

OMRON

SRT2-ID32ML/ID32ML-1

OD32ML/OD32ML-1

MD32ML/MD32ML-1

REMOTE I/O TERMINAL

INSTRUCTION MANUAL

Thank you purchasing this OMRON product. This manual primarily describes precautions required in installing and operating the digital controller. Before operating the product, read this manual through to acquire sufficient knowledge of the product. Keep this manual for future reference.

To ensure safe and correct use of this product, also read the following manuals:
 • CompoBus/S OPERATION MANUAL (Man. No. W266-E1)
 Make sure that information written in this document are delivered to the final user of the product.

OMRON Corporation

0622110-0E

WARNING

Provide safety measures in external circuits. (i.e., not in the Remote I/O Terminal), including the following items, in order to ensure safety in the system if an abnormality occurs due to malfunction of the Remote I/O Terminal or another external factor affecting the Remote I/O Terminal operation. Not doing so may result in serious accidents.

- Emergency stop circuits, interlock circuits, limit circuits, and similar safety measures must be provided in external control circuits.
- Remote I/O Terminal outputs may remain ON or OFF due to destruction of the output transistors. As a countermeasure for such problems, external safety measures must be provided to ensure safety in the system.

NOTICE

Items shown below are necessary for safe usage.

Please note them carefully.

- Do not attempt to disassemble, repair, or modify any Units. Any attempt to do so may result in malfunction, or electric shock.
- Do not wire the product with the power ON.
- Do not submit the product to abnormal shock. Doing so might result in faulty operation.
- Fit the product to a DIN rail or an attachment correctly.
- Use the appointed communications cable.
- Use the product within communications distance of specifications.
- Use the communication cable and the I/O cable that is separate from the one used for high-tension lines.
- Do not pull on the cables or bend the cables beyond their natural limit. Doing so may break the cables.
- Double-check all the wiring before turning on the power supply. Incorrect wiring may result in burning.
- Be sure that terminal polarity and power supply wiring, and I/O voltage specifications are correct, incorrect connections may cause failures.
- Never connect or disconnect connector with the power ON
- Use correct specification voltage.

CORRECT USAGE

- Installation Place

Do not install the Unit in any of the following locations. Installing the Unit in the following locations may result in malfunction, electric shock, or burning.

- Locations subject to direct sunlight.
- Locations subject to temperatures or humidities outside the range specified in the specifications
- Locations subject to corrosive or flammable gases.
- Locations subject to dust (especially iron dust) or salts.
- Locations subject to exposure to water, oil, or chemicals.
- Locations subject to or condensation as the result of severe changes in temperature.
- Locations subject to shock or vibration.

Take appropriate and sufficient countermeasures when installing systems in the following locations. Inappropriate and insufficient measures may result in malfunction.

- Locations subject to static electricity or other forms of noise.
- Locations subject to strong electromagnetic fields.
- Locations subject to possible exposure to radioactivity.
- Locations close to power supplies.

This is a class A product. In residential areas it may cause radio interference, in which case the user may be required to take adequate measures to reduce interference.

- Cleaning

- Power Supply
- Isolate internal Power Supply that is connected to the product from I/O Power Supply that is for load.
 - Take appropriate measures to ensure that the specified power with the rated voltage and frequency is supplied. Be particularly careful in places where the power supply is unstable. An incorrect power supply may result in malfunction.

SPECIFICATIONS

● Ratings : Input Slave Unit : SRT2-ID32ML/ID32ML-1

Input and Output Slave Unit : SRT2-MD32ML/MD32ML-1

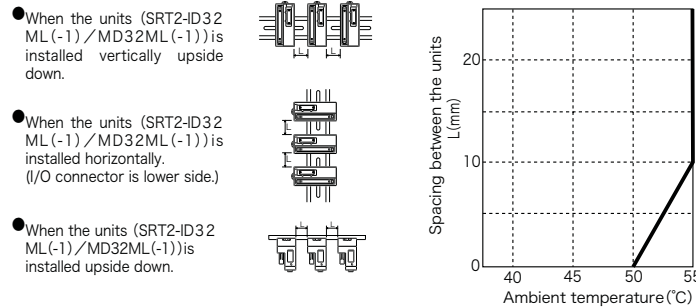
Output Slave Unit : SRT2-OD32ML/OD32ML-1

	ID32ML ID32ML-1	MD32ML MD32ML-1	OD32ML OD32ML-1
	Communication Power Voltage	14 to 26.4VDC	
I/O Power Voltage	20.4 to 26.4VDC		
Current Consumption (Communication Power)	50mA max.	60mA max.	70mA max.
Ambient Temperature	-10 to 55°C		
Ambient Humidity	25% to 85% (no condensation)		
Storage Temperature	-25 to 65°C		
Storage Humidity	25% to 85% (no condensation)		
Structure	Mounted in a panel		
Weight	100g typ.	90g typ.	

