

# 14mm Interface Relays

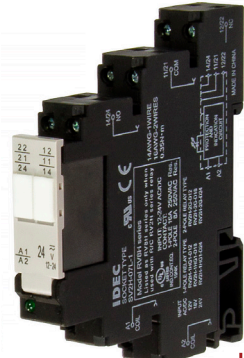
## RV8 Series



Top View with Marking Plate

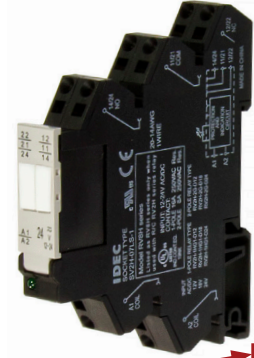


Screw Terminal



Only 70mm in height from DIN rail

Spring Clamp Terminal



Only 70mm in height from DIN rail

### SPECIFICATIONS

Number of Poles		1-pole	2-pole
Contact Configuration		1C (SPDT)	2C (DPDT)
Contact Material		AgNi	AgNi (Au-plated)
Degree of Protection		IP20	IP20
Dielectric strength	Between contact and coil	5,000V AC for 1 minute	5,000V AC for 1 minute
	Between contacts of the same pole	1,000V AC for 1 minute	1,000V AC for 1 minute
	Between contact sets	-	2,500V AC for 1 minute
Vibration Resistance	Operating extremes	10 to 55Hz, amplitude 0.75mm (NO contact), 0.175mm (NC contact)	10 to 55Hz, amplitude 0.75mm (NO contact), 0.1mm (NC contact)
	Damage limits	10 to 55Hz, amplitude 0.75mm (NO contact), 0.175mm (NC contact)	10 to 55Hz, amplitude 0.75mm (NO contact), 0.1mm (NC contact)
Shock Resistance	Operating extremes	98m/s <sup>2</sup> (NO)	98m/s <sup>2</sup> (NO)
	Damage limits	980m/s <sup>2</sup>	980m/s <sup>2</sup>
Electrical Life - Screw terminal		AC load:30,000 operations minimum (250V AC, 16A resistive load, operation frequency 360 operation per hour)	AC load:100,000 operations minimum (250V AC, 8A resistive load, operation frequency 360 operation per hour)
Electrical Life - Spring Clamp terminal		AC load:30,000 operations minimum (250V AC, 12A resistive load, operation frequency 360 operation per hour)	AC load:100,000 operations minimum (250V AC, 6A resistive load, operation frequency 360 operation per hour)
Mechanical Life (no load)		10,000,000 operations minimum (Operation frequency 18,000 operations per hour)	10,000,000 operations minimum (Operation frequency 18,000 operations per hour)
Operating Temperature	RV8H-1L1-D6, D9, D12, D18, D24, AD12, AD18, AD24, AD48, AD60, AD110	: -40 to +70°C (Contact current 12A max, 6A per terminal) no freezing : -40 to +55°C (Contact current 16A max, 8A per terminal) no freezing	RV8H-2L-D6, D9, D12, D18, D24, AD12, AD18, AD24, AD48, AD60, AD110 : -40 to +70°C (Contact current 6A max) no freezing : -40 to +55°C (Contact current 8A max) no freezing
	RV8H-1L1- AD220	: -40 to +55°C (Contact current 16A max, 8A per terminal) no freezing	RV8H-2L- AD220 : -40 to +55°C (Contact current 8A max) no freezing
	RV8H-1S1-D6, D9, D12, D18, D24, AD12, AD18, AD24, AD48, AD60, AD110	: -40 to +70°C (Contact current 12A max, 6A per terminal) no freezing	RV8H-2S-D6, D9, D12, D18, D24, AD12, AD18, AD24, AD48, AD60, AD110 : -40 to +70°C (Contact current 6A max) no freezing
	RV8H-1S1- AD220	: -40 to +55°C (Contact current 12A max, 6A per terminal) no freezing	RV8H-2S- AD220 : -40 to +55°C (Contact current 6A max) no freezing
Operating Humidity		5 to 85% (no condensation)	5 to 85% (no condensation)
Weight		Screw Terminal: Approx.52g Spring Clamp Terminal: Approx. 49g	Screw Terminal: Approx. 52g Spring Clamp Terminal: Approx. 49g

