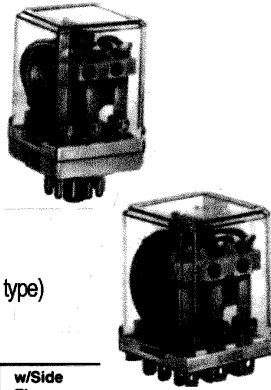


RR SERIES - POWER TYPE, 10A CONTACT RATING, 1, 2, AND 3 POLES

Features

- High reliability and long service life
- Available in octal (8- and 11-pin) and square (11-blade) base
- Options include check button for test operation, indicator light and side flange
- Contacts rated up to 10A at 240V AC
- Choose from DIN rail or panel type sockets for a wide range of mounting applications
- UL Recognized, CSA Certified, TUV approved (pin type) CE marked (pin type only)



RR Series Relay Type List

Terminal Style	Contact Config.	Basic Type	w/Indicator Light	w/Check Button	w/Side Flange
P,PA (Pin)	DPDT 3PDT	RR2P-U RR3PA-U	RR2P-UL RR3PA-UL	RR2P-UC RR3PA-UC	— —
B,BA (Blade)	SPDT DPDT 3PDT	RR1BA-U RR2BA-U RR3B-U	RR1BA-UL RR2BA-UL RR3B-UL	RR1BA-UC RR2BA-UC RR3B-UC	RR1BA-US RR2BA-US RR3B-US

NOTE: Add coil voltage to part number.

RR Series

Coil Ratings

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

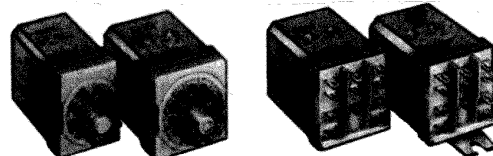
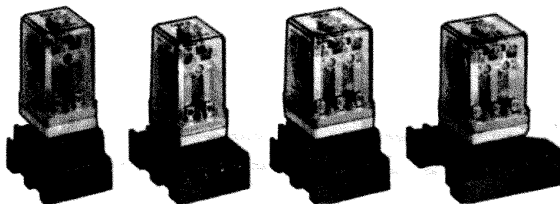
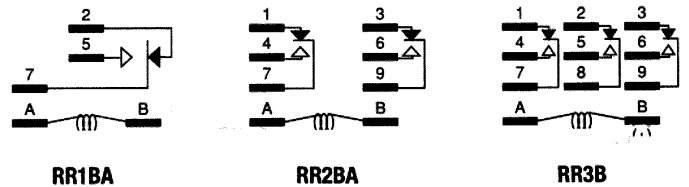
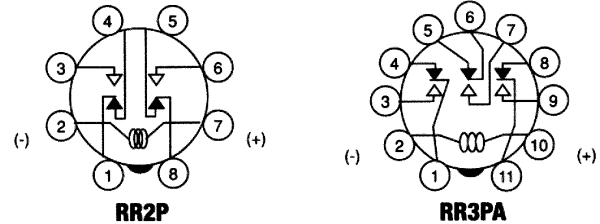
Sockets

Relays	Sockets			Spring (Optional)
	DIN Rail Mount		Panel Mount	
	Standard	Fingersafe		
RR2P	SR2P-05 -06	SR2P-05C	SR2P-51	SR2B-02F1 SR3P-01F1
RR3PA	SR3P-05 -06	SR3P-05C	SR3P-51	SR3B-02F1
RR1BA RR2BA RR3B	SR3B-05	-	SR3B-51	-

Contact Ratings and Specifications

- Contact Material:** Silver (Ag)
- Contact Resistance:** 30 mΩ maximum (initial value)
- Operating Time:** 25 ms maximum
- Release Time:** 25 ms maximum
- Power Consumption:** AC: 2.5VA (60Hz); DC: 1.5W approx.
- Insulation Resistance:** 100 MΩ minimum (measured w/500 DC megger)
- Dielectric Strength (Pin Type-RR2P, RR3PA):**
 - Between live and non-live parts - 1,500VAC, 1 minute
 - Between contact circuits and operating coil - 1,500V AC, 1 minute
 - Between contact circuits - 1,500V AC, 1 minute (1,000V AC between NO-NC contacts)
- Blade Type (RR1BA, RR2BA, RR3B)**
 - Between live and non-live 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: 153°F (85°C) maximum
- Contact:** 117°F (65°C) maximum
- Vibration Resistance:** 0 to 6G (55Hz) maximum
- Shock Resistance:** 10G minimum
- Electrical Life:** 500,000 operations (120V, 50/60Hz, 10A)
- Mechanical Life:** 10,000,000 operations minimum
- Operating Temperature:** -22°F to +158°F (-30°C to 70°)