● Characteristics Input, Input and Output Slave Unit : SRT2-ID32ML/MD32ML/ID32ML-1/MD32ML-1

	ID32ML	MD32ML	ID32ML-1	MD32ML-1
ON Voltage	15VDC min. (between each input terminal and V)		15VDC min. (between each input terminal and G)	
OFF Voltage	5VDC max. (between each input terminal and V)		5VDC max. (between each input terminal and G)	
OFF Current	1.0mA max.			
Input Current	6.0mA max. (24VDC) 3.0mA min. (17VDC) (between each input terminal and V)		6.0mA max. (24VDC) 3.0mA min. (17VDC) (between each input terminal and G)	
Input impedance	4.4kΩ			
ON Delay Time	1.5ms max.			
OFF Delay Time	1.5ms max.			
Number of points that can be ON simultaneously	32points * 1circuit	16points * 1circuit	32points * 1circuit	16points * 1circuit
Number of circuits	32points /common 1circuit	16points /common 1circuit	32points /common 1circuit	16points /common 1circuit

*SRT2-ID32ML : For example, when the max. number of simultaneous input points is 32 at ambient temperature of 55°C, space between each unit is 10 mm min. (When installed it as below.)

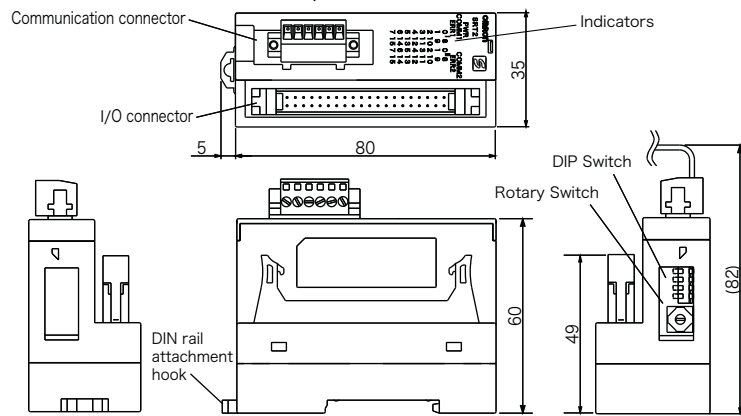


● Characteristics Output Slave Unit : SRT2-OD32ML/MD32ML/OD32ML-1/MD32ML-1

	OD32ML	MD32ML	OD32ML-1	MD32ML-1
Output Current	0.3A /point 4A /common *1, 3 2A /common *2, 3		0.3A /point 4A /common *1, 3 2A /common *2, 3	
Residual Voltage	1.2V max. (0.3ADC, between each output terminal and G)		1.2V max. (0.3ADC, between each output terminal and V)	
Leakage Current	0.1mA max. (24VDC, between each output terminal and G)		0.1mA max. (24VDC, between each output terminal and V)	
ON Delay Time	0.5ms max.			
OFF Delay Time	1.5ms max.			
Number of Circuits	32points /common 1circuit	16points /common 1circuit	32points /common 1circuit	16points /common 1circuit

- *1. Using at 4A or less per common. (Using V/G pin in I/O connector.)
- *2. Using at 2A or less per common. (Using V/G pin in I/O connector.)
- *3. Using at 1A or less per one terminal. (Using V/G pin in I/O connector.)

NOMENCLATURE / DIMENSIONS (unit : mm)

