B-1405(7)

INSTRUCTION SHEET

Slim Relay & Socket Operating Instructions

RV8H Series

Type No. RV8H-L-☐, RV8H-S-☐, RV8H-L-☐-HD, RV8H-S-☐-HD

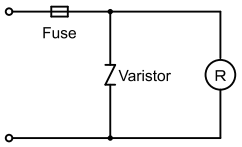
Read this instruction sheet to make sure of correct operation before starting installation,wiring, operation, maintenance, and inspection of this product. Also make sure that this instruction sheet is kept by end users.

⚠ Safety Precautions

- Turn off power to the sockets before starting installation, removal, wiring, maintenance, and inspection of the sockets. Failure to turn power off may cause electrical shocks or fire hazard.
- Use proper wires to meet the voltage and current requirements.
- Make sure that relay and output equipment are connected completely. Incomplete connection may cause overheat, resulting in fire hazard.
- To ensure safety, make sure that all descriptions in the operation instructions are followed strictly.
- Prevent metal fragments and pieces of wire from dropping inside the sockets. Ingress of such fragments and chips may cause fire, failure, or malfunction.
- Use a 15A non-time delay fuse for protection against short-circuit.
- When lightening surge may enter the input circuit of types AD12, AD18, and AD24, and when lightening surge and noise may enter the input circuit of types AD48 and AD60 of the following products, use a proper varistor. Otherwise, failure maybe caused.

Corresponding products	Recommend varistor
RV8H-L-AD12	Panasonic ERZV07D390
RV8H-L-AD18	
RV8H-L-AD24	
RV8H-L-AD48	Panasonic ERZV14D121
RV8H-L-AD60	
RV8H-S-AD12	Panasonic ERZV07D390
RV8H-S-AD18	
RV8H-S-AD24	
RV8H-S-AD48	Panasonic ERZV14D121
RV8H-S-AD60	

Example of circuit



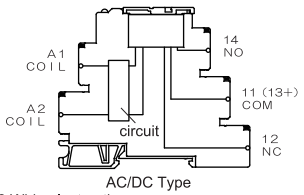
- Apply voltage that is applicable to the relay and socket. Otherwise fire, failure, or malfunction will be caused.

	Coil Voltage	Relay & Socket P/N	Socket P/N	Relay P/N
Screw Type	DC6V	RV8H-L-D6	SV1H-07L-5	RV1H-G-D5
	DC9V	RV8H-L-D9	SV1H-07L-5	RV1H-G-D9
	DC12V	RV8H-L-D12	SV1H-07L-5	RV1H-G-D12
	DC18V	RV8H-L-D18	SV1H-07L-5	RV1H-G-D18
	DC24V	RV8H-L-D24	SV1H-07L-5	RV1H-G-D24
	AC/DC12V	RV8H-L-AD12	SV1H-07L-1	RV1H-G-D12
	AC/DC18V	RV8H-L-AD18	SV1H-07L-1	RV1H-G-D18
	AC/DC24V	RV8H-L-AD24	SV1H-07L-1	RV1H-G-D24
	AC/DC48V	RV8H-L-AD48	SV1H-07L-2	RV1H-G-D48
	AC/DC60V	RV8H-L-AD60	SV1H-07L-2	RV1H-G-D60
	AC/DC110-125V	RV8H-L-AD110	SV1H-07L-3	RV1H-G-D60
	AC/DC110-125V	RV8H-L-AD110-HD(*1)	SV1H-07L-6	RV1H-G-D60
	AC/DC220-240V	RV8H-L-AD220	SV1H-07L-4	RV1H-G-D60
Spring clamp Type	DC6V	RV8H-S-D6	SV1H-07LS-5	RV1H-G-D5
	DC9V	RV8H-S-D9	SV1H-07LS-5	RV1H-G-D9
	DC12V	RV8H-S-D12	SV1H-07LS-5	RV1H-G-D12
	DC18V	RV8H-S-D18	SV1H-07LS-5	RV1H-G-D18
	DC24V	RV8H-S-D24	SV1H-07LS-5	RV1H-G-D24
	AC/DC12V	RV8H-S-AD12	SV1H-07LS-1	RV1H-G-D12
	AC/DC18V	RV8H-S-AD18	SV1H-07LS-1	RV1H-G-D18
	AC/DC24V	RV8H-S-AD24	SV1H-07LS-1	RV1H-G-D24
	AC/DC48V	RV8H-S-AD48	SV1H-07LS-2	RV1H-G-D48
	AC/DC60V	RV8H-S-AD60	SV1H-07LS-2	RV1H-G-D60
	AC/DC110-125V	RV8H-S-AD110	SV1H-07LS-3	RV1H-G-D60
	AC/DC110-125V	RV8H-S-AD110-HD(*1)	SV1H-07LS-6	RV1H-G-D60
	AC/DC220-240V	RV8H-S-AD220	SV1H-07LS-4	RV1H-G-D60

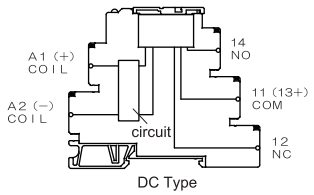
*1) High dropout voltage type

- Observe the maximum ambient temperature shown below. Otherwise, fire, failure, or malfunction will be caused.
  55℃ maximum: RV8H-L-AD110, RV8H-L-AD110-HD, RV8H-L-AD220
  RV8H-S-AD110, RV8H-S-AD110-HD, RV8H-S-AD220
  70℃ maximum: All other part not otherwise specified.

1.Terminal Arrangement



AC/DC Type

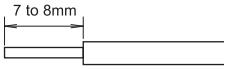


DC Type

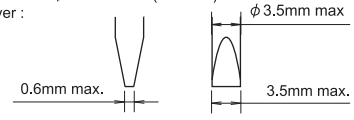
2.Wiring Instructions

2-1 RV8H-L-☐

Use the following applicable wires for wiring.
2.5mm² max. or AWG14 max., CU(copper), Stranded or Solid wire : 1
1.5mm² max. or AWG16 max., CU(copper), Stranded wire : 2 max.
ϕ1.3mm max. or AWG16 max., CU(copper) solid wire : 2 max.



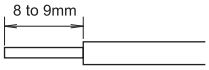
Strip the wire insulation 7 to 8 mm from the end.
Stripping the wire insulation too short may cause the wire to come off. Stripping the wire insulation too long may cause short-circuit with the adjacent socket. Make sure to twist the stranded wire to prevent loosening.
For wiring, use the optional screwdriver(S3TL-D06-35-100) or the following applicable screwdriver.
Phillips screwdriver : ϕ3.5mm max.(Bit No.1)
Flat screwdriver :



Recommended tightening torque : 0.3 N・m to 0.4 N・m (UL certificated: 0.35N・m)

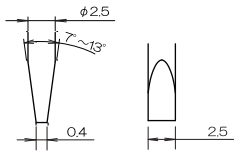
2-2 RV8H-S-☐

Use the following applicable wires for wiring.
0.5mm² to 2.5mm² or AWG20 to AWG14, CU(copper),
Stranded or Solid wire : 1



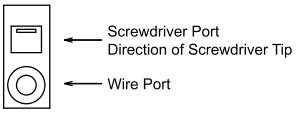
Strip the wire insulation 8 to 9 mm from the end.
Stripping the wire insulation too short may cause the wire to come off. Stripping the wire insulation too long may cause short-circuit with the adjacent socket. Make sure to twist the stranded wire to prevent loosening.

- For wiring, use the optional screwdriver(S3TL-D04-25-75) or the applicable screwdriver on the right figure.
- In applications using ferrules for stranded wires, choose the ferrule listed in the table.



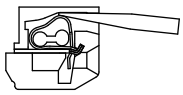
Applicable wire (standard)		IDEC	Phoenix Contact	Nichifu
AWG	mm²			
20	0.5	S3TL-H05-14WA	AI0.5-8WH	NF0.5-8
20	0.75	-	-	NF0.75-8
18	0.75	S3TL-H075-14WW	AI0.75-8GY	-
18	1.0	-	AI1-8RD	NF1.0-8
17	1.0	S3TL-H10-14WY	-	-

- Wire insertion positions, screwdriver insertion positions, and the directions of screwdriver tip are shown below.

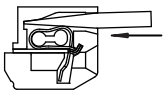


- Wiring Instructions

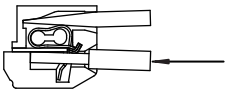
1. Insert an applicable screwdriver into the square-shaped port as shown,until the screwdriver tip touches the bottom of the spring.



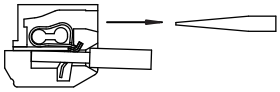
2. Push in the screwdriver until it touches the bottom of the port. The wire port is now open, and the screwdriver is held in place. The screwdriver will not come off even if you release your hand.



3. While the screwdriver is retained in the port, insert the wire or ferrule into the round-shaped wire port. Each wire port can accommodate one wire or ferrule.

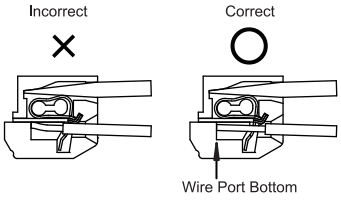


4. Pull out the screwdriver. The connection is now complete.



⚠ CAUTION

- When using wire with insulation diameter of ϕ2.0mm or less, do not insert the wire too deep where the insulation inserts into the spring clamp opening. Otherwise conductive failure will be caused. Make sure that the wire insulation is stripped 8 to 9 mm and the wire is inserted to the bottom.

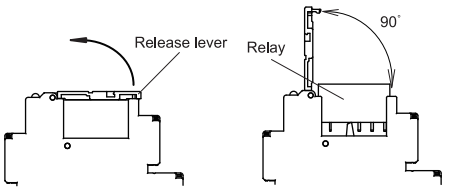


3.Removing the Relay

Open the release lever in the direction of the arrow, and remove the relay.

⚠ CAUTION

- The relay may pop out when opening the release lever, resulting in possible damage or loss of the relay. To prevent this, rightly press down the relay using a finger when opening the release lever.
- Do not open the release lever more than 90˚, otherwise the socket will be damaged.

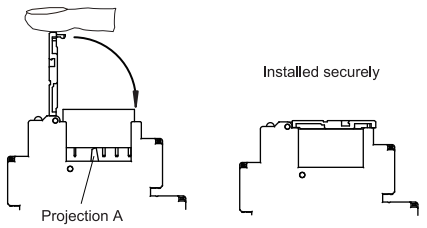


4.Installing the Relay

Open the release lever, and insert the relay into the socket until the bottom of relay touches the projection A on the socket. Close the release lever until it is latched.

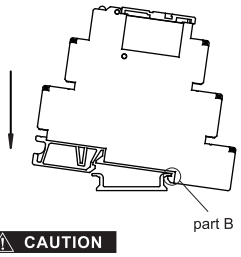
⚠ CAUTION

- When installing the relay, do not press in using a relay. Make sure to use the release lever, otherwise the projection A will be damaged.



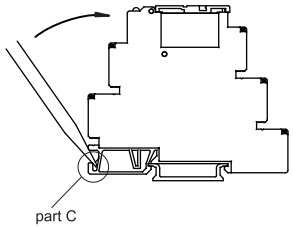
5.Installing the socket

Put the groove on the socket(part B) on the DIN rail, and press the socket towards the DIN rail as shown in the figure.



6.Removing the Socket

Insert a small flat screwdriver into the slot (part C) of the socket, and pull out the socket as shown in the figure.



⚠ CAUTION

- When using the RV8H in cold temperature (0℃ or below), install or remove the socket on the DIN rail carefully so that the socket will not be damaged.

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