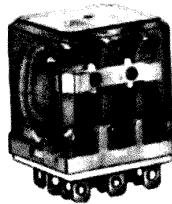
Internal Circuit



RH SERIES - COMPACT SIZE , 10A CONTACT RATING, 1, 2, 3, AND 4 POLES

Features

- Compact "midget" size package saves space
- Large switching capacity, (10A)
- Choice of blade or PCB style terminals
- Relay options include indicator light, check button and top mounting bracket
- DIN rail, surface, panel and PCB type sockets available for a wide range of mounting applications
- UL Recognized, CSA Certified, TUV approved, CE marked



RH Series - PC Terminal width .078" (2mm)

Style	Contact Config.	Basic	Indicator Light	Check Button	Top Bracket
B (Blade)	SPDT	RH1B-U	-	-	RH1B-UT
	DPDT	RH2B-U	RH2B-UL	RH2B-UC	RH2B-UT
	3PDT	RH3B-U	RH3B-UL	RH3B-UC	RH3B-UT
	4PDT	RH4B-U	RH4B-UL	RH4B-UC	RH4B-UT
V2 (PCB) 0.078" (2mm)	SPDT	RH1V2-U	-	-	-
	DPDT	RH2V2-U	RH2V2-UL	RH2V2-UC	-
	3PDT	RH3V2-U	RH3V2-UL	RH3V2-UC	-
	4PDT	RH4V2-U	RH4V2-UL	RH4V2-UC	-

NOTE: Add coil voltage to part number.

Coil Ratings - Coil Resistance

Rated Voltage	RH1 SPDT		RH2 DPDT		RH3 3PDT		RH4 4PDT	
	AC	DC	AC	DC	AC	DC	AC	DC
6V	18.8Ω	47Ω	9.4Ω	40Ω	6.0Ω	25Ω	5.4Ω	24Ω
12V	76.8Ω	188Ω	39.3Ω	160Ω	25.3Ω	100Ω	21.2Ω	96Ω
24V	300Ω	750Ω	153Ω	650Ω	103Ω	400Ω	84.5Ω	388Ω
120V	7680Ω	2660Ω	4170Ω	2600Ω	2770Ω	1600Ω	2220Ω	1550Ω
240V	-	-	15210Ω	12100Ω	12100Ω	8600Ω	9120Ω	7340Ω

NOTE: Add coil voltage to part number.

Sockets

Type	Sockets	Hold-Down Spring Clip
RH1B	*SH1B-05 - Din Mount SH1B-51 - Panel Mount SH1B-62 - PC Mount	SY2S-02F1/SFA-202 SY4S-51F1 SY4S-51F1
RH2B	*SH2B-05 - Din Mount SH2B-51 - Panel Mount SH2B-62 - PC Mount	SY4S-02F1/SFA-202 SY4S-51F1 SY4S-51F1
RH3B	*SH3B-05 - Din Mount SH3B-51 - Panel Mount SH3B-62 - PC Mount	SY3B-05F1/SFA-202 SY4S-51F1 SY4S-51F1
RH4B	*SH4B-05 - Din Mount SH4B-51 - Panel Mount SH4B-62 - PC Mount	SY4B-02F1/SFA-202 SY4S-51F1 SY4S-51F1

