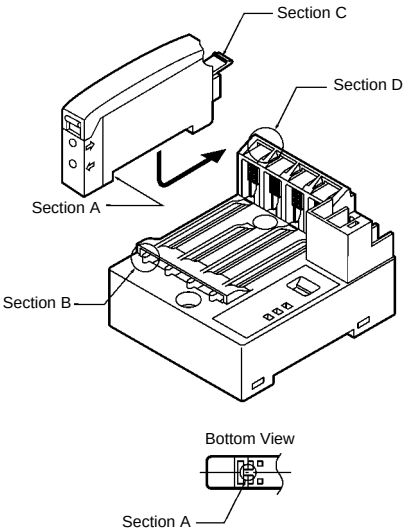
Figure 2

Attaching and Removing Connector Units

(SRT1-TID04S, SRT1-XID04S, E3X-NT□6, E39-JID01)

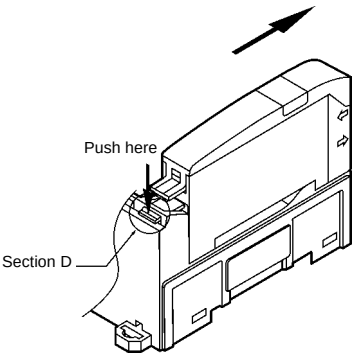
Attaching Connector Units

1. Hook Section A of the Connector Unit onto Section B of the Sensor Amplifier Terminal.
2. Push in the Connector Unit until Section C locks inside Section D of the Sensor Amplifier Terminal.



Removing Connector Units

1. While pushing Section D, pull the Connector Unit in direction E.
2. When Section D releases from the lock, the Connector Unit can be removed.

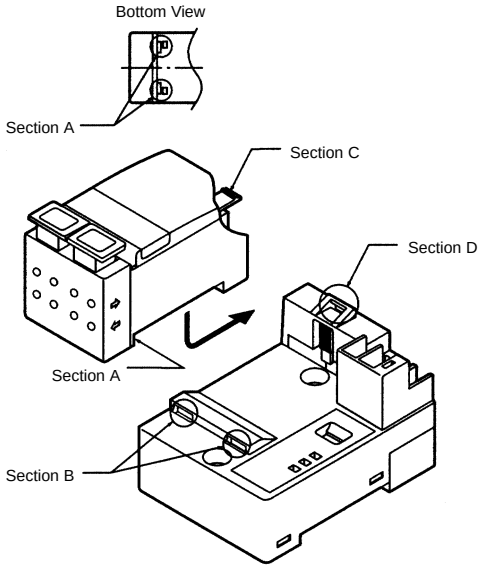


Attaching or Removing Connector Unit

(SRT1-TKD04S, SRT1-XKD04S, E3X-NM16)

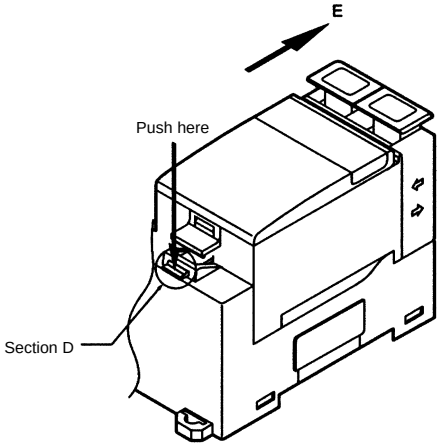
Attaching Connector Unit

1. Hook Section A of the Connector Unit onto Section B of the Sensor Amplifier Terminal.
2. Push in the Connector Unit until Section C locks inside Section D of the Sensor Amplifier Terminal.



Removing Connector Unit

1. While pushing Section D, pull the Connector Unit in direction E.
2. When Section D releases from the lock, the Connector Unit can be removed.



Channel Numbers

Channel numbers 1 to 4 of the E3X-NM16 correspond to contact numbers 0 to 3 of the SRT1-TKD04S, and to contact numbers 4 to 7 of the SRT1-XKD04S.

OMRON

Analog Input Terminal

SRT2-AD04

Compact Analog Input Model is the Same Shape as 16-point Remote I/O Terminals

- Allows flexible input point settings up to a maximum of four points.
- Resolution: 1/6,000
- Takes only 1 ms to exchange each input point.
- Wide input ranges available.
- 105 x 48 x 50 (W x H x D)

Ordering Information

Classification	I/O points	Model
Analog Input Terminal	1 to 4 (selectable with DIP switch)	SRT2-AD04

Note: For details about connecting the SRT2-AD04 to the Master Unit. Refer to page 2.

Specifications

■ Ratings

Input

Item		Voltage input	Current input
Max. signal input		±15 V	±30 mA
Input impedance		1 MΩ max.	Approx. 250 Ω
Resolution		1/6,000 (FS)	
Total accuracy	**25°C**	±0.3% FS	±0.4% FS
	–10 to 55°C	±0.6% FS	±0.8% FS
Conversion time		4 ms/4 points, 3 ms/3 points, 2 ms/2 points, and 1 ms/1 point	
Dielectric strength		500 VAC for 1 min between communications power supply, analog input, and communications terminals (see note)	

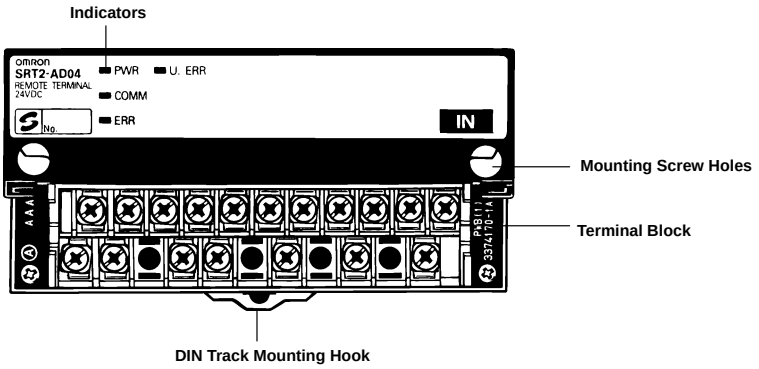
Note: There is no insulation between analog inputs.

■ Characteristics

Communications power supply voltage	14 to 26.4 VDC (possible to provide through dedicated flat cable)
Current consumption	100 mA max.
Connection method	Multi-drop method and T-branch method Secondary branches cannot be connected to T-branch lines.
Dielectric strength	500 VAC (between insulated circuits)
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power lines)
Vibration resistance	10 to 150 Hz, 1.0-mm double amplitude or 70 m/s^2
Shock resistance	200 m/s^2
Mounting strength	No damage with 100 N pull load applied in all directions.
Terminal strength	No damage with 100 N pull load applied
Screw tightening torque	0.3 to 0.5 N • m
Ambient temperature	Operating: –10°C to 55°C Storage: –25°C to 65°C
Ambient humidity	Operating: 25% to 85% (with no condensation)
Weight	Approx. 120 g

Nomenclature

SRT2-AD04

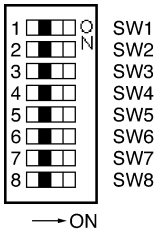


Indicators

Indicator	Name	Color	Display	Meaning
PWR	Power supply	Green	Lit	The communications power supply is ON.
			Not lit	The communications power supply is OFF.
COMM	Communication	Yellow	Lit	Normal communications
			Not lit	A communications error has occurred or the Unit is in standby status.
ERR	Communication error	Red	Lit	A communications error has occurred.
			Not lit	Normal communications or the Unit is in standby status.
U.ERR	Unit error	Red	Lit	An error has occurred in the Unit.
			Not lit	Normal communications or the Unit is in standby status.