### PRODUCT DESCRIPTION

With the addition of a 14mm version, IDEC offers a complete line of RV8 interface relays. Ideal for panels with limited room, these low-profile relays provide up to a 40% reduction in DIN rail space when compared with standard plug-ins. RV8 relays are good for higher load switching applications, panels with high I/O content and commercial HVAC panels. UL listed when paired with a corresponding socket, it's easy to save space with new RV8 models.

### KEY FEATURES

- Space-saving 14mm width.
- Universal AC/DC socket with built-in surge suppression and green LED Indicator
- Gold plated contacts (2-pole model only)
- Pre-assembled relay and DIN mount socket
- Universal screw terminals (flat and Philips) or spring clamp terminals
- Only 70 mm in height from DIN rail
- Release lever for easy locking and removal of relay
- Wide input voltage range: 6 to 240V
- High dielectric strength and impulse withstand voltages.
- Reverse polarity protected
- RoHS compliant



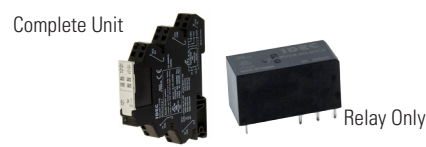
(when using combination of RV relay and SV socket)

## PART NUMBERS

### Screw Terminals



### Spring Clamp Terminals



Input voltage	1-pole		2-pole		1-pole		2-pole		
	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-1L1-D6	RV2H-1HG1-D5	RV8H-2L-D6	RV2H-2G-D5	RV8H-1S1-D6	RV2H-1HG1-D5	RV8H-2S-D6	RV2H-2G-D5
	9V	RV8H-1L1-D9	RV2H-1HG1-D9	RV8H-2L-D9	RV2H-2G-D9	RV8H-1S1-D9	RV2H-1HG1-D9	RV8H-2S-D9	RV2H-2G-D9
	12V	RV8H-1L1-D12	RV2H-1HG1-D12	RV8H-2L-D12	RV2H-2G-D12	RV8H-1S1-D12	RV2H-1HG1-D12	RV8H-2S-D12	RV2H-2G-D12
	18V	RV8H-1L1-D18	RV2H-1HG1-D18	RV8H-2L-D18	RV2H-2G-D18	RV8H-1S1-D18	RV2H-1HG1-D18	RV8H-2S-D18	RV2H-2G-D18
	24V	RV8H-1L1-D24	RV2H-1HG1-D24	RV8H-2L-D24	RV2H-2G-D24	RV8H-1S1-D24	RV2H-1HG1-D24	RV8H-2S-D24	RV2H-2G-D24
AC/DC	12V	RV8H-1L1-AD12	RV2H-1HG1-D12	RV8H-2L-AD12	RV2H-2G-D12	RV8H-1S1-AD12	RV2H-1HG1-D12	RV8H-2S-AD12	RV2H-2G-D12
	18V	RV8H-1L1-AD18	RV2H-1HG1-D18	RV8H-2L-AD18	RV2H-2G-D18	RV8H-1S1-AD18	RV2H-1HG1-D18	RV8H-2S-AD18	RV2H-2G-D18
	24V	RV8H-1L1-AD24	RV2H-1HG1-D24	RV8H-2L-AD24	RV2H-2G-D24	RV8H-1S1-AD24	RV2H-1HG1-D24	RV8H-2S-AD24	RV2H-2G-D24
	48V	RV8H-1L1-AD48	RV2H-1HG1-D48	RV8H-2L-AD48	RV2H-2G-D48	RV8H-1S1-AD48	RV2H-1HG1-D48	RV8H-2S-AD48	RV2H-2G-D48
	60V	RV8H-1L1-AD60	RV2H-1HG1-D60	RV8H-2L-AD60	RV2H-2G-D60	RV8H-1S1-AD60	RV2H-1HG1-D60	RV8H-2S-AD60	RV2H-2G-D60
	110V - 125V	RV8H-1L1-AD110	RV2H-1HG1-D110	RV8H-2L-AD110	RV2H-2G-D110	RV8H-1S1-AD110	RV2H-1HG1-D110	RV8H-2S-AD110	RV2H-2G-D110
	220V - 240V	RV8H-1L1-AD220	RV2H-1HG1-D110	RV8H-2L-AD220	RV2H-2G-D110	RV8H-1S1-AD220	RV2H-1HG1-D110	RV8H-2S-AD220	RV2H-2G-D110