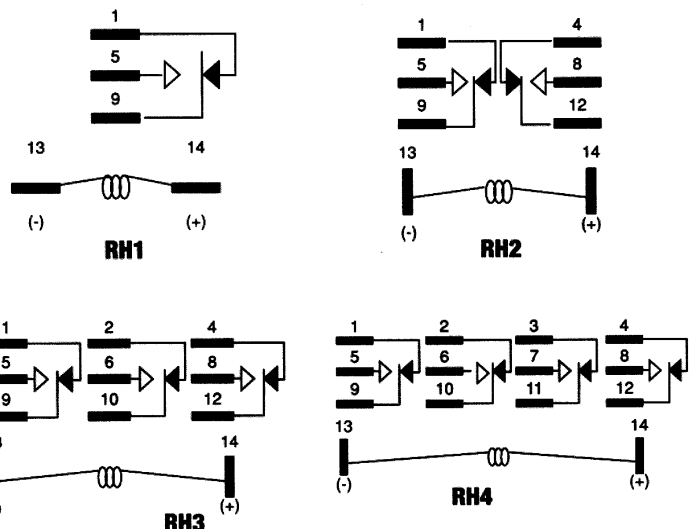
Accessories: BNDN-1000 Aluminum DIN rail
BNL-5 Metal end clip

* Also available in finger-safe sockets.

Contact Ratings and Specifications

- Contact Material:** Silver cadmium oxide (AgCdO)
- Contact Resistance:** 50 mΩ maximum (initial value)
- Operating Time:** SPDT (RH1), DPDT (RH2) — 20 msec maximum
3PDT (RH3), 4PDT (RH4) — 25 msec maximum
- Release Time:** SPDT (RH1), DPDT (RH2) — 20 msec maximum
3PDT (RH3), 4PDT (RH4) — 25 msec maximum
- Power Consumption (approx.):**
SPDT (RH1) — AC: 1 VA (60 Hz), DC: 0.8 W
DPDT (RH2) — AC: 1.2 VA (60 Hz), DC: 0.9W
3PDT (RH3) — AC: 1.7 VA (60 Hz), DC: 1.5W
4PDT (RH4) — AC: 2 VA (60 Hz), DC: 1.5W
- Insulation Resistance:** 100 MΩ minimum (with 500V DC megger)
- Dielectric Strength: SPDT (RH1)**
Between live and non-live parts- 2000V AC, 1 minute
Between contact circuit and operating coil- 2000V AC, 1 minute
Between contacts of the same pole- 1000V AC, 1 minute
- DPDT (RH2), 3PDT (RH3), 4PDT (RH4)**
Between live and non-live parts- 2000V AC, 1 minute
Between contact circuit and operating coil- 2000V AC, 1 minute
Between contact circuits- 2000V AC, 1 minute
Between contacts of the same pole- 1000V AC, 1 minute
- Frequency Response:** 1800 operations/hour
- Temperature Rise:** Coil 85° maximum, Contact-65° maximum
- Vibration Resistance:** 0 to 6G (55 Hz) max.
- Shock Resistance:**
SPDT (RH1), DPDT (RH2) — 20G
3PDT (RH3), 4PDT (RH4) — 10G
- Electrical Life:** 500,000 operations minimum (120V AC, 10A)
- Mechanical Life:** 50,000,000 operations minimum
- Operating Temperature:** -22°F to +158°F (-30°C to 70°C)
- Weight (approx.):** RH1-24g, RH2-37g, RH3-50g, RH4-74g

Internal Circuit



RM SERIES - GENERAL PURPOSE , 5A CONTACT RATING, 2 FORM C CONTACTS

7
RELAYS

Features

- Compact miniature size saves space
- High reliability and long service life
- Choice of plug-in/solder or PCB type terminals
- Options include models with indicator light, check button and top mount bracket
- DIN rail, surface, panel and PCB type sockets available for a wide range of mounting applications
- UL Recognized, CSA Certified, TUV approved, CE marked



Contact Ratings and Specifications

- Contact Material:** Silver (Ag)
- Contact Resistance:** 30 mΩ maximum (initial value)
- Minimum Applicable Load:** 24V DC/10mA, 5V DC/20mA (ref. value)
- Operating Time:** 20ms maximum
- Release Time:** 20ms maximum
- Power Consumption (approx.):**
AC: 1.2VA (60Hz); DC: 0.9W
- Insulation Resistance:** 100 MΩ minimum (with 500V DC megger)
- Dielectric Strength:**
Between live and non-live parts - 2000V AC, 1 minute
Between contact circuit and operating coil - 2000V AC, 1 minute
Between contact circuits - 2000V AC, 1 minute
(1000V between NO-NC contacts)
- Frequency Response:** 1800 operations/hour
- Temperature Rise: Coil:** 85°C maximum, contact - 65°C maximum
- Vibration Resistance:** 0 to 6G (55Hz) maximum
- Shock Resistance:** 200N (20G approx.)
- Electrical Life:** 500,000 operations minimum(240V AC, 5A)
- Mechanical Life:** 50,000,000 operations minimum
- Operating Temperature:** -30° to +70°C
- Weight (approx.):** 35g

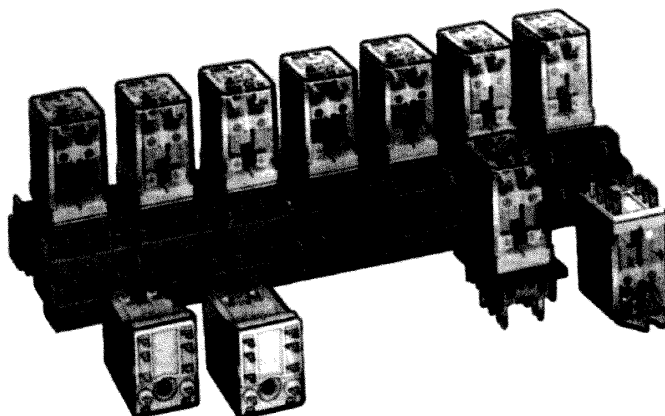
RM Series

Style	Contact Config.	Basic	Indicator Light	Check Button	Top Bracket
S: Solder/Plug-in	DPDT	RM2S-U	RM2S-UL	RM2S-UC	RM2S-UT
V: PCB. 0.031" (0.8mm) wide		RM2V-U	RM2V-UL	RM2V-UC	-

NOTE: Add coil voltage to part number.

Coil Ratings

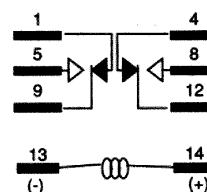
Rated Voltage (V)		Rated Current ±15% @ 20°C		Coil Resistance ±10% @ 20°C
		60Hz	50Hz	
AC	6	200 mA	240 mA	9.4Ω
	12	100 mA	121 mA	39.3Ω
	24	50 mA	60.5 mA	153Ω
	110-120	11 mA	13.1 mA	4170Ω
	240	5.5 mA	6.6 mA	15210Ω
DC	6	150 mA		40Ω
	12	75 mA		160Ω
	24	36.9 mA		650Ω
	48	18.5 mA		2600Ω
	100-110	9.1 mA		12100Ω



Sockets

Type	Sockets				Spring (Optional)
	Din Rail Mount		Panel Mount	PC Mount	
	Standard	Fingersafe			
RM2S	SY4S-05	SY4S-05C	SY4S-51	SY4S-61 SY4S-62	SY4S-51F1 SFA-101 SFA-202 SFA-302 SFA-301

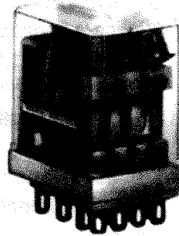
Internal Circuit



RY SERIES - 3A & 5A CONTACT RATING, 2 & 4 FORM C CONTACTS

Features

- Compact miniature size saves space
- Gold-plated contacts
- 2PDT and 4PDT models, available with bifurcated cross-bar contacts, ensure reliable low-current switching for dry circuit applications
- Choice of plug-in/solder or PCB type terminals
- Options include check button for test operation and indicator lights on 4PDT models
- DIN rail, panel and PCB type sockets available for a wide range of mounting applications
- UL Recognized, CSA Certified, TUV certified, CE marked