DIP Switch (SW101)

(Open cover to access.)



Pin 1	Pin 2	Input points
OFF	OFF	4 points (default setting)
OFF	ON	3 points (inputs 0 to 2 enabled)
ON	OFF	2 points (inputs 0 and 2 enabled)
ON	ON	1 point (input 0 enabled)

Pin 3	Communications mode
OFF	High-speed communications (default setting)
ON	Long-distance communications

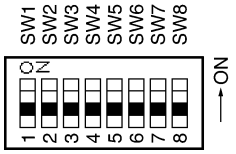
Pin 4	Be sure to turn OFF.

Pin No.	Node address
Pin 5	2^3
Pin 6	2^2
Pin 7	2^1
Pin 8	2^0

The default setting is for all of these pins to be OFF.

DIP Switch (SW102)

(Open cover to access.)



Pin 1	Pin 2	Pin 3	Range for inputs 0, 1
Pin 4	**Pin 5**	**Pin 6**	**Range for inputs 2, 3**
OFF	OFF	OFF	0 to 5 (V) (default setting)
ON	OFF	OFF	1 to 5 (V)
OFF	ON	OFF	0 to 10 (V)
ON	ON	OFF	–10 to 10 (V)
OFF	OFF	ON	4 to 20 (mA)
ON	OFF	ON	0 to 20 (mA)
Do not make any settings other than the ones listed above.			

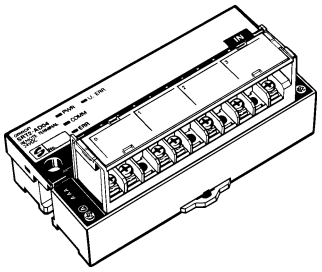
Pin 7	Mean value processing
OFF	Without mean value processing (default setting)
ON	With mean value processing (mean for 8 operations)

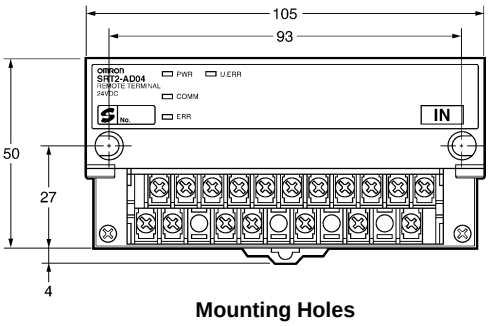
Pin 8	Be sure to turn OFF.

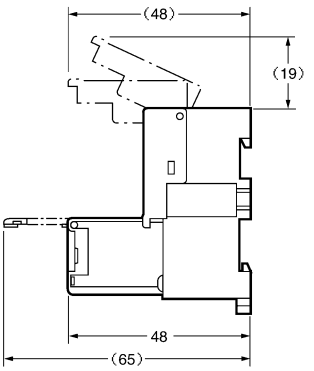
Dimensions

Note: All units are in millimeters unless otherwise indicated.

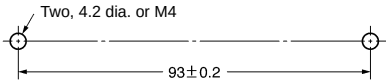
SRT2-AD04







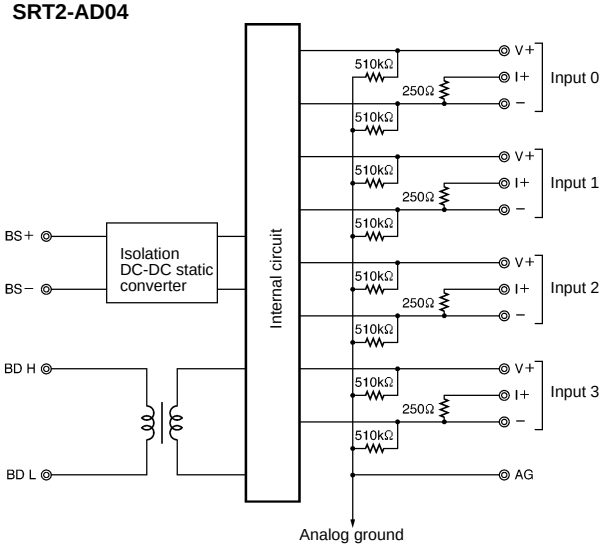
Mounting Holes



Installation

■ Internal Circuit Configuration

SRT2-AD04



■ Terminal Arrangement

SRT2-AD04

BD H	BS +	AG	V0 +	I0 +	V1 +	I1 +	V2 +	I2 +	V3 +	I3 +
BD L	BS −	NC	AG	0−	NC	1−	NC	2−	NC	3−

Note: When the input is current input, short-circuit the “V+” terminals and the “I+” terminals. When short-circuiting, use the short-circuiting tool provided as an accessory.

Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

For details about general precautions, refer to page 72.

Connections to the Master Unit

Connections cannot be made to the following Master Units. If the following Master Units are connected, incorrect data may be transferred.

C200HW-SRM21 (-V1 and later versions supported)
CQM1-SRM21 (-V1 and later versions supported)
SRM1-C0□, SRM1-C0□-V1 (-V2 and later versions supported)
C200PC-ISA□2-SRM
3G8B3-SRM0□
SDD-CS1 (made by NKE Ltd.)

OMRON

Analog Output Terminal

SRT2-DA02

Compact Analog Output Model is the Same Shape as 16-point Remote I/O Terminals

- Two output points or 1 output point is selectable.
- Resolution: 1/6,000
- 105 x 48 x 50 (W x H x D)

Ordering Information

Classification	I/O points	Model
Analog Output Terminal	1 or 2 (selectable with DIP switch)	SRT2-DA02

Note: For details about connecting the SRT2-DA02 to the Master Unit, refer to page 2.

Specifications

■ Ratings

Output

Item		Voltage output	Current output
External output permissible load resistance		5 kΩ min.	600 Ω max.
Output impedance		0.5 Ω max.	---
Resolution		1/6,000 (FS)	
Total accuracy	**25°C**	±0.4% FS	
	–10 to 55°C	±0.8% FS	
Conversion time		2 ms/2 points and 2 ms/1 point	
Dielectric strength		500 VAC for 1 min between communications power supply, analog output, and communications terminals (see note)	

Note: There is no insulation between analog outputs.