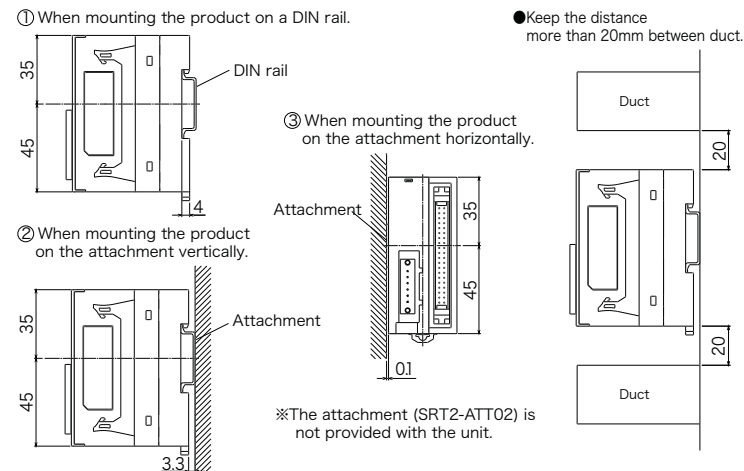


DISPLAY

LED name	ID(-1)/OD(-1) series	MD(-1) series	LED Display Color	State	Description
PWR	POWER		Green		<ul style="list-style-type: none"> ● The communications power supply is ON. ● The communications power supply is OFF.
COMM1	mch communications		Yellow		<ul style="list-style-type: none"> ○ Normal communications. ● A communications error has occurred or the unit is in standby status.
ERR1	mch communications error		Red		<ul style="list-style-type: none"> ○ Normal communications or the unit is in standby status. ● A communications error has occurred.
ERR2	m+1ch communications error		Red		<ul style="list-style-type: none"> ○ Normal communications or the unit is in standby status. ● A communications error has occurred.
I 0~7	mch I/O		Yellow		<ul style="list-style-type: none"> ○ Input(Output) is ON. ● Input(Output) is OFF.
I 0~15	m+1ch I/O		Yellow		<ul style="list-style-type: none"> ○ Input(Output) is ON. ● Input(Output) is OFF.

ATTACHMENT (unit : mm)

The product can be mounted on a 35mm DIN rail or the attachment (SRT2-ATT02) by using the DIN rail attachment hook of the product.
 Do not install the product in places to be touched by accident to avoid malfunction caused by static electricity.



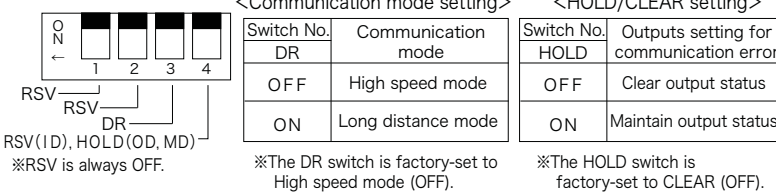
● WEIDMULLER CO, the multi-drop connector (BLDZ3.5/6F : model 176651) and WEIDMULLER CO, Tension-Clamp connector (BLZF3.5/6F : model 169092) can be used for Communication connector.
 *When the product is mounted at panel horizontally, the multi-drop connector can not be used.
 *When the hood cover (XG5S-4022) is mounted at I/O connector, the multi-drop connector can not be used.

ROTARY SWITCH AND DIP SWITCH

● Rotary Switch

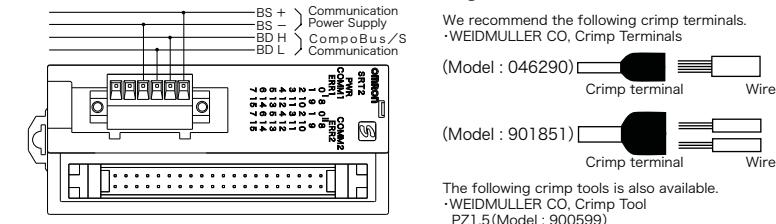
Node number	Switch number	Node number	Switch number
0	0	8	8
1	1	9	9
2	2	10	A
3	3	11	B
4	4	12	C
5	5	13	D
6	6	14	E
7	7	15	F