Contact Ratings and Specifications

Contact Material: RY2, RY4-Silver (gold plated); RY22, RY42 (AgPd alloy)
Contact Resistance: RY2, RY4 - 50 mΩ maximum (Initial Value)
 RY22, RY42 -100 mΩ maximum
Operate Time: 20 ms maximum
Release Time: 20 ms maximum
Power Consumption: RY2, RY22 AC- approx. 1 VA (60 Hz)
 DC- approx. 0.8W,
 RY4, RY42: AC-approx. 1.2 VA (60 Hz), DC- approx. 0.9W
Insulation Resistance: 100 MΩ minimum (with 500V DC megger)
Dielectric Strength: Between live and dead parts- 1500V AC, 1 minute
 Between contact circuit and operating coil- 1500V AC, 1 minute
 Between contact circuits- 1000V AC, 1 minute
Frequency Response: 1800 operations/hour
Temperature Rise: Coil: 153°F (85°C) maximum
 Contact: 117°F (65°C) maximum
Vibration Resistance: 0 to 6G (55 Hz) maximum
Shock Resistance: RY2, RY22 -10G minimum; RY4, RY42- 20G minimum
Electrical Life: 200,000 operations minimum (120V AC, 3A)
Mechanical Life: 50,000,000 operations minimum
Operating Temperature: -22° to 158°F (-30°C to 70°C)

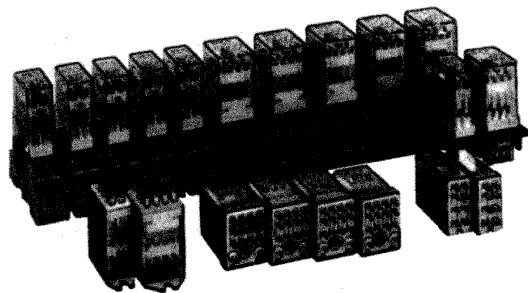
RY Series

Style	Contact Config.	Basic	Indicator Light	Check Button	Top Bracket
S Solder/Plug-in	DPDT	RY2S-U	-	-	RY2S-UT
	*DPDT	RY22S-U	-	-	RY22S-UT
	4PDT	RY4S-U	RY4S-UL	RY4S-UC	RY4S-UT
	*4PDT	RY42S-U	RY42S-UL	RY42S-UC	RY42S-UT
V PCB 0.031" (0.8mm) wide	DPDT	RY2V-U	-	-	-
	*DPDT	RY22V-U	-	-	-
	4PDT	RY4V-U	RY4V-UL	RY4V-UC	-
	*4PDT	RY42V-U	RY42V-UL	RY42V-UC	-

* Models with bifurcated contacts NOTE: Add coil voltage to part number.

Coil Ratings

Rated Voltage (V)		Rated Current ±15% @ 20°C				Coil Resistance ±10% @ 20°C		
		60Hz		50Hz		RY2	RY42	
AC	DPDT	4PDT	DPDT	4PDT	DPDT	4PDT	DPDT	DPDT
	6V	6V	150mA	200mA	170mA	240mA	18.8Ω	9.4Ω
	12V	12V	75mA	100mA	86mA	121mA	76.8Ω	39.3Ω
	24V	24V	37mA	50mA	42mA	60.5mA	300Ω	153Ω
	120V	120V	7.5mA	11mA	8.6mA	13.1mA	7680Ω	4170Ω
-	240V	-	5.5mA	-	6.6mA	-	15210Ω	
DC	DPDT	4PDT	DPDT		4PDT		DPDT	4PDT
	6V	6V	128mA		150mA		47Ω	40Ω
	12V	12V	64mA		75mA		188Ω	160Ω
	24V	24V	32mA		36.9mA		750Ω	650Ω
	48V	48V	18mA		18.5mA		2660Ω	2600Ω
-	110V	-	-	9.1mA		-	12100Ω	

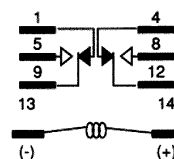


Sockets

Relay	Sockets				Spring (Optional)
	DIN Rail Mount		Panel Mount	PC Mount	
	Standard	Fingersafe			
RY2S RY22S	SY2S-05	SY2S-05C	SY2S-51	SY2S-61	SY2S-02F1, SFA-202 SFA-301, 302 SY4S-51F1
RY4S RY42S	SY4S-05	SY4S-05C	SY4S-51	SY4S-61 SY4S-62	SY4S-02F1 SFA-101, 202 SFA-301, 302 SY4S-51F1

Internal Circuit

RY2, RY22



RY4, RY42