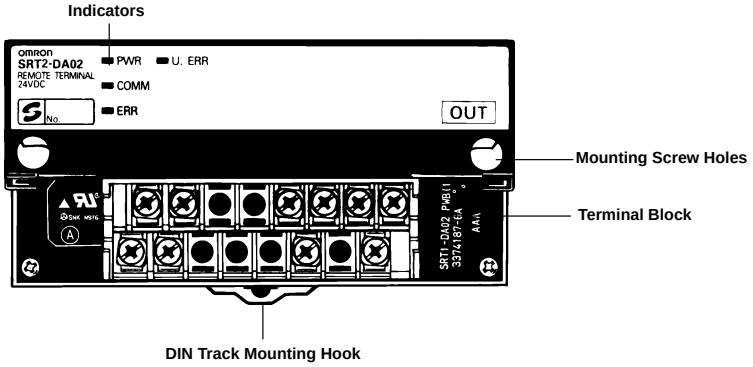
■ Characteristics

Communications power supply voltage	14 to 26.4 VDC (power supply possible from dedicated flat cable)
Current consumption (see note)	170 mA max.
Connection method	Multi-drop method and T-branch method Secondary branches cannot be connected to T-branch lines.
Dielectric strength	500 VAC (between insulated circuits)
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power lines)
Vibration resistance	10 to 150 Hz, 1.0-mm double amplitude or 70 m/s^2
Shock resistance	200 m/s^2
Mounting strength	No damage when 100 N pull load was applied in all directions
Terminal strength	No damage when 100 N pull load was applied
Screw tightening torque	0.3 to 0.5 N • m
Ambient temperature	Operating: –10°C to 55°C Storage: –25°C to 65°C
Ambient humidity	Operating: 25% to 85% (with no condensation)
Weight	Approx. 100 g

Note: The above current consumption is the value with all points turned ON excluding the current consumption of the external load.

Nomenclature

SRT2-DA02

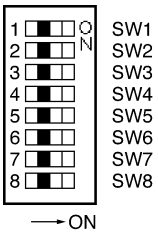


Indicators

Indicator	Name	Color	Display	Meaning
PWR	Power supply	Green	Lit	The communications power supply is ON.
			Not lit	The communications power supply is OFF.
COMM	Communication	Yellow	Lit	Normal communications
			Not lit	A communications error has occurred or the Unit is in standby status.
ERR	Communication error	Red	Lit	A communications error has occurred.
			Not lit	Normal communications or the Unit is in standby status.
U.ERR	Unit error	Red	Lit	An error has occurred in the Unit.
			Not lit	A communications error has occurred or the Unit is in standby status.

DIP Switch (SW101)

(Open cover to access.)



Pin 1	Be sure to turn OFF.

Pin 2	Output points
OFF	2 points (default setting)
ON	1 point (output 0 enabled)

Pin 3	Communications mode
OFF	High-speed communications (default setting)
ON	Long-distance communications

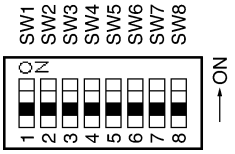
Pin 4	Be sure to turn OFF.

Pin No.	Node addresses
Pin 5	2^3
Pin 6	2^2
Pin 7	2^1
Pin 8	2^0

The default setting is for all of these switches to be OFF.

DIP Switch (SW102)

(Open cover to access.)



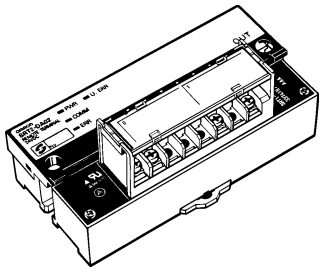
Pin 1	Pin 2	Pin 3	Range for output 0
Pin 4	**Pin 5**	**Pin 6**	**Range for output 1**
OFF	OFF	OFF	0 to 5 (V) (default setting)
ON	OFF	OFF	1 to 5 (V)
OFF	ON	OFF	0 to 10 (V)
ON	ON	OFF	–10 to 10 (V)
OFF	OFF	ON	4 to 20 (mA)
Do not make any settings other than the ones listed above.			

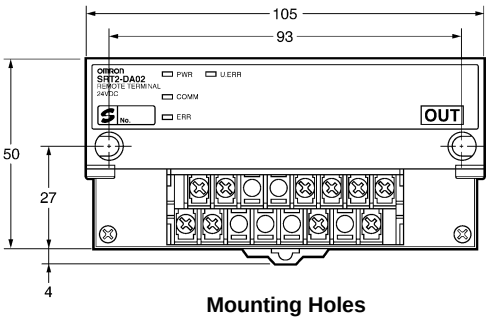
Pin 7	Pin 8	Output during communications error
OFF	OFF	Clear at the output lower limit when communications error occurs. (default setting)
OFF	ON	Clear at the output upper limit when communications error occurs.
ON	OFF	Clear at the output lower limit when communications error occurs (however, if the range is –10 to 10 V, the output will be 0).
ON	ON	Output held when communications error occurs.

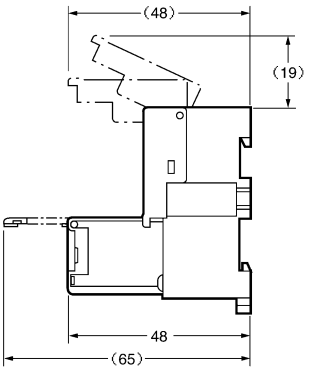
Dimensions

Note: All units are in millimeters unless otherwise indicated.

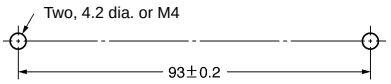
SRT2-DA02







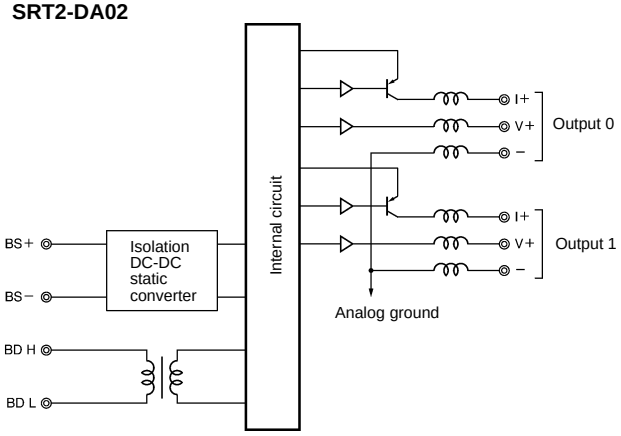
Mounting Holes



Installation

■ Internal Circuit Configuration

SRT2-DA02



■ Terminal Arrangement

SRT2-DA02

H	BS +	NC	NC	V0 +	I0 +	V1 +	I1 +
BD L	BS −	NC	NC	NC	0 −	NC	1 −

Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

For details about general precautions, refer to page 72.

Connections to the Master Unit

Connections cannot be made to the following Master Units. If the following Master Units are connected, incorrect data may be transferred.

