

RR Series — General Purpose Power Relays

Key features of the RR series include:

- High reliability and long service life
- Available in octal (8- and 11-pin) or square (11-blade) base
- Options include check button for test operation, indicator light, and side angle
- DIN rail, surface and panel type sockets available for a wide range of mounting applications



UL Recognized
File Nos. E67770
E59804
E64245



CSA Certified
® File No. LR35144



File No. BL951113332319*
* Pin Style Only
(does not apply to blade style)



* Pin Style Only



Specifications	Contact Material	Silver
	Contact Resistance	30mΩ maximum (initial value)
	Minimum Applicable Load	24V DC/10mA, 5V DC/20mA (reference value)
	Operating Time	25ms maximum
	Release Time	25ms maximum
	Power Consumption	AC: approximately 3VA (50Hz), 2.5VA (60Hz) DC: approximately 1.5W
	Insulation Resistance	100MΩ minimum (measured with 500V DC megger)
	Dielectric Strength	Pin (RR2P, RR3PA) Between live and dead parts: 1,500V AC, 1 minute Between contact circuit and operating coil: 1,500V AC, 1 minute Between contact circuits: 1,500V AC, 1 minute (1,000V AC between NO-NC contacts) Blade (RR1BA, RR2BA, RR3B) Between live and dead parts: 2,000V AC, 1 minute Between contact circuit and operating coil: 2,000V AC, 1 minute Between contact circuits: 2,000V AC, 1 minute Between contacts of same polarity: 1,000V AC, 1 minute
	Frequency Response	1,800 operations/hour
	Temperature Rise	Coil: 85C maximum Contact: 65C maximum
	Vibration Resistance	0 to 6G (55Hz maximum)
	Shock Resistance	100N (approximately 10G)
	Life Expectancy	Electrical: over 500,000 operations (120V, 50/60Hz, 10A) Mechanical: over 10,000,000 operations
	Operating Temperature	-30 to +70C
Weight	RR2P: 90g, RR3P/RR3PA: 96g (approximately) RR1BA/RR2BA/RR3B: 82g (approximately)	

Operational Characteristics

Maximum Continuous Applied Voltage (AC/DC) at 20C	110% of the rated voltage
Minimum Operating Voltage (AC/DC) at 20C	80% of the rated voltage
Drop-Out Voltage (AC) at 20C	30% of the rated voltage
Drop-Out Voltage (DC) at 20C	15% of the rated voltage

Ordering Information

Order standard voltages for fastest delivery. Allow extra delivery time for non-standard voltages.

Basic Part No. **Coil Voltage:**
RR3PA-U AC230V

Part Numbers

Part Numbers: RR Series with Options

Termination	Contact Configuration	Basic Part No.	Indicator Light	Check Button	Light and Check Button	Side Flange
P, PA (pin)	DPDT	RR2P-U	RR2P-UL	RR2P-UC	RR2P-ULC	—
	3PDT	RR3PA-U	RR3PA-UL	RR3PA-UC	RR3PA-ULC	—
B, BA (blade)	SPDT	RR1BA-U	RR1BA-UL	RR1BA-UC	RR1BA-ULC	RR1BA-US
	DPDT	RR2BA-U	RR2BA-UL	RR2BA-UC	RR2BA-ULC	RR2BA-US
	3PDT	RR3B-U	RR3B-UL	RR3B-UC	RR3B-ULC	RR3B-US



1. RR1BA, RR2BA, and RR3PA are standard terminal arrangements.

Part Numbers: Sockets

Relays	Standard DIN Rail Mount	Finger-Safe DIN Rail Mount	Panel Mount	Spring (optional)
RR2P	SR2P-05 SR2P-06	SR2P-05C	SR2P-51	SR2B-02F1 SR3P-01F1
RR3PA	SR3P-05 SR3P-06	SR3P-05C	SR3P-51	SR3B-02F1
RR1BA RR2BA RR3B	SR3B-05	—	SR3B-51	SR3B-02F1

Ratings

Coil Ratings

Rated Voltage	Rated Current $\pm 15\%$ at 20C		Coil Resistance $\pm 10\%$ at 20C	
	60Hz	50Hz		
AC	6V	420mA	490mA	4.9 Ω
	12V	210mA	245mA	18 Ω
	24V	105mA	121mA	79 Ω
	120V	20.5mA	24mA	2100 Ω
	240V	10.5mA	12.1mA	8330 Ω
DC	6V	240mA		25 Ω
	12V	120mA		100 Ω
	24V	60mA		400 Ω
	48V	30mA		1600 Ω
	110V	13mA		8460 Ω