## RATINGS

### Coil Ratings

Rated Voltage	Operating Characteristics (Against Rated Voltage)						Power Consumption (W)						
	Minimum Pickup Voltage (at 23°C)	Dropout Voltage (at 23°C)	Maximum Allowable Voltage (at 23°C)	Maximum Continuous Applied Voltage (Note 1)	Operation time	Release time	DC	AC (50Hz)	AC (60Hz)				
DC	6V	80% max	7% min	120%	15ms max	15ms max	0.45	-	-				
	9V						0.40	-	-				
	12V						0.38	-	-				
	18V						0.43	-	-				
	24V						0.48	-	-				
AC/DC	12V			110%			110%	110% (Note 2)	15ms max	15ms max	0.38	0.35	0.35
	18V										0.43	0.43	0.43
	24V										0.48	0.50	0.50
	48V										0.36	0.43	0.43
	60V										0.46	0.54	0.54
	110V - 125V	0.64	0.73		0.73								
	220V - 240V	1.10	1.25		1.32								

Note 1: At rated operating temperature  
 Note 2: Rated Voltage AC/DC 240V : 106%

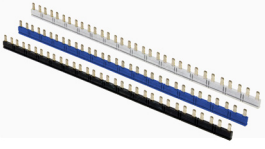


### Contact Ratings

Allowable contact power	Resistive load	Screw Terminal	Spring Clamp Terminal
		1-pole 4,000VA 2-pole 2,000VA	1-pole 3,000VA 2-pole 1,500VA
Rated Load	Inductive load	B300 (pilot duty)	B300 (pilot duty)
		1-pole 250V AC, 16A (8A per terminal) at 55°C, 12A (6A per terminal) at 70°C 2-pole 250V AC, 8A at 55°C, 6A at 70°C	1-pole 250V AC, 12A (6A per terminal) at 70°C 2-pole 250V AC, 6A at 70°C
Allowable Switching Current	Resistive load	B300 (pilot duty)	B300 (pilot duty)
		1-pole 16A (8A per terminal) at 55°C, 12A (6A per terminal) at 70°C 2-pole 8A at 55°C, 6A at 70°C	1-pole 12A (6A per terminal) at 70°C 2-pole 6A at 70°C
Allowable Switching Power	Inductive load	1-pole 4,000VA 2-pole 2,000VA	1-pole 3,000VA 2-pole 1,500VA
		1-pole 6VDC 100mA 2-pole 5VDC 10mA	1-pole 6VDC 100mA 2-pole 5VDC 10mA



### UL Ratings

	Voltage	Screw Terminal		Spring Clamp Terminal	
		1-Pole	2-Pole	1-Pole	2-Pole
Resistive	250V AC	16A (8A per terminal) at 55°C	8A at 55°C	-	-
		12A (6A per terminal) at 70°C	6A at 70°C	12A (6A per terminal) at 70°C	6A at 70°C

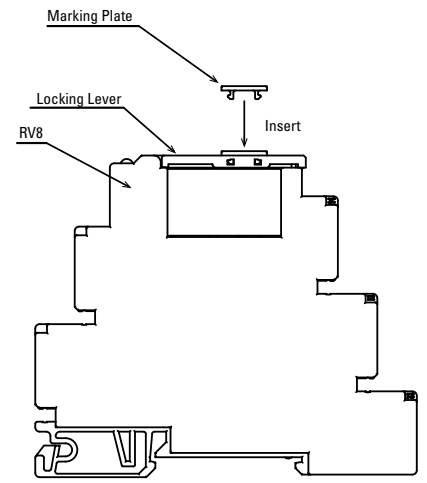
## ACCESSORIES

Item	Color	Part Number
<b>Jumper</b> (32 combs, with 2-combs per relays, or 16 discrete relays.) Note 1, 2, 4	Black	SV9Z-J232B
	Gray	SV9Z-J232W
	Blue	SV9Z-J232S
	Light Grey	SV9Z-SA2W
<b>Spacer (circuit separator)</b> Note 3, 4		
		