C200HW-SRM21 (-V1 and later versions supported)
CQM1-SRM21 (-V1 and later versions supported)
SRM1-C0□, SRM1-C0□-V1 (-V2 and later versions supported)
C200PC-ISA□2-SRM
3G8B3-SRM0□
SDD-CS1 (made by NKE Ltd.)

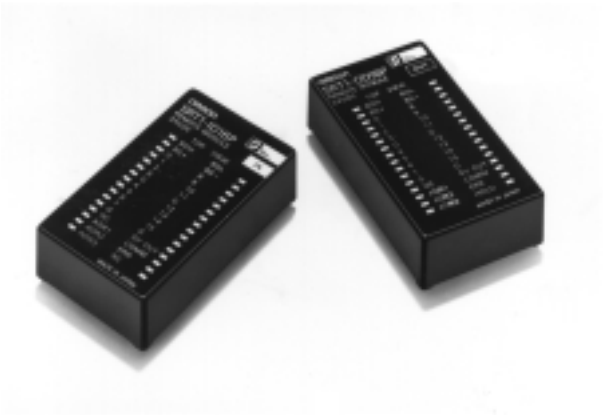
OMRON

Remote I/O Module

SRT1-ID□P/OD□P

Module Type that Allows PCB Mounting

- Compact size at 60 x 16 x 35 (W x H x D)
- Lineup now includes the 16-point input model and 16-point output model.



Ordering Information

I/O classification	Internal I/O circuit common	I/O points	Rated voltage	I/O rated voltage	Model
Input	NPN (+ common)	16	24 VDC	24 VDC	SRT1-ID16P
Output	NPN (– common)				SRT1-OD16P

Specifications

■ Ratings

Input (SRT1-ID16P)

Input current	2 mA max./point
ON delay time	1.5 ms max.
OFF delay time	1.5 ms max.
ON voltage	15 VDC min. between each input terminal and BS+ terminal
OFF voltage	5 VDC max. between each input terminal and BS + terminal

Output (SRT1-OD16P)

Rated output current	0.2 A/point, 0.6 A/common
Residual voltage	0.6 V max. between each output terminal and G terminal at 0.2 A
Leakage current	0.1 mA max. between each output terminal and G terminal at 24 VDC

■ Characteristics

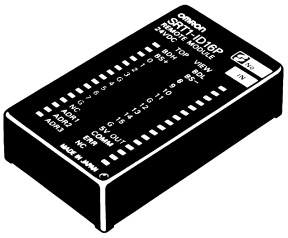
Communications power supply voltage	20.4 to 26.4 VDC
I/O power supply voltage	24 VDC $^{+10\%}/_{-15\%}$
Current consumption (see note)	60 mA max.
Connection method	Multi-drop method and T-branch method Secondary branches cannot be connected to T-branch lines.
Connecting Units	8 Input Terminals and 8 Output Terminals per Master
Dielectric strength	500 VAC for 1 min (1-mA sensing current between insulated circuits)
5-V output current	20 mA max. (5 V ± 0.5 V)
LED drive current (COMM, ERR)	10 mA max. (5 VDC)
SW carry current (ADR0 to 3, HOLD)	1 mA max.
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	35 g max.

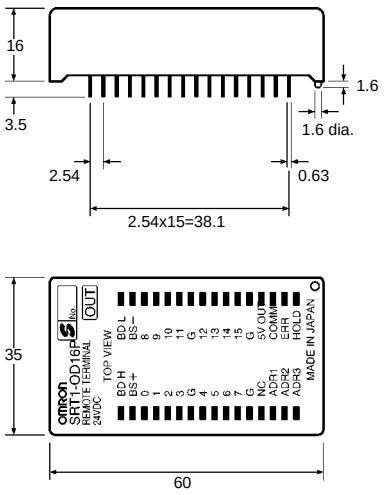
Note: The above current consumption is the value with all points turned ON excluding the current consumption of the external sensor connected to the input model and the current consumption of the load connected to the output model.

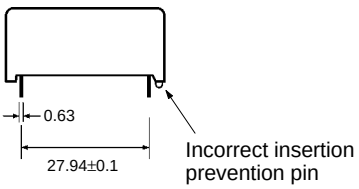
Dimensions

Note: All units are in millimeters unless otherwise indicated.

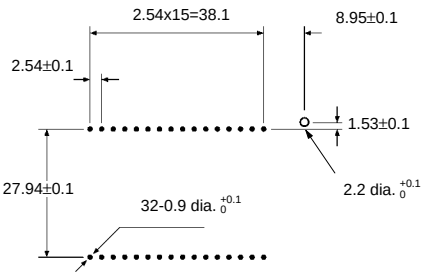
SRT1-ID16P
SRT1-OD16P







PCB dimensions (top view)