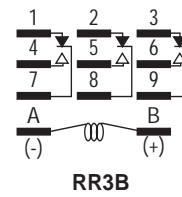
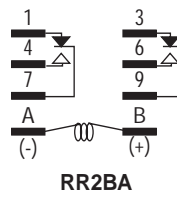
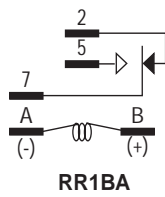
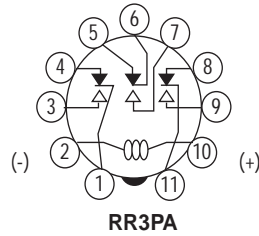
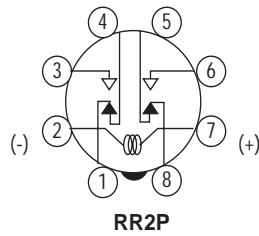
Contact Ratings

Voltage	Resistive			Inductive			Motor Load
	Nominal	UL	CSA	Nominal	UL	CSA	UL
30V DC	10A	10A	10A	7.5A	7A	7.5A	—
110V DC	0.5A	—	—	0.3A	—	0.5A	—
120V AC	10A	10A	10A	7.5A	7.5A	7.5A	1/4 hp
240V AC	7.5A	10A	10A	5A	7A	7A	1/3 hp

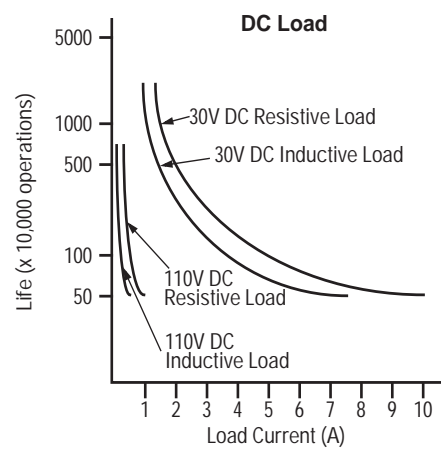
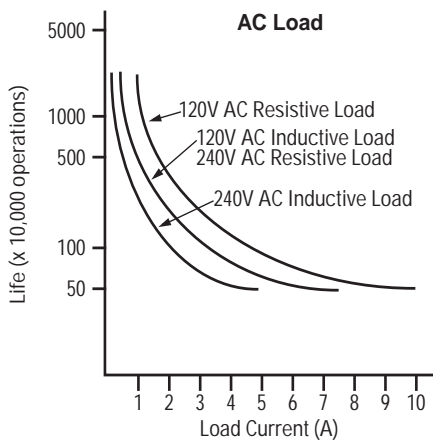


3. Inductive load $\cos \phi = 0.3$, $L/R = 7ms$.

Internal Circuit



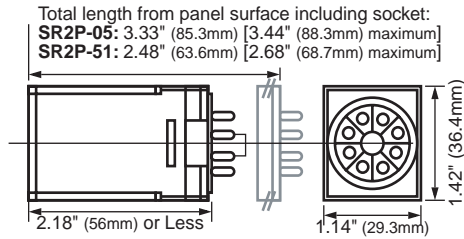
Electrical Life Curves



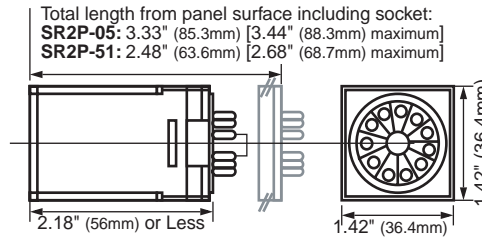
General Purpose and Latching Relay Dimensions

