

### 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 flange (contact IDEC for diodes)
- DIN rail, surface and panel type sockets available for a wide range of mounting applications

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			
Maximum Continuous Applied Voltage (AC/ DC) at 20°C	110% of the rated voltage			
Minimum Operating Voltage (AC/DC) at 20°C	80% of the rated voltage			
Drop-Out Voltage (AC) at 20°C	30% of the rated voltage			
Drop-Out Voltage (DC) at 20°C	15% of the rated voltage			
Power Consumption	AC: approximately 3VA (50Hz), 2.5VA (60Hz) DC: approximately 1.5W			
Insulation Resistance	100M $\Omega$ minimum (measured with 500V DC megger)			
	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)			
Dielectric Strength	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: 85°C maximum Contact: 65°C 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 +70°C			
Weight	RR2P: 90g, RR3PA: 96g (approximately) RR1BA/RR2BA/RR3B: 82g (approximately)			





UL Recognized File No. E66043





File No. B020813332452\*
\* Pin Style Only
(does not apply to blade style)



#### **Ordering Information**

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

Basic Part No.

**Coil Voltage:** 

RR3PA-U

**AC120V** 

# IDEC Relays

#### **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	DPDT	RR2P-U	RR2P-UL	RR2P-UC	RR2P-ULC	<u> </u>
(pin)	3PDT	RR3PA-U	RR3PA-UL	RR3PA-UC	RR3PA-ULC	_
	SPDT	RR1BA-U	RR1BA-UL	RR1BA-UC	RR1BA-ULC	RR1BA-US
B, BA (blade)	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 U.S. standard terminal arrangements.

 $2.\ For\ diode\ option\ on\ DC\ coils\ please\ consult\ factory.$ 

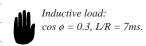
#### **Ratings**

#### **Coil Ratings**

Rated Voltage		Rated Current ±15% at 20°C		Coil Resistance ±10% at 20°C	Inrush Current	Inductance		
		60Hz	50Hz	COII NESISTAILE TIV /0 at 20 C	illiusii Guileiit	Energizing	De-Energizing	
	6V	420mA 490mA 4.9Ω		720mA	0.04H	0.02H		
	12V	210mA	245mA	18Ω	365mA	0.15H	0.08H	
AC	24V	105mA	121mA	79Ω	182mA	0.57H	0.32H	
	120V	20.5mA	24mA	2100Ω	35mA	15H	8.2H	
	240V	10.5mA	12.1mA	8330Ω	18mA	57H	32H	
	6V	240mA		25Ω				
	12V	120mA		100Ω				
DC	<b>DC 24V</b> 60mA		400Ω	N/A				
	48V	30mA		1600Ω				
	110V	13mA		8460Ω				

**Contact Ratings** 

	Resistive			Inductive			Motor Load
Voltage	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

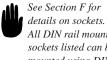


#### **Applicable Sockets**

#### **Part Numbers: Sockets**

Relays	Standard DIN Rail Mount	Finger-Safe DIN Rail Mount	Panel Mount
RR2P	SR2P-05 SR2P-06	SR2P-05C	SR2P-51
RR3PA	SR3P-05 SR3P-06	SR3P-05C	SR3P-51
RR1BA RR2BA RR3B	SR3B-05	_	SR3B-51

Springs & Clips (optional)				
Part Numbers	Use With Socket			
SR2B-02F1	SR2P-05, -05C, -06			
SR3P-01F1	SR2P-51, SR3P-51			
SR3B-02F1	SR3P-05, -05C, -06 SR3B-05, -51			
SR3P-01F1	SR3P-51			
SR3B-02F1	SR3B-05 SR3B-51			



All DIN rail mount sockets listed can be mounted using DIN rail BNDN1000.



#### **Internal Circuits**

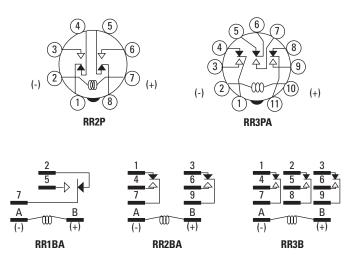
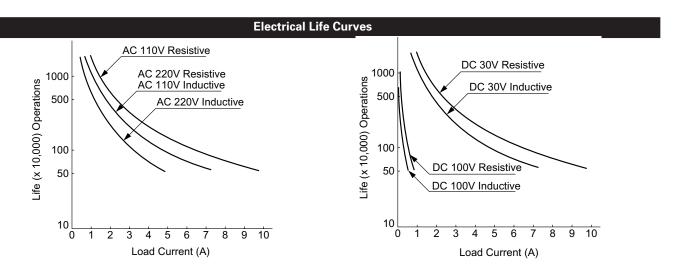
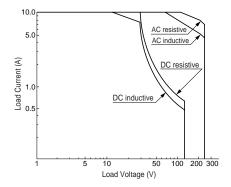


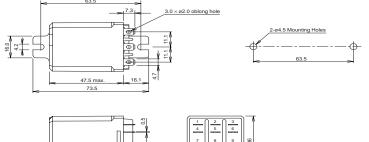


Image as viewed from bottom of relay. Refer to socket for exact wiring layout (Section F).



### **Maximum Switching Capacity**





All dimensions in mm.

**Dimensions** 

11-Pin

**RR3PA** 

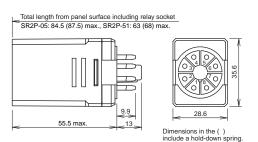
Total length from panel surface including relay socket

SR3P-05: 84.5 (87.5) max., SR3P-51: 63 (68) max.

55.5 max

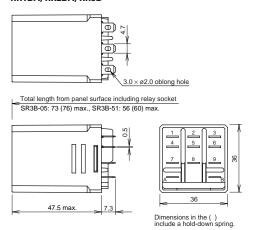
Side Flange RR1BA-US, RR2BA-US, RR3B-US

#### 8-Pin RR2P



IDEC Relays

## RR1BA, RR2BA, RR3B



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