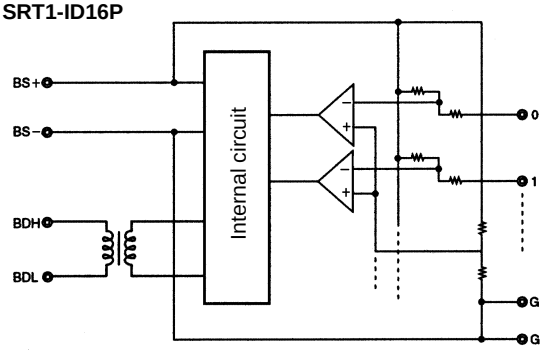


No cumulative tolerance allowed

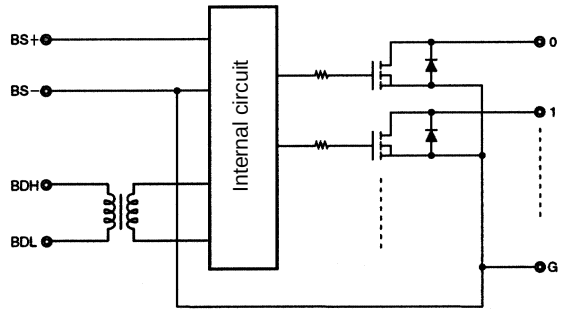
Installation

■ Internal Circuit Configuration

SRT1-ID16P

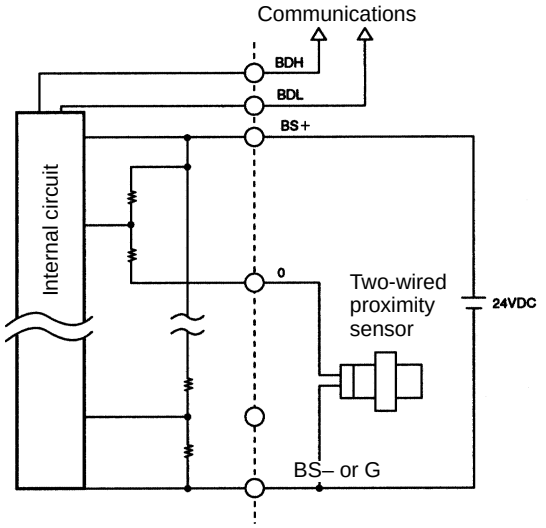


SRT1-OD16P

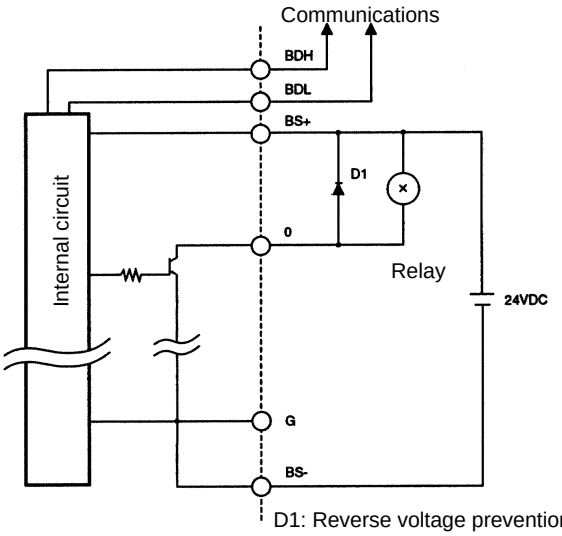


■ External Connections

Input Module (SRT1-ID16P)

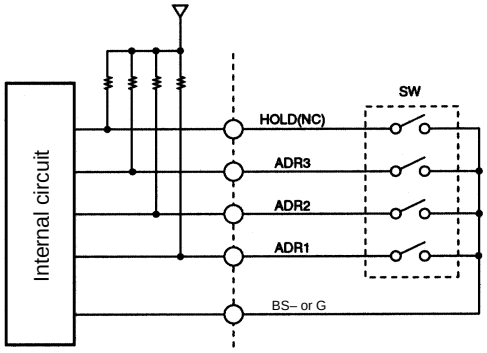


Output Module (SRT1-OD16P)



D1: Reverse voltage prevention diode

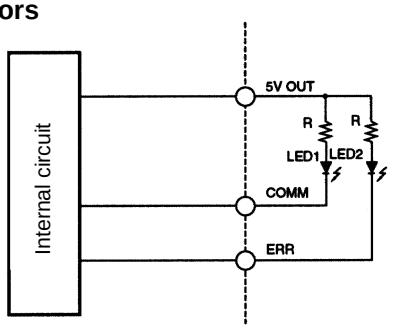
Node Number Settings and Output HOLD/CLEAR Mode



Note: NC in parentheses is for the Input Modules.

Note: Refer to the *CompoBus/S Operation Manual (W266)* for details on the switch.

Indicators



R: LED current limiting resistor
LED1: LED for COMM
LED2: LED for ERR
The maximum current for LED1 and 2 is 10 mA.

The 5-V Output Terminals have positive power supplies (maximum output current of 20 mA) for the ERR and COMM LEDs. Recommended LED colors are red for ERR and yellow for COMM.

Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

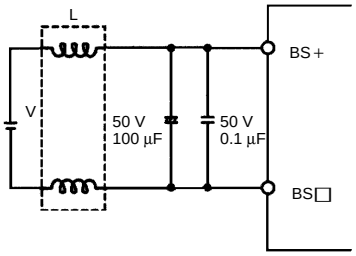
Refer to page 72 for precautions common to all SRT1 Terminals.

Correct Use

Noise Protection Circuit

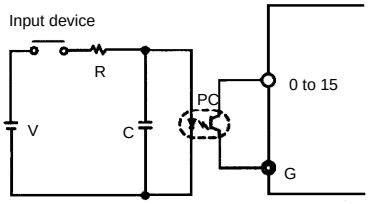
Add the following protection circuit if noise is generated from the power supply, input section, or output section.

Power Supply Noise Protection Circuit



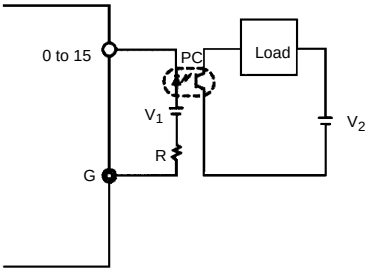
L: Coil for the common mode
Install the coil near the SRT1.

Input Section Noise Protection Circuit



C: 0.1 μF min.
R: Resistor for limiting current to PC
PC: Photocoupler

Output Section Noise Protection Circuit

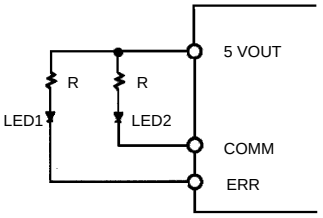


V_1 and V_2: Power supply.
R: Resistor for limiting current to PC
PC: Photocoupler

5-V Output Terminals

The 5-V Output Terminals have positive power supplies (maximum output current of 20 mA) for the ERR and COMM LED. Use them as shown below. Recommended LED colors are red for ERR and yellow for COMM.

Wiring Method



R: LED current limiting resistor
LED1: LED for COMM
LED2: LED for ERR
The maximum current for the LED1 and 2 is 10 mA.

Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Terminal.

The following precautions are the same for all SRT1 Terminals. Refer also to the precautions specified for individual Terminals.

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.

Relay I/O Type

SRT1-ROC08 and SRT2-ROC16

Do not connect the Unit to loads operating at any voltage or consuming a total current exceeding the permissible switching voltage or current of the Unit. Doing so may result in the faulty insulation, contact weld, or faulty contact of the relays, or damage to the relays, or cause the relays to malfunction or burn.

The life of a relay varies with the switching condition. Test the relays under the actual operating conditions before using the relays within the permissible switching frequency. The use of deteriorated relays may result in the faulty insulation of the relays or cause the relays to burn.

Do not use the Unit in places with inflammable gas. Doing so may result in a fire or explosion due to the heat of the relays or a spark from the relays when they are switched.

Transistor, Power MOS FET, and SSR I/O Types

SRT1-OD04, SRT2-OD08, SRT2-OD16, SRT1-OD16P, SRT1-ROF08, and SRT2-ROF16

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

Replacing Relays

Use the relay removal tool to the left of the screw terminals to replace relays.

Turn OFF the Unit to replace relays, otherwise an electric shock may occur or the Unit may malfunction.

Installation Environment

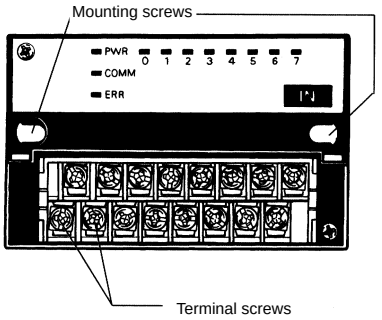
Do not install the Unit in the following places. Doing so may result in damage to the Unit or cause the Unit to malfunction.

- 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).



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.

OMRON

Position Driver

FND-X□-SRT

Advanced Servodrivers with Positioner Functions

DIO and CompoBus/S Models are Newly Added

- Servodriver and positioner are combined into one Unit.
- Conventional U-series, U-series UE type, H-series, and M-series AC Servomotors can be used.
- Feeder control/DTP control and single operation/ automatic incremental/continuous operation are available.
- Easy to set, operate, and adjust.