● DIP Switch

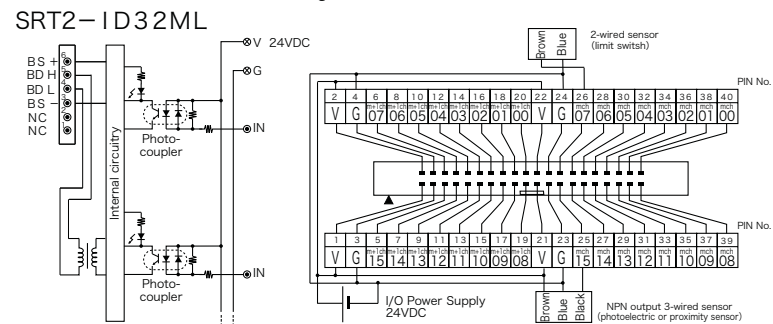


WIRING

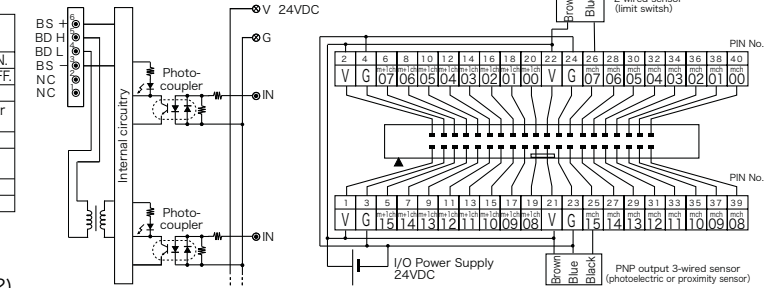
● Communication circuit, and Connecting an External



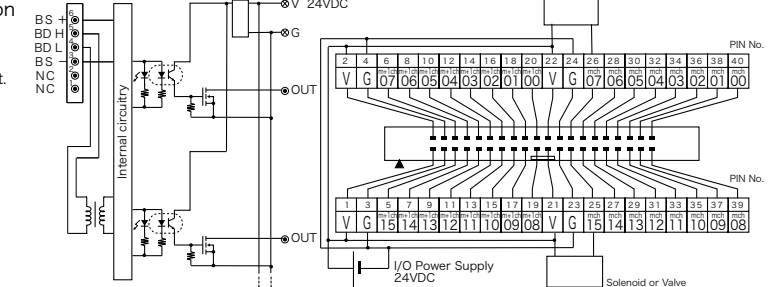
● I/O Circuits, and Connecting an External



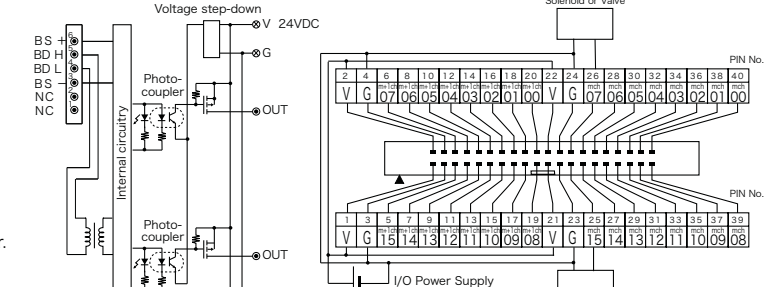
SRT2-ID32ML-1



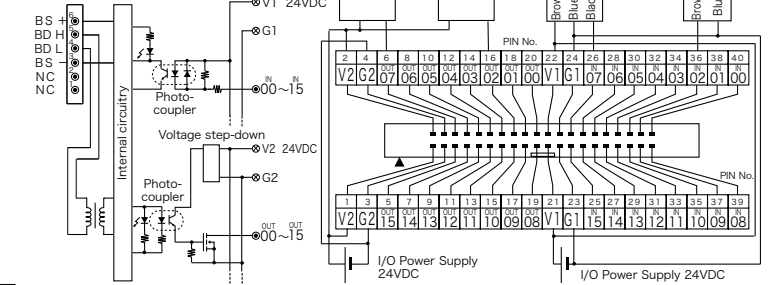
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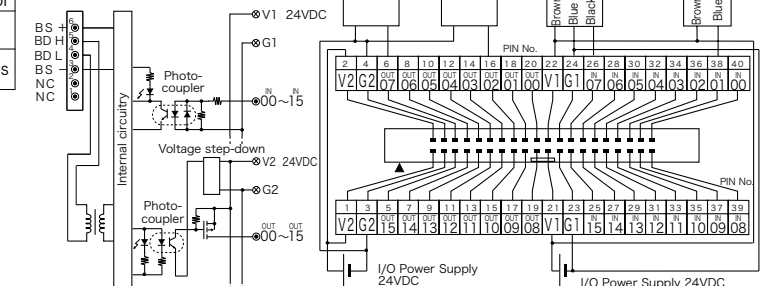
SRT2-OD32ML-1



SRT2-MD32ML



SRT2-MD32ML-1



PRECAUTIONS IN USING THE PRODUCT

When the product is used under the circumstances or environment below, ensure adherence to limitations of the ratings and functions. Also, take countermeasures for safety precautions such as fail-safe installations.

- Use under circumstances or environment which are not described in the instruction manual.
- Use for nuclear power control, railway, aircraft, vehicle, incinerator, medical equipment, entertainment equipment, safety device etc...
- Use for applications where death or serious property damages is possible and extensive safety precautions are required.

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Note: Specifications subject to change without notice.