RR Series

8-Pin RR2P

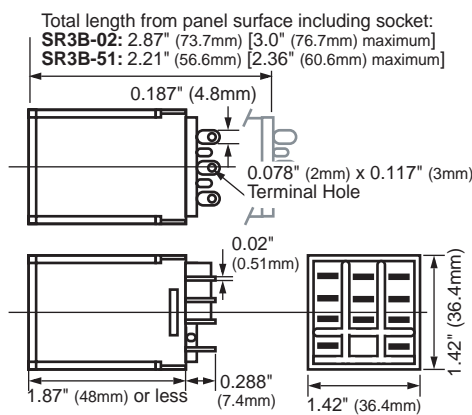


11-Pin RR3PA



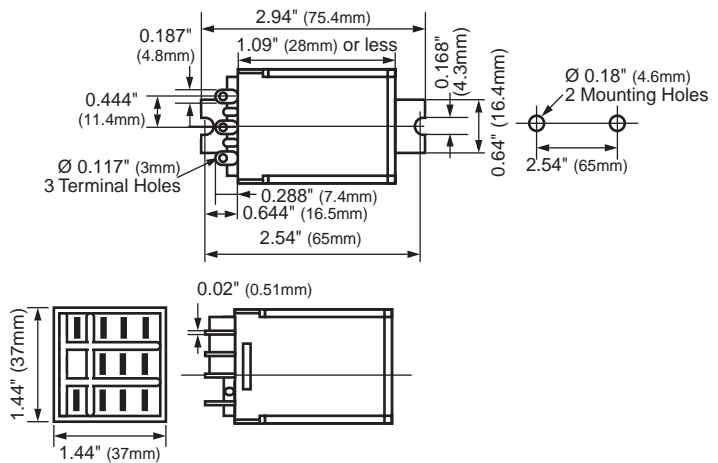
Blade

RR1BA, RR2BA, RR3B



Side Flange

RR1BA-US, RR2BA-US, RR3B-US

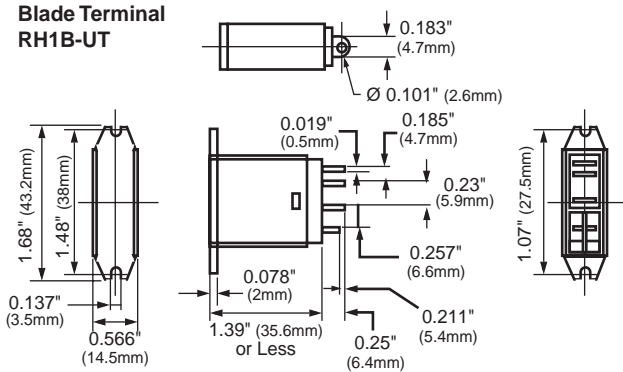


Note: Dimensions in [] include hold-down spring.

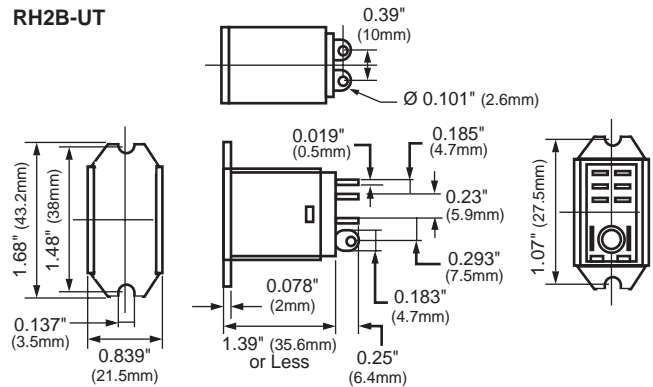
RH Series

Top Bracket Mounting

Blade Terminal RH1B-UT



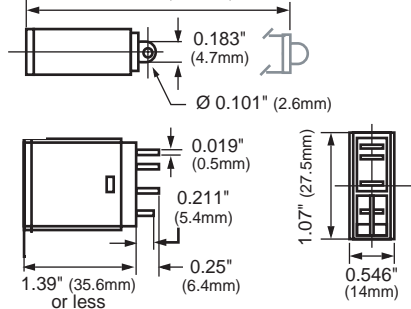
RH2B-UT



Plug-in

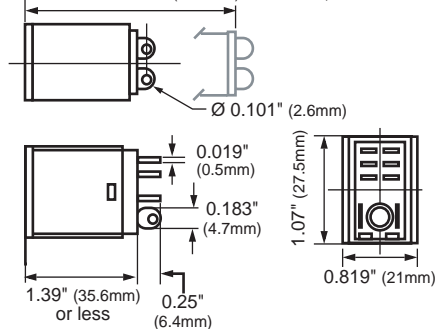
Blade Terminal RH1B

Total length from panel surface including socket:
SH1B-05: 2.40" (61.5mm) maximum; **SH1B-51:** 1.54" (39.6mm) maximum
 Total length from panel surface including hold-down spring:
SH1B-05: 2.48" (63.5mm) maximum; **SH1B-51:** 1.62" (41.6mm) maximum



RH2B

Total length from panel surface including socket:
SH2B-05: 2.40" (61.5mm) maximum; **SH2B-51:** 1.54" (39.6mm) maximum
 Total length from panel surface including hold-down spring:
SH2B-05: 2.48" (63.5mm) maximum; **SH2B-51:** 1.62" (41.6mm) maximum



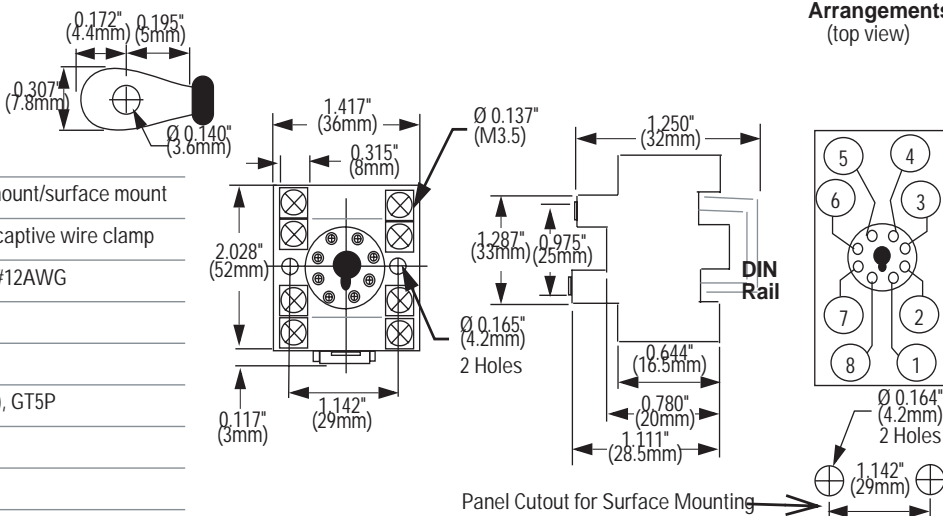
SR Series: DIN Rail Snap-Mount Sockets

SR2P Sockets

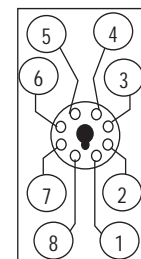


SR2P-05

Style	8-pin octal, snap-mount/surface mount
Terminal	M3.5 screws with captive wire clamp
Wire Size	Maximum up to 2-#12AWG
Electrical Rating	300V, 10A
Compatible Relay	RR2P, RAPP, RBPP
Compatible Timer	RTE-P1, GT3 (8-pin), GT5P
Hold-Down Spring	SR2B-02F1
Hold-Down Clip	SFA-203

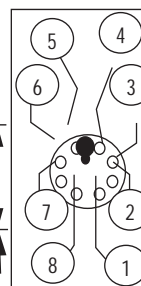
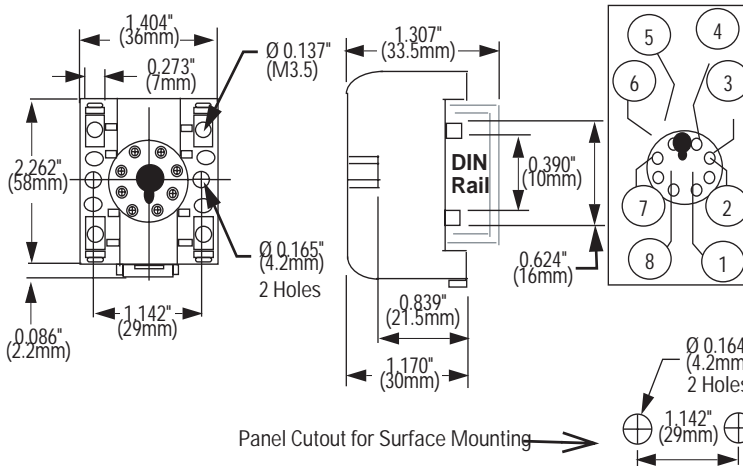


Terminal Arrangements (top view)



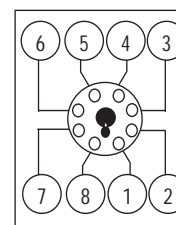
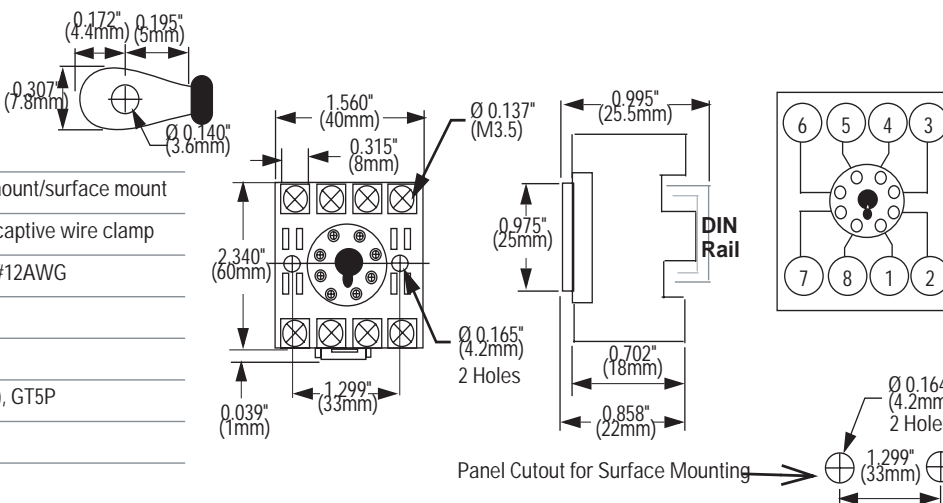
SR2P-05C Fingersafe

Style	8-pin octal, snap-mount/surface mount
Terminal	M3.5 screws with captive wire clamp, fingersafe
Wire Size	Maximum up to 2-#12AWG
Electrical Rating	300V, 10A
Compatible Relay	RR2P, RAPP, RBPP
Compatible Timer	RTE-P1, GT3 (8-pin), GT5P
Hold-Down Spring	SR2B-02F1
Hold-Down Clip	SFA-203



SR2P-06

Style	8-pin octal, snap-mount/surface mount
Terminal	M3.5 screws with captive wire clamp
Wire Size	Maximum up to 2-#12AWG
Electrical Rating	300V, 10A
Compatible Relay	RR2P, RAPP, RBPP
Compatible Timer	RTE-P1, GT3 (8-pin), GT5P
Hold-Down Spring	SR2B-02F1
Hold-Down Clip	SFA-202

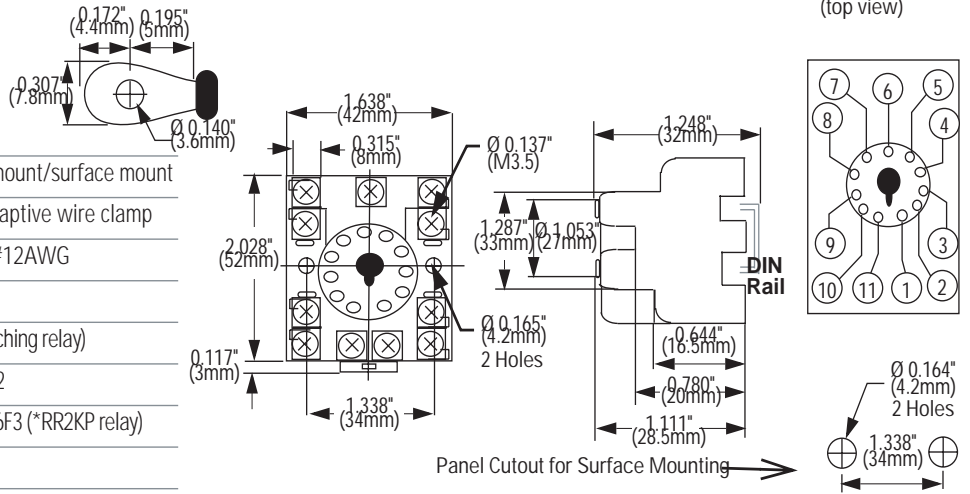


SR3P Sockets



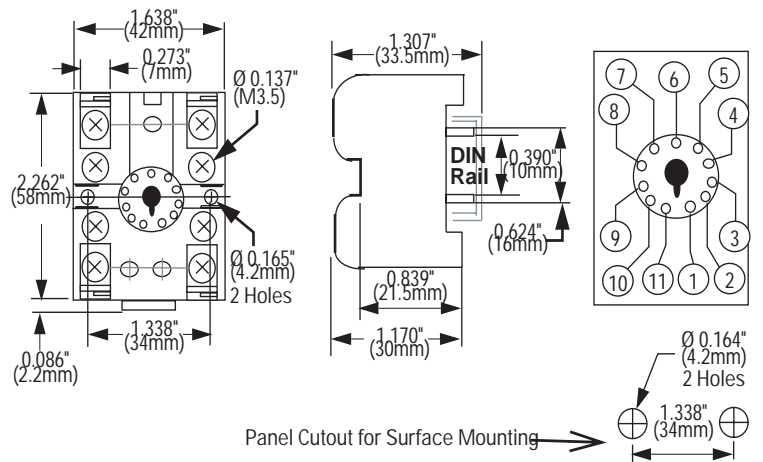
SR3P-05

Style	11-pin octal, snap-mount/surface mount
Terminal	M3.5 screws with captive wire clamp
Wire Size	Maximum up to 2-#12AWG
Electrical Rating	300V, 10A
Compatible Relay	RR3PA, *RR2KP (*latching relay)
Compatible Timer	GT3 (11-pin), RTE-P2
Hold-Down Spring	SR3B-02F1, *SR3P-06F3 (*RR2KP relay)
Hold-Down Clip	SFA-203



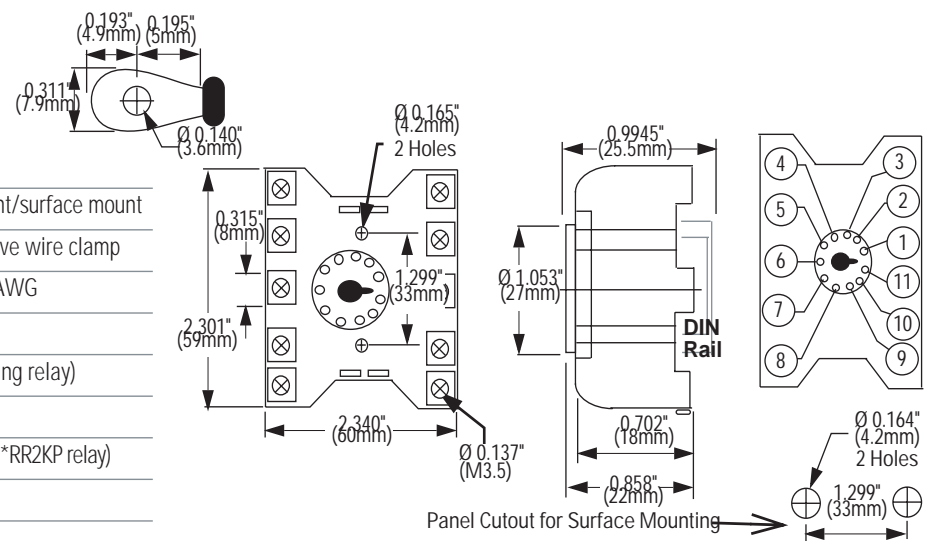
SR3P-05C Fingersafe

Style	11-pin octal, snap-mount/surface mount
Terminal	M3.5 screws with captive wire clamp, fingersafe
Wire Size	Maximum up to 2-#12AWG
Electrical Rating	300V, 10A
Compatible Relay	RR3PA, *RR2KP (*latching relay)
Compatible Timer	GT3 (11-pin), RTE-P2
Hold-Down Spring	SR3B-02F1, *SR3P-06F3 (*RR2KP relay)
Hold-Down Clip	SFA-203

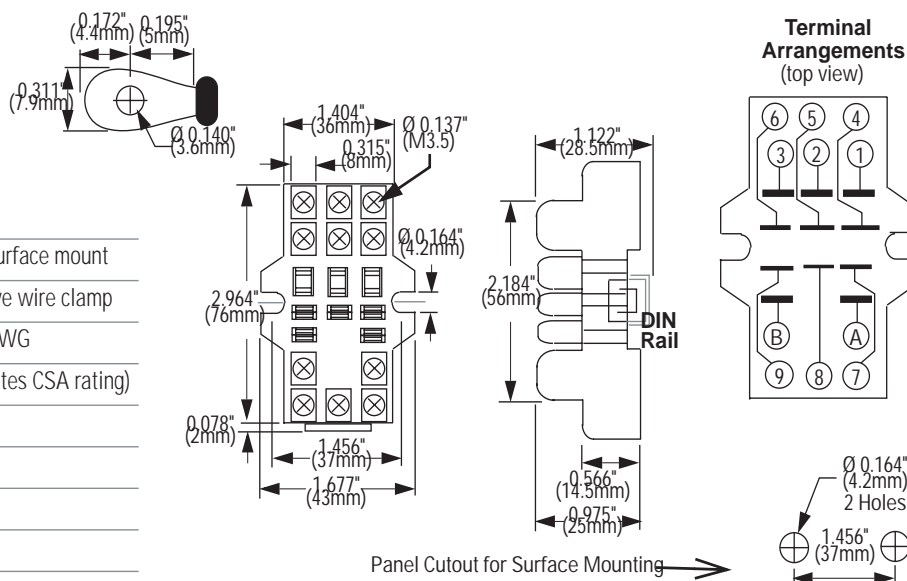


SR3P-06

Style	11-pin octal, snap-mount/surface mount
Terminal	M3.5 screws with captive wire clamp
Wire Size	Maximum up to 2-#12AWG
Electrical Rating	300V, 10A
Compatible Relay	RR3PA, *RR2KP (*latching relay)
Compatible Timer	GT3 (11-pin), RTE-P2
Hold-Down Spring	SR3B-02F1, *SR3P-06F3 (*RR2KP relay)
Hold-Down Clip	SFA-202



SR3B Sockets



SR3B-05

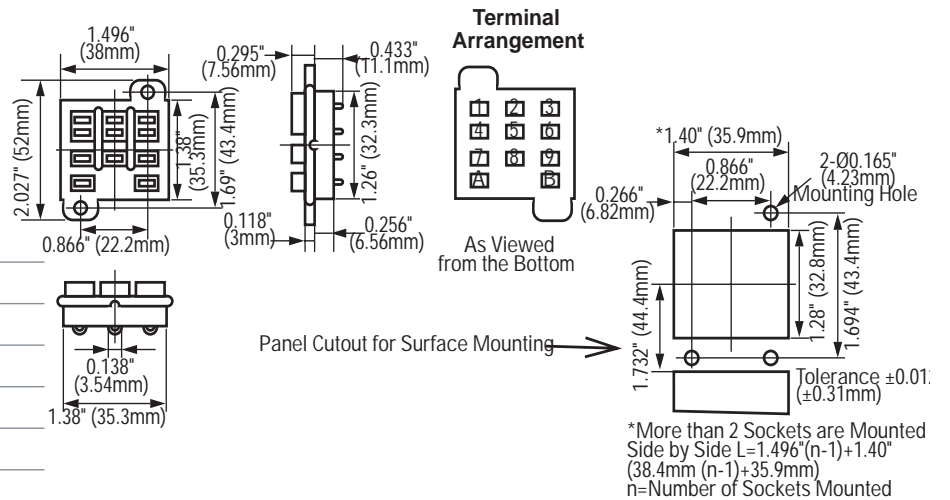
Style	11-blade, snap-mount/surface mount
Terminal	M3.5 screws with captive wire clamp
Wire Size	Maximum up to 2-#12AWG
Electrical Rating	300V, 15A (10A)* (*denotes CSA rating)
Compatible Relay	RR1BA, RR2BA, RR3B
Compatible Timer	RTE-B
Hold-Down Spring	SR3B-02F1
Hold-Down Clip	SFA-202

SR Series: Panel Mount Sockets



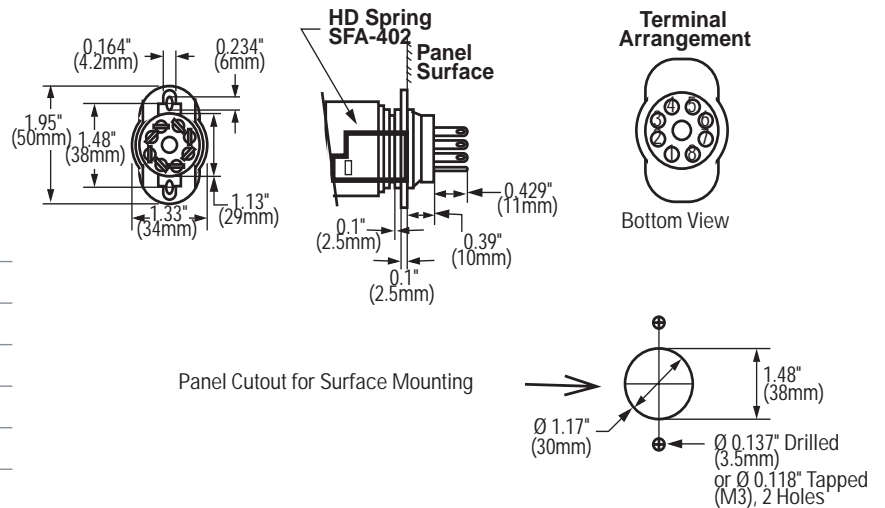
SR3B-51

Style	11-blade, panel mount
Terminal	Solder
Electrical Rating	300V, 10A
Compatible Relay	RR1BA, RR2BA, RR3B
Compatible Timer	RTE-B
Hold-Down Spring	SR3B-02F1



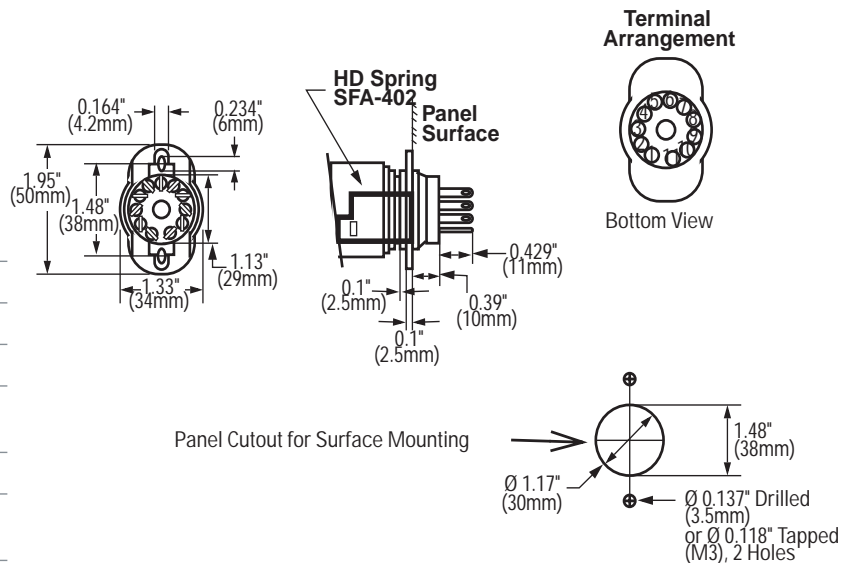
SR2P-51

Style	8-pin octal, panel mount
Terminal	Solder
Electrical Rating	300V, 10A
Compatible Relay	RR2P, RAPP, RBPP
Compatible Timer	RTE-P1, GT3 (8-pin), GT5P
Hold-Down Spring	SR3P-01F1
Hold-Down Clip	SFA-402



SR3P-51

Style	11-pin octal, panel mount
Terminal	Solder
Electrical Rating	300V, 10A
Compatible Relay	RR3PA, *RR2KP (*latching relay)
Compatible Timer	GT3 (11-pin), RTE-P2
Hold-Down Spring	SR3P-01F1, *SR3P-51F3 (*for RR2KP relay)
Hold-Down Clip	SFA-402



Hold-Down Springs and Clips Selection Guide

DIN Rail Snap-Mount Sockets

Socket Part No.	Applicable Relays, Timer	Hold-Down Spring	Hold-Down Clip
SR2P-05 SR2P-05C	RR2P, RAPP, RBPP	SR2B-02F1	SFA-203
	RTE-P1, GT3, GT5P	—	SFA-203
SR2P-06	RR2P, RAPP, RBPP	SR2B-02F1	SFA-202
	GT3 (8-pin), RTE-P1, GT5P	—	SFA-202
SR3P-05 SR3P-05C	RR3PA	SR3B-02F1	SFA-203
	RR2KP	SR3P-06F3	SFA-203
	RTE-P2, GT3 (11-pin)	—	SFA-203
SR3P-06	RR3PA	SR3B-02F1	SFA-202
	RR2KP	SR3P-06F3	SFA-202
	RTE-P2, GT3 (11-pin)	—	SFA-202
SR3B-05	RR1BA, RR2BA, RR3B, RTE-B	SR3B-02F1	SFA-202
SH1B-05 SH1B-05C	RH1B, RAHB, RBHB	SY2S-02F1	SFA-101 SFA-202
SH2B-05 SH2B-05C	RH2B, RAMB, RBMB	SY4S-02F1	SFA-101 SFA-202
SH3B-05 SH3B-05C	RH3B, RH2LB	SH3B-05F1	SFA-101 SFA-202
SH4B-05 SH4B-05C	RH4B	SH4B-02F1	SFA-101 SFA-202
SY2S-05 SY2S-05C	RY2S, RY22S	SY2S-02F1	SFA-101 SFA-202
SY4S-05 SY4S-05C	RY4S, RY42S, RY2LS, RM2S	SY4S-51F1	SFA-101 SFA-202
	RY2KS, GT5Y	(SY4S-51F3)	SFA-202