Ordering Information

Specifications			Model
CompoBus/S models	For 200-VAC input	6 A	FND-X06H-SRT
		12 A	FND-X12H-SRT
		25 A	FND-X25H-SRT
		50 A	FND-X50H-SRT
	For 100-VAC input	6 A	FND-X06L-SRT
		12 A	FND-X12L-SRT

Note: For details, refer to *OMNUC FND-X-series User's Manual (I524)*.

Specifications

■ General Specifications

Ambient temperature	Operating: 0°C to 55°C Storage: –10°C to 70°C
Ambient humidity	Operating: 35% to 90% (with no icing) Storage: 35% to 90% (with no icing)
Operating atmosphere	No corrosive gases
Dielectric strength	1,500 VAC_{RMS} for 1 min at 50/60 Hz
Insulation resistance	5 MΩ min. (at 500 VDC) between power input terminals and between the power terminal and the case
Vibration resistance	10 to 150 Hz in X, Y, and Z directions with 0.10-mm single amplitude; acceleration: 9.8 m/s^2 max.; time coefficient: 8 min; 4 sweeps
Shock resistance	98 m/s^2 max., three times each in X, Y, and Z directions
Degree of protection	Built into panel (IP00)

■ Performance Specifications

Item \ Model (see note 1)		FND-X06H-SRT	FND-X12H-SRT	FND-X25H-SRT	FND-X06L-SRT	FND-X12L-SRT
Continuous output current (0-P)		2.0 A	4.8 A	8.0 A	2.0 A	3.0 A
Momentary maximum output current (0-P)		6.0 A	12 A	25 A	6.0 A	12 A
Input power supply		Single-phase 200/240 VAC (170 to 264 V) 50/60 Hz			Single-phase 100/115 VAC (85 to 127 V) 50/60 Hz	
Position/speed feedback	**U Series (INC)**	Optical Incremental encoder, 2,048 pulses/revolution				
	U Series (ABS)	Optical Absolute encoder, 1,024 pulses/revolution				
	U-UE Series	Optical Incremental encoder, 1,024 pulses/revolution				
	H Series	Magnetic Incremental encoder, 2,000 pulses/revolution				
	M Series	Resolver, absolute accuracy 0.18° max.; ambient temperature 25°				
Applicable load inertia	**U Series (INC)**	Maximum of 30 times motor's rotor inertia		Maximum of 20 times motor's rotor inertia	Maximum of 30 times motor's rotor inertia	
	U Series (ABS)	Maximum of 20 times motor's rotor inertia		Maximum of 18 times motor's rotor inertia	Maximum of 20 times motor's rotor inertia	
	U-UE Series	Maximum of 30 times motor's rotor inertia		Maximum of 20 times motor's rotor inertia	Maximum of 30 times motor's rotor inertia	
	H Series	Maximum of 10 times motor's rotor inertia				
	M Series	Maximum of 10 times motor's rotor inertia				
Inverter method		PWM method based on IGBT				
PWM frequency		10 kHz				
Weight		Approx. 1.5 kg		Approx. 2.5 kg	Approx. 1.5 kg	
Frequency response (speed control)		100 Hz (at a load inertia equivalent to motor's rotor inertia)				
Position loop gain		1 to 200 (rad/s)				
Feed forward		0% to 200% of speed reference				
Pulse rate		1/32,767 = (pulse rate 1 / pulse rate 2) = 32,767/1				
Positioning completion width		1 to 32,767 (pulses) U Series (INC): 8,192 pulses/revolution; U Series (ABS): 4,096 pulses/revolution; M Series 24,000 pulses/revolution				
Acceleration/Deceleration time		0 to 9,999 (ms); acceleration and deceleration times set separately. Two types can be set for each. S-curve acceleration/deceleration function available (filter time constant: 0.00 to 32.76 s).				
Sequence input		19 pts. (limit inputs, origin proximity, RUN command, START, alarm reset, origin search, JOG operation, teaching, point selection, position data, deceleration stop) Photocoupler input: 24 VDC, 8 mA External power supply: 24 VDC ±1 V, 150 mA min.				
Sequence output		15 pts. (brake output, READY, origin search completion, origin, teaching, motor running, positioning completion, alarm, point output, position selection, speed selection) Open collector output: 24 VDC, 40 mA				
Monitor output (See note 2.)	**Speed monitor**	3 V/motor's rated speed (output accuracy: approx. ±10%)				
	Current monitor	3 V/motor's maximum current (output accuracy: approx. ±10%)				
Regenerative absorption capacity		13 W + 17 J	24 W + 17 J	37 W + 22 J	13 W + 17 J	17 W + 17 J
Protective functions		Overcurrent, overvoltage, voltage drop, resolver disconnection, power status error, clock stopped, overcurrent (soft), speed amp saturation, motor overload, temporary overload, resolver error, speed over, error counter over, parameter setting error, software limit over, coordinate counter over, overrun, encoder disconnection, encoder communications error, absolute encoder backup error, absolute encoder checksum error, absolute encoder absolute error, absolute encoder over speed, encoder data not transmitted, BCD data error, present value undetermined, PTP data not set				

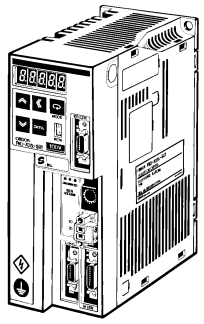
Note: 1. When using the 100-VAC-input Position Drivers in combination with the U-series or U-series UE type models, use 200-VAC Servomotors (-HA, -TA , or -H models).

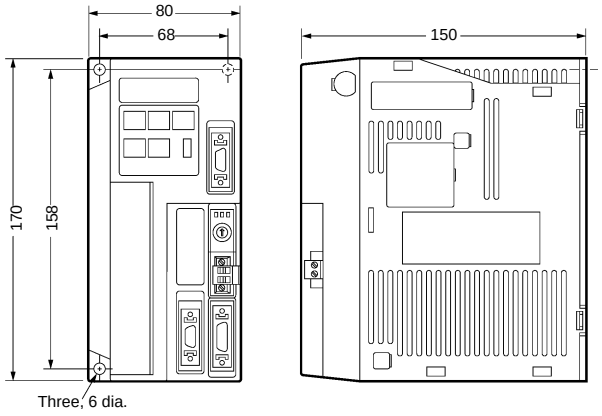
2. For the monitor output, the monitor items and voltage polarity can be set by parameter UP-25 (monitor output selection).

Dimensions

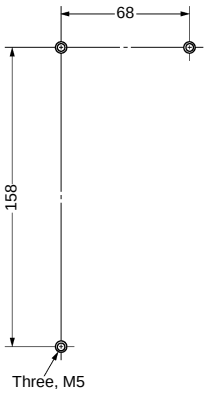
Note: All units are in millimeters unless otherwise indicated.

