

Now available
Class I
Div 2

6mm Hazardous Location Interface Relays - RV8H Series

Screw Terminals



Top view with
Marking Plate

Only 70mm from DIN rail!

Spring Clamp Terminals



Top view without
Marking Plate

Only 70mm from DIN rail!

Key Features

- Class I, Division 2 and Class I, Zone 2 hazardous locations
- Space-saving 6mm width
- Only 70mm in height from DIN rail
- Gold-plated contacts
- Pre-assembled relay and DIN mount socket
- Universal screw terminals (flat and Phillips) or Spring clamp terminals
- Universal AC/DC socket with built-in surge suppression and green LED
- 6A contact rating
- Lever for easy locking and removal of relay
- Wide input voltage range: 6 to 240V
- High dielectric strength and impulse withstand voltages
- Operating Temperature: -40C ~ +70C
- Reverse Polarity protected
- 400V AC maximum switching voltage
- 1500VA maximum switching power
- RoHS compliant

Specifications

| | | |
|--------------------------------|---|--|
| Hazardous Location Rating | Class I, Division2, Groups A, B, C, D T4A Class I, Zone 2, AEx nA nC IIC T4 Class I, Zone 2, Ex nA nC IIC T4 X Gc UL/c-UL Listed | |
| Number of Poles | 1 pole | |
| Contact Configuration | 1 form C (SPDT) | |
| Contact material | AgNi (Au plating) | |
| Degree of Protection | IP20 | |
| Dielectric strength | Between contact and coil | 4,000V AC for 1min |
| | Between pole | 1,000V AC for 1min |
| Vibration Resistance | Operating extremes | NO: Frequency 10 to 55Hz, Amplitude 0.5mm NC: Frequency 10 to 55Hz, Amplitude 0.2mm |
| | Damage limits | |
| Shock Resistance | Operating extremes | NO: 49m/s ² (5G) NC: 29.4m/s ² (3G) |
| | Damage limits | 980m/s ² (10G) |
| Mechanical Life (without load) | Over 10,000,000 operations (operation frequency 18,000 operations per hour) | |
| Operating Temperature | -40 to +70°C without freezing (-40 to +55°C for AD110 and AD220 coil voltages) | |
| Operating Humidity | 5 to 85% (without condensation) | |
| Weight (approx.) | 30g (RV8H-L), 26g (RV8H-S) | |



(when using combination of
RV relay and SV socket)