Panel and PC Board Mount Sockets

Socket Part No.	Applicable Relays, Timer	Hold-Down Spring	Hold-Down Clip
SR2P-51	RR2P, RAPP, RBPP	SR3P-01F1	—
	GT3 (8-pin), RTE-P1	—	SFA-402
SR3P-51	RR3PA	SR3P-01F1	—
	RR2KP	SR3P-51F3	—
	GT3 (11-pin), RTE-P2	—	SFA-402
SR3B-51	RR1BA, RR2BA, RR3B, RTE-B	SR3B-02F1	—
SH1B-51 SH1B-62	RH1B, RAHB, RBHB	SY4S-51F1	SFA-301 SFA-302
SH2B-51	RH2B, RAMB, RBMB	SY4S-51F1 (SY4S-02F1)	SFA-301 SFA-302
SH2B-62	RH2B, RAMB, RBMB	SY4S-51F1 (SY4S-02F1)	—
SH3B-51 SH3B-62	RH3B, RH2LB	SY4S-51F1 (SY4S-02F1)	SFA-301 SFA-302
SH4B-51 SH4B-62	RH4B	SY4S-51F1 (SY4S-02F1)	SFA-301 SFA-302
SY2S-51 SY2S-61	RY2S, RY22S	SY4S-51F1	SFA-301 SFA-302
SY4S-51 SY4S-61	RY4S, RY42S, RY2LS	SY4S-51F1 (SY4S-02F1)	SFA-301 SFA-302
	RY2KS	SY4S-51F1 (SY4S-02F3)	SFA-302
	GT5Y	—	SFA-302
SY4S-62 *	RY4S, RY42S, RY2LS, RM2S	SY4S-51F1 (SY4S-02F1)	—
	RY2KS	SY4S-51F1 (SY4S-02F3)	—

* Does not accept hold down clips



1. When mounting relays with a check button onto panel mount or PC board mount sockets, use the hold-down spring shown in parenthesis. Hold-down springs for relays with check buttons are not available for SR2P-51.
2. For close mounting of panel mount or PC mount sockets, use hold-down clips rather than hold-down springs.



SFA-101



SFA-202



SFA-302



SFA-402



SR3P-01F1



SY4S-51F1

Accessories

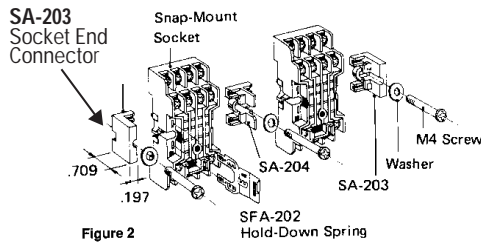


Figure 2

Description	Appearance	Use with	Part No.	Remarks
Aluminum DIN Rail (1 meter length)		All DIN rail sockets	BNDN1000	IDEC offers a low-profile DIN rail (BNDN-1000). The BNDN-1000 is designed to accommodate snap-mount sockets and surface mount sockets. Made of durable extruded aluminum, the BNDN-1000 measures 0.413" in height and 1.37" (35mm) in width (DIN standard). Standard length is 39" (1,000mm).
DIN Rail End Stop		BNDN1000 DIN rail	BNL5	9.1 mm wide.
Surface Mount End Connector		SY2S, SY4S, SR3B, SH1B, SH2B, SH3B, SH4B	SA-203	For use on ends of socket groupings when surface mounting.
			SA-204	For use between adjoining sockets when surface mounting.
Surface Mount Connector		SY2S, SY4S, SR3B, SH1B, SH2B, SH3B, SH4B	SA-405	For use between adjoining sockets when surface mounting.
DIN Rail Spacer		All DIN rail sockets	SA-406	
Steel Mounting Plates (for panel mount sockets)		SY4S-51, SH2B-51	SA-402	11.42" length with 10 holes.
		SY4S-51, SH2B-51	SA-403	23.33" length with 21 holes.
Relay Holders		RH2B, RM2S, RY4S, RY42S, RY2LS, RAMB, RBMB	RH-01	For diagram, see next page.
		RY2S, RAHB, RBHB, RH1B	RH-03	
Replacement Hold-Down Spring Anchor (horseshoe clip)		All DIN rail sockets	Y778-011	For use with hold-down springs (bale wire types) or DIN rail mount sockets. 2 pieces included with each socket.