200-VAC FND-X06H-SRT/-X12H-SRT
100-VAC FND-X06L-SRT/-X12L-SRT

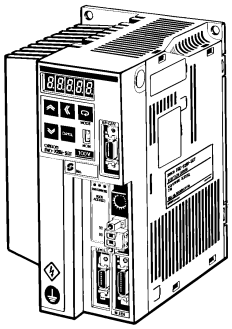


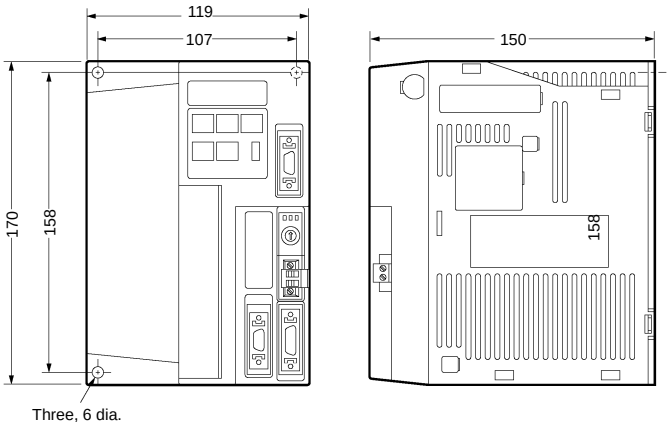


Mounting Holes

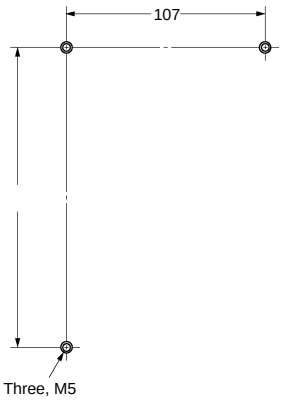


200-VAC FND-X25H-SRT





Mounting Holes



■ Position Drivers

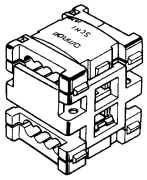
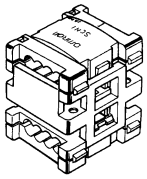
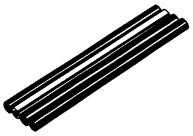
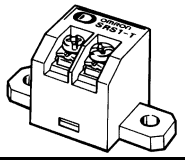
Item	Model	Continuous output current (0-P)	Momentary maximum output current (0-P)	Input power supply	Inverter method	PWM frequency	Weight
200-VAC input	FND-X06H-SRT	2.0 A	6.0 A	Single-phase 200/240 VAC (170 to 264 V) 50/60 Hz	PWM method based on IGBT	10 kHz	Approx. 1.5 kg
	FND-X12H-SRT	4.8 A	12 A				
	FND-X25H-SRT	8.0 A	25 A				Approx. 2.5 kg
100-VAC input	FND-X06L-SRT	2.0 A	6.0 A	Single-phase 100/115 VAC (85 to 127 V) 50/60 Hz			Approx. 1.5 kg
	FND-X12L-SRT	3.0 A	12 A				

Peripheral Devices

Connectors, Cables, and Terminal-block Terminator

Dedicated Flat Cable Allows Communication Path Extension and T-branching with Ease

Ordering Information

Product	Appearance	Model	Specification
Branch Connector		SCN1-TH4	---
Extension Connector		SCN1-TH4E	---
Connector Terminator		SCN1-TH4T	---
Communications Cable		SCA1-4F10	Flat cable, 100 m, 4 conductors (0.75 mm^2 each)
Terminal-block Terminator		SRS1-T	---

Note: Branch Connectors and Extension Connectors are sold in blocks of 10 Units.

Specifications

■ Ratings/Characteristics

Rated current	4 A
Contact resistance	20 mΩ max.
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Withstand voltage	1,000 VAC for 1 min, leakage current: 1 mA max.
Cable pulling strength	50 N (5.1 kgf) min.
Operating temperature	–20°C to 70°C

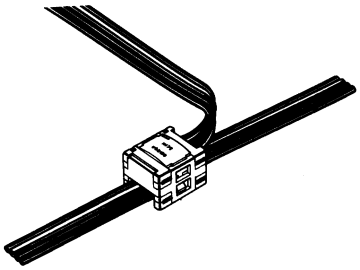
■ Materials

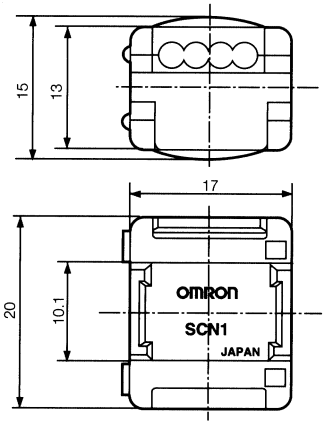
Housing	PA66 resin (UL94V-2) Branching and extension: Gray Terminator: Black
Cover	
Contact	Phosphor bronze and nickel base, tin plated

Dimensions

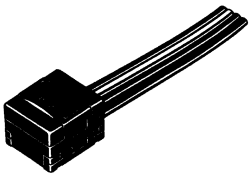
Note: All units are in millimeters unless otherwise indicated.

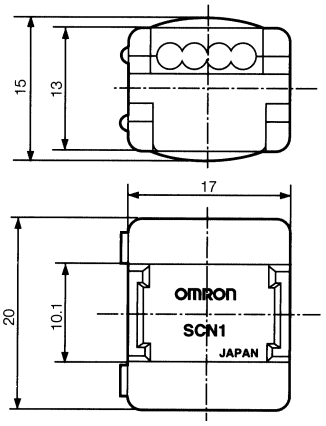
SCN1-TH4 Branch Connector
SCN1-TH4E Extension Connector



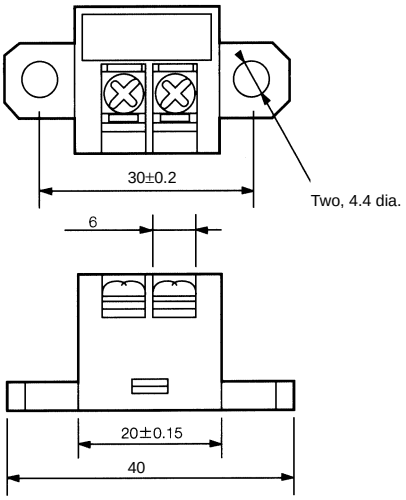


SCN1-TH4T Connector Terminator

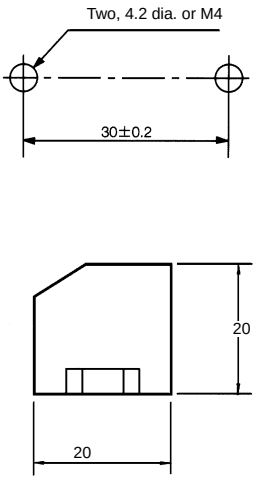




SRS1-T Terminal-block Terminator



Mounting Holes



Precautions

Refer to the *CompoBus/S Operation Manual (W266)* before using the Unit.