<b>Screwdriver</b> 		
		BC1S-SD0

### Marking Plates (Blank and Pre-marked)

Item	Part Number	Engraving
 Horizontal Orientation	SV9Z-PW10	blank
	SV9Z-PW10-⓪1-10	1-10
	SV9Z-PW10-⓪11-20	11-20
	SV9Z-PW10-⓪21-30	21-30
	SV9Z-PW10-⓪31-40	31-40
	SV9Z-PW10-⓪41-50	41-50
	SV9Z-PW10-⓪51-60	51-60
	SV9Z-PW10-⓪61-70	61-70
	SV9Z-PW10-⓪71-80	71-80
	SV9Z-PW10-⓪81-90	81-90
 Vertical Orientation	SV9Z-PW10-⓪91-100	91-100
	SV9Z-PW10-⓪A-J	A-J
	SV9Z-PW10-⓪K-T	K-T
	SV9Z-PW10-⓪U-Z	U-Z
	SV9Z-PW10-⓪GROUND	⏚
	SV9Z-PW10-⓪AC	⚡

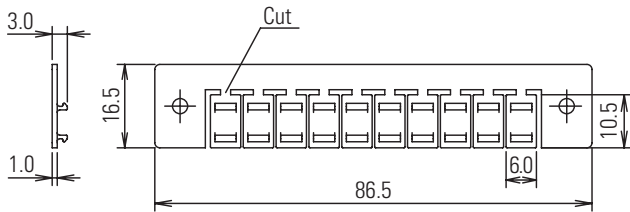
### Marking Plate Placement



1. In place of ⓪ insert orientation code: V=Vertical, H=Horizontal
2. Each unit has 10 pieces (marking plates).
1. Jumper combs come with 16 pairs of combs, if shorter lengths are needed simply cut off the excess points.
2. Ensure that the total current to the jumper does not exceed the overall rated current (Rated current: 6A for spring-clamp terminals and 8A for screw type terminations).
3. Width of spacer: 2mm
4. When using a cut jumper, please use a spacer on the cut side. For additional information see instruction sheet.

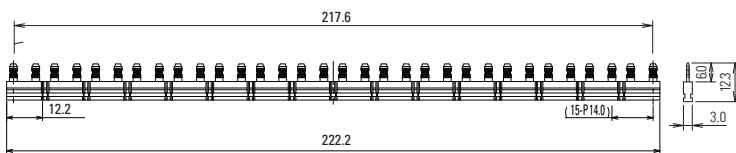
### Dimensions (mm)

#### SV9Z-PW10\* Marking Plate



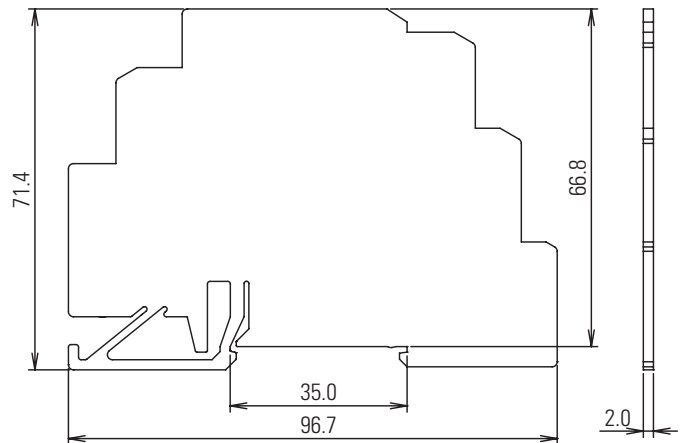
\*Available blank or pre-marked.

#### SV9Z-J232\* Jumper



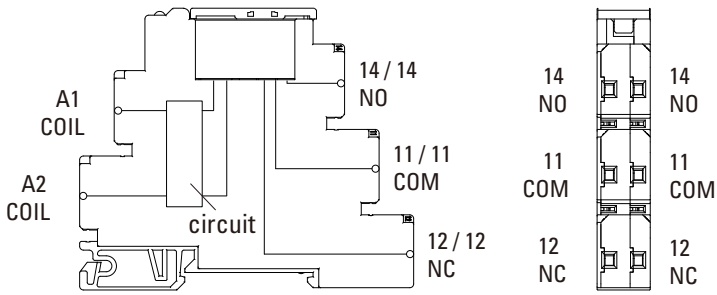
\*Available in black, gray and blue.

#### SV9Z-SA2W Spacer

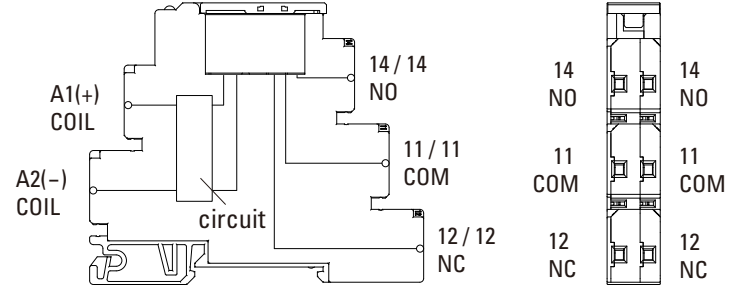


# INTERNAL CONNECTIONS

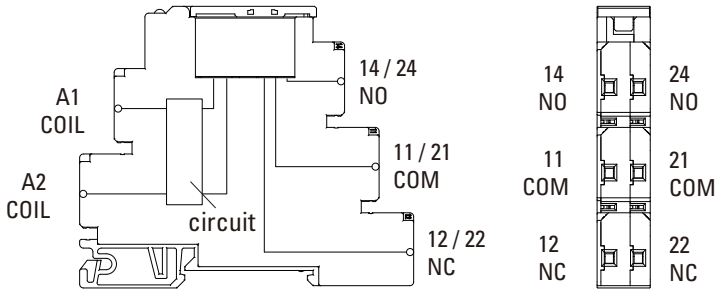
## AC/DC Type (1-Pole)



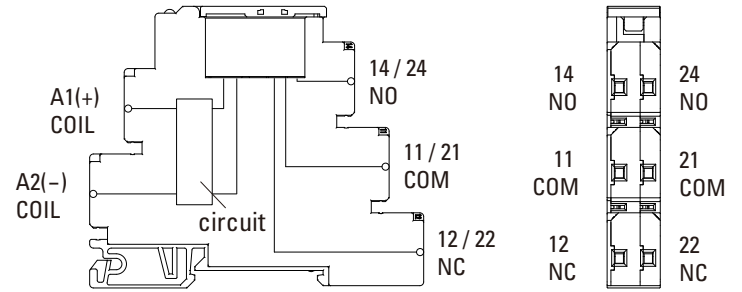
## DC Type (1-Pole)



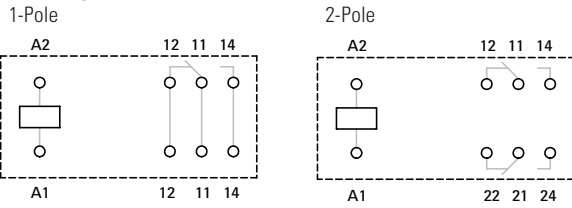
## AC/DC Type (2-Pole)



## DC Type (2-Pole)

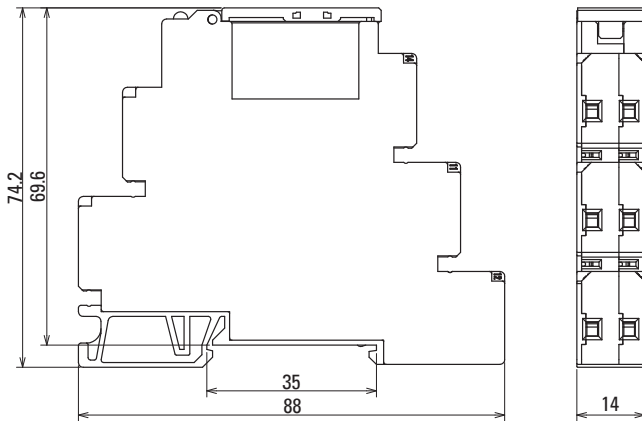


## RV2H Replacement Relay

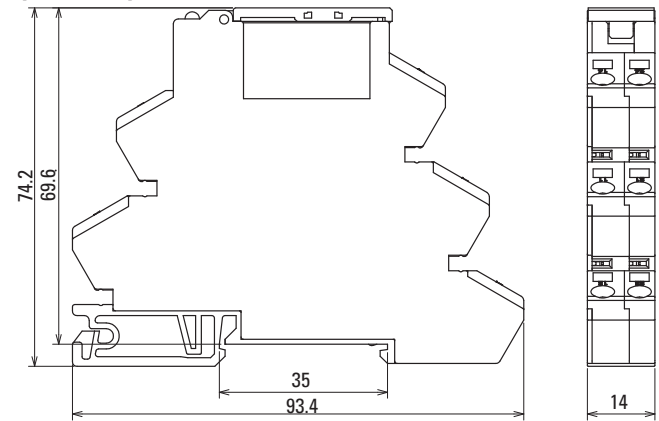


## DIMENSIONS (mm)

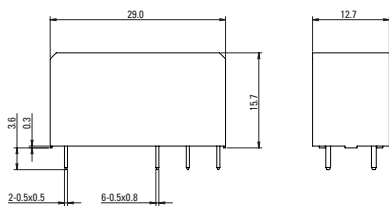
### Screw Terminals



### Spring Clamp Terminals

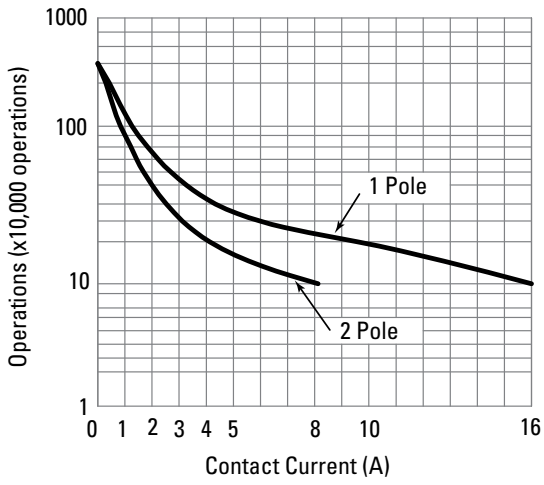


## RV2H Replacement Relay (mm)



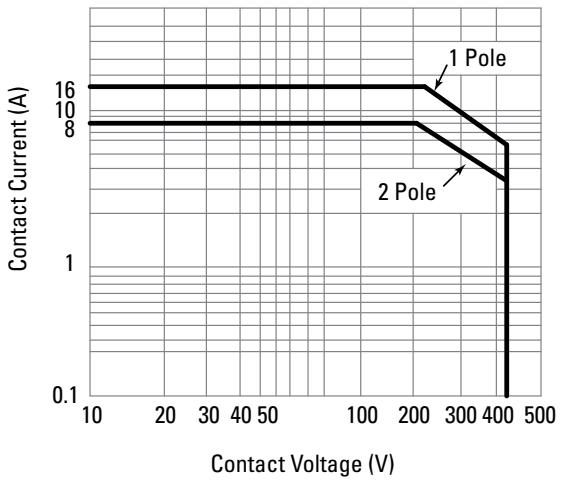
# CHARACTERISTICS

Electrical Life Curve (AC Load)



Contact Rating

AC



DC