Part Numbers

Complete Part Numbers (Relay & Socket) and Replacement Relay



| | | Screw Terminals | | | | Spring Clamp Terminals | | | |
|--------------|-------------|---|--------------------------|---|--------------------------|---|--------------------------|---|--------------------------|
| | | Complete Unit | | Relay Only | | Complete Unit | | Relay Only | |
| | |  | |  | |  | |  | |
| | | | | New | | | | New | |
| Coil voltage | | Standard | | Hazardous Location (Class I Div 2) | | Standard | | Hazardous Location (Class I Div 2) | |
| | | Complete Part Number | Replacement (Relay Only) | Complete Part Number | Replacement (Relay Only) | Complete Part Number | Replacement (Relay Only) | Complete Part Number | Replacement (Relay Only) |
| DC | 6V | RV8H-L-D6 | RV1H-G-D5 | RV8H-L-D6-C1D2 | RV1H-G-D5-C1D2 | RV8H-S-D6 | RV1H-G-D5 | RV8H-S-D6-C1D2 | RV1H-G-D5-C1D2 |
| | 9V | RV8H-L-D9 | RV1H-G-D9 | RV8H-L-D9-C1D2 | RV1H-G-D9-C1D2 | RV8H-S-D9 | RV1H-G-D9 | RV8H-S-D9-C1D2 | RV1H-G-D9-C1D2 |
| | 12V | RV8H-L-D12 | RV1H-G-D12 | RV8H-L-D12-C1D2 | RV1H-G-D12-C1D2 | RV8H-S-D12 | RV1H-G-D12 | RV8H-S-D12-C1D2 | RV1H-G-D12-C1D2 |
| | 18V | RV8H-L-D18 | RV1H-G-D18 | RV8H-L-D18-C1D2 | RV1H-G-D18-C1D2 | RV8H-S-D18 | RV1H-G-D18 | RV8H-S-D18-C1D2 | RV1H-G-D18-C1D2 |
| | 24V | RV8H-L-D24 | RV1H-G-D24 | RV8H-L-D24-C1D2 | RV1H-G-D24-C1D2 | RV8H-S-D24 | RV1H-G-D24 | RV8H-S-D24-C1D2 | RV1H-G-D24-C1D2 |
| AC/DC | 12V | RV8H-L-AD12 | RV1H-G-D12 | RV8H-L-AD12-C1D2 | RV1H-G-D12-C1D2 | RV8H-S-AD12 | RV1H-G-D12 | RV8H-S-AD12-C1D2 | RV1H-G-D12-C1D2 |
| | 18V | RV8H-L-AD18 | RV1H-G-D18 | RV8H-L-AD18-C1D2 | RV1H-G-D18-C1D2 | RV8H-S-AD18 | RV1H-G-D18 | RV8H-S-AD18-C1D2 | RV1H-G-D18-C1D2 |
| | 24V | RV8H-L-AD24 | RV1H-G-D24 | RV8H-L-AD24-C1D2 | RV1H-G-D24-C1D2 | RV8H-S-AD24 | RV1H-G-D24 | RV8H-S-AD24-C1D2 | RV1H-G-D24-C1D2 |
| | 48V | RV8H-L-AD48 | RV1H-G-D48 | RV8H-L-AD48-C1D2 | RV1H-G-D48-C1D2 | RV8H-S-AD48 | RV1H-G-D48 | RV8H-S-AD48-C1D2 | RV1H-G-D48-C1D2 |
| | 60V | RV8H-L-AD60 | RV1H-G-D60 | RV8H-L-AD60-C1D2 | RV1H-G-D60-C1D2 | RV8H-S-AD60 | RV1H-G-D60 | RV8H-S-AD60-C1D2 | RV1H-G-D60-C1D2 |
| | 110V - 125V | RV8H-L-AD110 | RV1H-G-D60 | RV8H-L-AD110-C1D2 | RV1H-G-D60-C1D2 | RV8H-S-AD110 | RV1H-G-D60 | RV8H-S-AD110-C1D2 | RV1H-G-D60-C1D2 |
| | 220V - 240V | RV8H-L-AD220 | RV1H-G-D60 | RV8H-L-AD220-C1D2 | RV1H-G-D60-C1D2 | RV8H-S-AD220 | RV1H-G-D60 | RV8H-S-AD220-C1D2 | RV1H-G-D60-C1D2 |

Accessories

| Description | Color | Part Number |
|--|-------|-------------|
| Jumper (20 combs ^{Note 1})  Rated current: 6A ^{Note 2} | Black | SV9Z-J20B |
| | Gray | SV9Z-J20W |
| | Blue | SV9Z-J20S |
| Spacer (circuit separator) ^{Note 3}  | - | SV9Z-SA2W |
| Screwdriver  | - | BC1S-SD0 |

- Jumper combs come with 20 points, if shorter lengths are needed simply cut off the excess points.
- Ensure that the total current to the jumper does not exceed the overall rated current.
- Width of spacer: 2mm
- When using a cut jumper, please use a spacer on the cut side. For additional information see instruction sheet.

Marking Plates (Blank and Pre-marked)

| Item | Part Number | Engraving |
|---|-------------------|-----------|
| | SV9Z-PW10 | blank |
|  Vertical Orientation | SV9Z-PW10-⊙1-10 | 1-10 |
| | SV9Z-PW10-⊙11-20 | 11-20 |
| | SV9Z-PW10-⊙21-30 | 21-30 |
| | SV9Z-PW10-⊙31-40 | 31-40 |
| | SV9Z-PW10-⊙41-50 | 41-50 |
| | SV9Z-PW10-⊙51-60 | 51-60 |
| | SV9Z-PW10-⊙61-70 | 61-70 |
|  Horizontal Orientation | SV9Z-PW10-⊙71-80 | 71-80 |
| | SV9Z-PW10-⊙81-90 | 81-90 |
| | SV9Z-PW10-⊙91-100 | 91-100 |
| | SV9Z-PW10-⊙A-J | A-J |
| | SV9Z-PW10-⊙K-T | K-T |
| | SV9Z-PW10-⊙U-Z | U-Z |
| | SV9Z-PW10-⊙GROUND | ⏚ |
| SV9Z-PW10-⊙AC | ⏚ | |

- In place of ⊙ insert orientation code: V=Vertical, H=Horizontal
- Each unit has 10 pieces (marking plates).

Coil Ratings

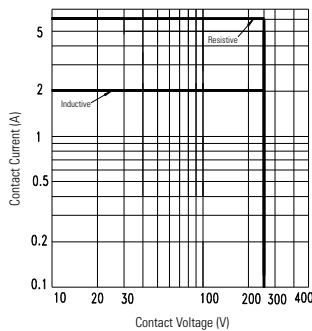
| Rated Voltage | Rated Current +15% (mA) | Circuit AC Resistance +10% (Ω) | Circuit DC Resistance +10% (Ω) | Operating Characteristics | | | Power Consumption | |
|---------------|----------------------------|---|---|---------------------------|--------------------|------------------------------|----------------------|-------|
| | | | | Pickup Voltage | Dropout Voltage | Maximum Allowable voltage | | |
| DC | 6V | 35 | - | 170 | 90% max | 7% min | 110% | 0.21W |
| | 9V | 18.6 | - | 485 | | | | 0.2W |
| | 12V | 14.6 | - | 820 | | | | 0.2W |
| | 18V | 11.6 | - | 1550 | | | | 0.2W |
| | 24V | 10.6 | - | 2270 | | | | 0.25W |
| AC/DC | 12V | 15.5 | 755 | 800 | | | 110% | 0.2W |
| | 18V | 13.3 | 1365 | 1345 | | | | 0.25W |
| | 24V | 13.7 | 1730 | 1790 | | | | 0.33W |
| | 48V | 4 | 11880 | 12230 | | | | 0.2W |
| | 60V | 3.4 | 17600 | 17910 | | | | 0.2W |
| | 110V - 125V | 3.4 - 3.9 | 31790 - 31890 | 32450 - 32900 | 0.5W | | | |
| | 220V - 240V | 3.3 - 3.6 | 65670 - 66070 | 65940 - 68570 | 0.85W | | | |

Contact Rating

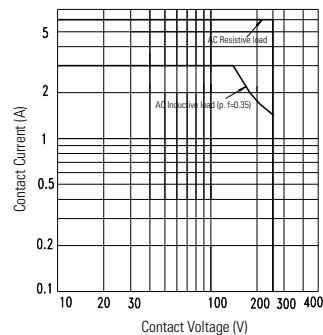
| | | |
|------------------------------|----------------|-----------------------|
| Max. Allowable Contact Power | Resistive load | 1500VA, 180W DC |
| Rated Load | Resistive load | 250V AC 6A, 30V DC 6A |
| Allowable Switching Current | | 6A |
| Allowable Switching Voltage | | 400V AC, 125V DC |
| Allowable Switching Power | | 1500VA, 180W DC |
| Minimum Applicable Load | | 6V DC/10mA |

RV1H Relay

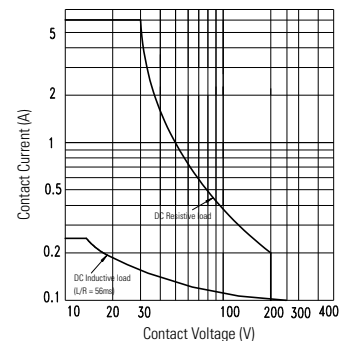
Contact Ratings



Maximum Switching Power AC



Maximum Switching Power DC

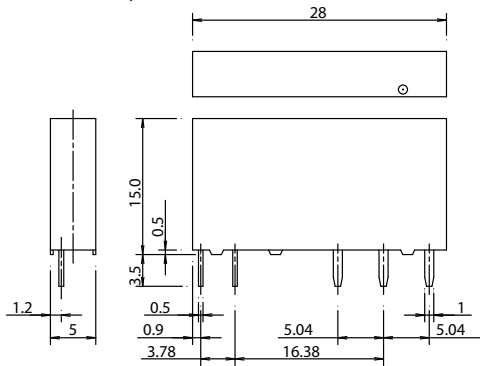


800.262.4332

www.IDEC.com/relays

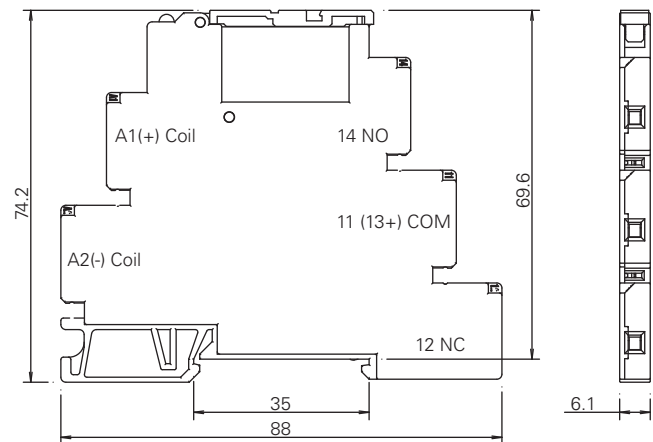
Dimensions (mm)

RV1H-G Relay

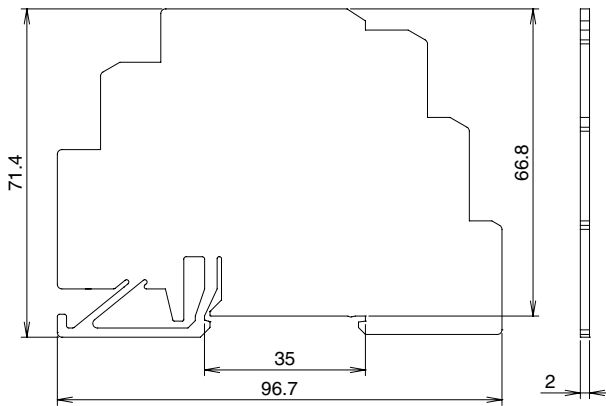


Note: Drawings are not to scale.

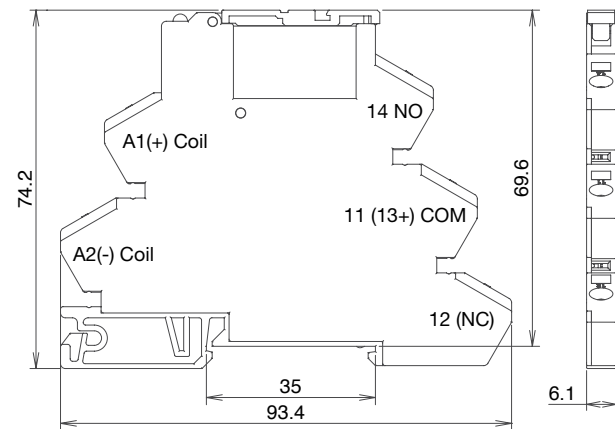
SV1H-07L Screw Terminals



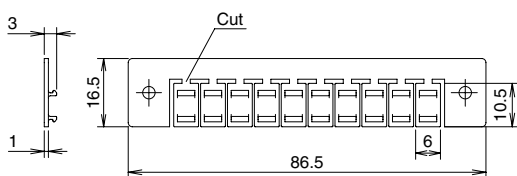
SV9Z-SA2W



RV8H-S Spring Clamp Terminals

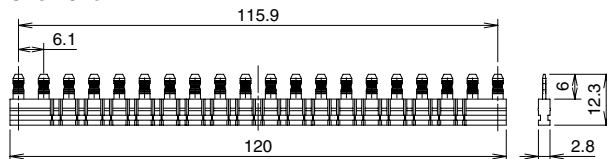


SV9Z-PW10*



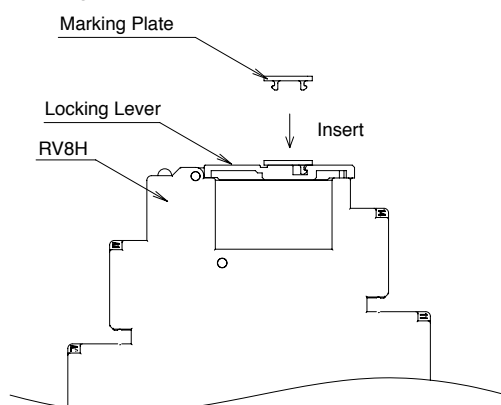
*Available blank or pre-marked.

SV9Z-J20*

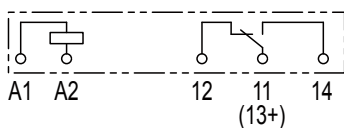


*Available in black, gray and blue.

Marking Plate Placement



Internal Connection (bottom view)



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