Correct Use

The SCN1-TH4, SCN1-TH4E, and SCN1-TH4T are dedicated connectors for CompoBus/S. Always use dedicated CompoBus/S cables with these connectors.

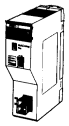
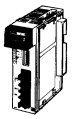
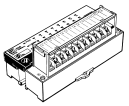
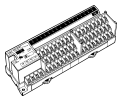
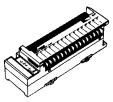
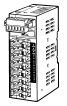
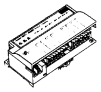
Do not locate the cables in places where excessive force may be imposed on the connectors of the cables such as an area where cables may entangle feet.

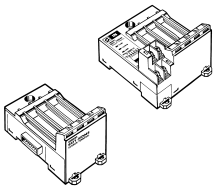
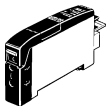
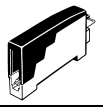
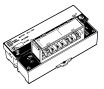
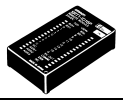
These connectors cannot be reused once they have been attached to cables. Use new connectors if they were not attached to cables properly.

Refer to the *CompoBus/S Operation Manual (W266)* to assemble the connectors.

Ordering Information

Note: Abbreviations for standards: U: UL, C: CSA, CE: EC Directive

Product	Appearance	Model	Specifications	Standards
Master Control Units		SRM1-C01-V2	Stand-alone model with built-in controller functions (without RS-232C)	UL CSA CE (see note 2)
		SRM1-C02-V2	Stand-alone model with built-in controller functions and RS-232C	
Master Units		C200HW-SRM21-V1	For C200HX (-ZE), C200HG (-ZE), C200HE (-ZE), and C200HS	
		CQM1-SRM21-V1	For CQM1	
SYSMAC Boards		C200PC-ISA02-SRM C200PC-ISA12-SRM	For C200HX/HG/HE	---
I/O Link Unit		CPM1A-SRT21	8 inputs 8 outputs	UL CSA CE (see note 2)
Remote Terminals (Transistor Models)	 	SRT1-ID04 SRT1-ID04-1 SRT2-ID08 SRT2-ID08-1 SRT2-ID16 SRT2-ID16-1 SRT1-OD04 SRT1-OD04-1 SRT2-OD08 SRT2-OD08-1 SRT2-OD16 SRT2-OD16-1	4 transistor input (NPN) 4 transistor inputs (PNP) 8 transistor inputs (NPN) 8 transistor inputs (PNP) 16 transistor inputs (NPN) 16 transistor inputs (PNP) 4 transistor outputs (NPN) 4 transistor outputs (PNP) 8 transistor outputs (NPN) 8 transistor outputs (PNP) 16 transistor outputs (NPN) 16 transistor outputs (PNP)	
Remote Terminals (M3 Terminal Block Models)		SRT1-ID16T SRT1-ID16T-1 SRT2-MD16T SRT2-MD16T-1 SRT2-OD16T SRT2-OD16T-1	16 transistor inputs (NPN) 16 transistor inputs (PNP) 16 transistor I/O points (NPN) 16 transistor I/O points (PNP) 16 transistor outputs (NPN) 16 transistor outputs (PNP)	CE (see note 2)
Remote Terminals (Relay-mounted Models)		SRT2-ROC08 SRT2-ROC16 SRT2-ROF08 SRT2-ROF16	8 relay outputs 16 relay outputs 8 power MOS FET relay outputs 16 power MOS FET relay outputs	UL CSA CE (see note 2)
Connector Terminals	 	SRT2-VID08S SRT2-VID08S-1 SRT2-VOD08S SRT2-VOD08S-1 SRT2-VID16ML SRT2-VID16ML-1 SRT2-VOD16ML SRT2-VOD16ML-1 SRT2-ATT01 SRT2-ATT02	8 transistor input (NPN) 8 transistor inputs (PNP) 8 transistor outputs (NPN) 8 transistor outputs (PNP) 16 transistor inputs (NPN) 16 transistor inputs (PNP) 16 transistor outputs (NPN) 16 transistor outputs (PNP) Mounting hook A Mounting hook B	CE (see note 2)
Sensor Terminals		SRT1-ID08S SRT1-ND08S SRT1-OD08S	8 inputs (NPN) 4 automatic teaching points (NPN) 8 outputs	---

Product	Appearance	Model	Specifications	Standards
Sensor Amplifier Terminals for CompoBus/S		SRT1-TID04S SRT1-TKD04S SRT1-XID04S SRT1-XKD04S	---	---
E3X-N Connector Type		E3X-NH16 E3X-NT16 E3X-NT26	Long-distance, high-precision, 1 channel General-purpose, 1 channel Multi-functional, 1 channel	
		E3X-NM16	Multi-functional, 4 channels	
Terminal Block Unit		E39-JID01	One input point	
Analog Input Terminal		SRT2-AD04	1 to 4 inputs (set with DIP switch)	CE (see note 2)
Analog Output Terminal		SRT2-DA02	1 or 2 outputs (set with DIP switch)	
Remote I/O Modules		SRT1-ID16P SRT1-OD16P	---	---
Position Drivers		FND-X06H-SRT	200-VAC input, momentary maximum output current: 6.0 A	
		FND-X12H-SRT	200-VAC input, momentary maximum output current: 12 A	
		FND-X25H-SRT	200-VAC input, momentary maximum output current: 25 A	
		FND-X06L-SRT	100-VAC input, momentary maximum output current: 6.0 A	
		FND-X12L-SRT	100-VAC input, momentary maximum output current: 12 A	
Branch Connector Extension Connector Connector Terminator		SCN1-TH4 SCN1-TH4E SCN1-TH4T	---	
Flat Cable		SCA1-4F10	100 m	
Terminal-block Terminator		SRS1-T	---	

Note: 1. Refer to the *C200HS Catalog (P32)*.
Refer to the *C200HX/C200HG/C200HE (-ZE) Catalog*

2. **Information on EC Directives**
Individual OMRON products that comply with EC Directives conform to the common emission standards of EMC Directives. However, the emission characteristics of these products installed on customers' equipment may vary depending on the configuration, wiring, layout, and other conditions of the control panel used. For this reason, customers are requested to check whether the emission characteristics of the entire machine or equipment comply with the EMC Directives.

■ Model Number Legend

SRT□-□□□□□ -1
1 2 3 4 5 6 7

1. Communications Mode
- 1: High-speed communications mode
- 2: High-speed/Long-distance communications mode

2. I/O Module Replacement
- None: Impossible
- R: Possible (Relays and power MOS FET relays)

3. I/O Specifications
- I: Input
- O: Output
- N: Input and output (with remote teaching)
- AD: Analog input
- DA: Analog output

4. I/O Voltage Specifications
- D: DC
- C: AC/DC (contact type)
- F: AC/DC (power MOS FET type)

5. I/O Points
- 04: 4 points
- 08: 8 points
- 16: 16 points

6. I/O Connection Method
- None: Screw terminals
- S: Connector
- P: PCB terminals

7.
- None: NPN
- -1: PNP

Notes: