



RELAYS & CONTACTORS

FUNCTIONAL DEVICES MODULAR PANEL RELAYS

RIB M SERIES

DESCRIPTION

The **Functional Devices RIB M Series modular relay** system allows the installer to mount a combination of relays in an attractive metal enclosure. Models are available to control most BAS, HVAC, low-horsepower motors and lighting applications. The relay modules snap into a 4" (10.16 cm) wide plastic track. This system provides a convenient and cost-saving method of mixing and matching relays of different ratings to suit the requirements of the application. Connections to the modules are made by wiring to screw terminals. Input connections can be grouped on one side of the enclosure and output connections on the other to separate high-voltage and low-voltage wires. Plenty of room is provided within the enclosure for wire runs, and the housings can be stacked vertically or horizontally. The relay modules can be snap-track mounted inside the housing as pictured or mounted into an available space in other equipment. The track is available in 2" (5.08 cm) lengths for mounting one module or in 12" (30.5 cm) lengths for mounting several modules.

RIBM Pilot Series - 10A, 15A modular relays

These pilot modular relays have contacts rated up to 15A and are used to control light electrical loads, drive power relays/contactors or to sense the voltage fed to electrical loads. The pilot modular relays require a low coil drive current and are provided with circuitry to allow powering the relay coil from a wide range of AC or DC voltages.

RIBM Power Series - 30A modular relays

The power modular relays have contacts rated up to 30A. They require modest coil drive current and are used for direct switching and control of heavy electrical circuits such as large resistive, motor, or lighting loads.



RIB M Series
(shown in optional enclosure)



FEATURES

- **Convenient and economical to use**
- **Handy, track-mounted modules**
- **Attractive, stackable metal enclosure**
- **Relay status indicator via LED**
- **Coil uses low current and accepts wide range of AC & DC voltages**
- **Closed/Open/Auto switch option available**
- **High density relay packaging**
- **UL listed enclosure and relay modules**

SPECIFICATIONS

Frequency	50/60 Hz
Life Rating	10 million cycles minimum mechanical
Relay Status	LED, ON - relay activated
Operating Temperature	-30° to 140°F (-34° to 60°C)
Operating Humidity	5% to 95% non-condensing
Dimensions	
C	1.75"H x 4"W x 1.25"L (4.45 x 10.16 x 3.18 cm)
D	1.75"H x 4"W x 2"L (4.45 x 10.16 x 5.08 cm)
F	1.75"H x 4"W x 2.45"L (4.45 x 10.16 x 6.22 cm)
H	1.75"D x 2.75"W x 1.25"L (4.45 x 6.99 x 3.18 cm)
I	1.75"D x 2.75"W x 1.7"L (4.45 x 6.99 x 4.32 cm)
J	1.75"D x 4"W x 1.5"L (4.45 x 10.16 x 3.85 cm)
K	1.75"D x 2.75"W x 2.5"L (4.45 x 6.99 x 6.35 cm)

L	1.75"D x 2.75"W x 3.40"L (4.45 x 6.99 x 8.64 cm)
MH1000	14.5"H x 7.7"W x 3.9"D (36.83 x 19.56 x 9.91 cm)
MH3500	24.5"H x 10.25"W x 3.9"D (62.23 x 26.04 x 9.91 cm)
MH38000	24.5"H x 12.5"W x 6.5"D (62.23 x 31.75 x 16.5 cm)
Approvals	UL listed, UL 916 Energy Management, UL 864 Fire, cUL listed, CSFM. UL File E68805
Warranty	1 year

Coil pull-in/drop-out (nominal values)

COIL DRIVE	PULL-IN		DROP-OUT	
	DC	AC	DC	AC
10-30 VAC/VDC	10	9	2.8	2.1
24 VAC/VDC	22	18	3.8	3
120 VAC	-	85	-	35
208-277 VAC	-	160	-	60

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SPECIFICATIONS - PILOT RELAY MODULES								
MODEL	TYPE	COIL DRIVE	SIZE*	OVR	CONTACT RATINGS		CONTACT WIRING	COIL DRIVE DATA
RIBM24C	1-SPDT	24 VAC/VDC 50-60 Hz	C	-	15A general use 10A general use 10A resistive	125 VAC 250 VAC 30 VDC	<p>*Cut appropriate jumper to select N.C. or N.O.</p>	Wiring Current Input 24 mA @ 20 VAC 13 mA @ 20 VDC 28 mA @ 24 VAC 16 mA @ 24 VDC 44 mA @ 35 VAC 25 mA @ 35 VDC
RIBM24S			C	Yes	1/2 hp 470 VA pilot duty	125/250 VAC 120/240 VAC		
RIBMU1C	1-SPDT	10-30 VAC/VDC 120 VAC	C	-	10A resistive 15A resistive 15A inductive	120/240/277 VAC 150 VAC, 28 VDC 150 VAC	Relay Without Override Switch Relay #1 Relay #2 (if present) Relay With Override Switch 	Wiring Relay #1 (and #2 if present) either --- 208-277 VAC or - - - - - 120 VAC Current Input 30 mA @ 10 VAC 12 mA @ 10 VDC 32 mA @ 12 VAC 14 mA @ 12 VDC 42 mA @ 24 VAC 16 mA @ 24 VDC 50 mA @ 30 VAC 18 mA @ 30 VDC 25 mA @ 120 VAC 35 mA @ 208-277 VAC
RIBMNU1C			C	Yes-2				
RIBMU2C	2-SPDT	50-60 Hz	F	-	600W tungsten 240W tungsten 1/3 hp for N.O. 1/6 hp for N.C.	120 VAC N.O. 120 VAC N.C. 120/240 VAC 277 VAC	Relay With Override Switch 	Current Input 30 mA @ 10 VAC 12 mA @ 10 VDC 32 mA @ 12 VAC 14 mA @ 12 VDC 42 mA @ 24 VAC 16 mA @ 24 VDC 50 mA @ 30 VAC 18 mA @ 30 VDC 25 mA @ 120 VAC 35 mA @ 208-277 VAC
RIBMH1C	1-SPDT	10-30 VAC/VDC 208-277 VAC	C	Yes-2	480 VA pilot duty 480 VA ballast	277 VAC		
RIBMNH1C	1-SPDT	10-30 VAC/VDC 208-277 VAC	J	Yes-2	600W tungsten 240W tungsten 1/3 hp for N.O. 1/6 hp for N.C.	120 VAC N.O. 120 VAC N.C. 120/240 VAC 277 VAC	U1S and H1S **For normally closed contacts, specify NC after model number U1SM and H1SM STATUS 50 VAC/VDC max and 0.25 A max	Current Input 30 mA @ 10 VAC 12 mA @ 10 VDC 32 mA @ 12 VAC 14 mA @ 12 VDC 42 mA @ 24 VAC 16 mA @ 24 VDC 50 mA @ 30 VAC 18 mA @ 30 VDC 25 mA @ 120 VAC 35 mA @ 208-277 VAC
RIBMH2C			2-SPDT	50-60 Hz	F	-		
RIBMU1S	1-SPST-NO	10-30 VAC/VDC 120 VAC	C	Yes	10A resistive 15A resistive	277 VAC 150 VAC	U1S and H1S **For normally closed contacts, specify NC after model number U1SM and H1SM STATUS 50 VAC/VDC max and 0.25 A max	Current Input 30 mA @ 10 VAC 12 mA @ 10 VDC 32 mA @ 12 VAC 14 mA @ 12 VDC 42 mA @ 24 VAC 16 mA @ 24 VDC 50 mA @ 30 VAC 18 mA @ 30 VDC 25 mA @ 120 VAC 35 mA @ 208-277 VAC
RIBMNU1S			K	Yes + Status	480 VA pilot duty 480 VA ballast	277 VAC		
RIBM1SM	1-SPST-NO	50-60 Hz	D	Yes + Status	600W tungsten 240W tungsten 1/3 hp for N.O. 1/6 hp for N.C.	120 VAC N.O. 120 VAC N.C. 120/240 VAC 277 VAC	U1S and H1S **For normally closed contacts, specify NC after model number U1SM and H1SM STATUS 50 VAC/VDC max and 0.25 A max	Current Input 30 mA @ 10 VAC 12 mA @ 10 VDC 32 mA @ 12 VAC 14 mA @ 12 VDC 42 mA @ 24 VAC 16 mA @ 24 VDC 50 mA @ 30 VAC 18 mA @ 30 VDC 25 mA @ 120 VAC 35 mA @ 208-277 VAC
RIBMNU1SM			L	Yes + Status	600W tungsten 240W tungsten 1/3 hp for N.O. 1/6 hp for N.C.	120 VAC N.O. 120 VAC N.C. 120/240 VAC 277 VAC		
RIBMH1S	1-SPST-NO	10-30 VAC/VDC 208-277 VAC	C	Yes	480 VA pilot duty 480 VA ballast	277 VAC	U1S and H1S **For normally closed contacts, specify NC after model number U1SM and H1SM STATUS 50 VAC/VDC max and 0.25 A max	Current Input 30 mA @ 10 VAC 12 mA @ 10 VDC 32 mA @ 12 VAC 14 mA @ 12 VDC 42 mA @ 24 VAC 16 mA @ 24 VDC 50 mA @ 30 VAC 18 mA @ 30 VDC 25 mA @ 120 VAC 35 mA @ 208-277 VAC
RIBMNH1S			K	Yes + Status	600W tungsten 240W tungsten 1/3 hp for N.O. 1/6 hp for N.C.	120 VAC N.O. 120 VAC N.C. 120/240 VAC 277 VAC		
RIBMH1SM	1-SPST-NO	50-60 Hz	D	Yes + Status	1/6 hp for N.O. 1/4 hp for N.C. 1/8 hp for N.C.	120/240 VAC 277 VAC	U1S and H1S **For normally closed contacts, specify NC after model number U1SM and H1SM STATUS 50 VAC/VDC max and 0.25 A max	Current Input 30 mA @ 10 VAC 12 mA @ 10 VDC 32 mA @ 12 VAC 14 mA @ 12 VDC 42 mA @ 24 VAC 16 mA @ 24 VDC 50 mA @ 30 VAC 18 mA @ 30 VDC 25 mA @ 120 VAC 35 mA @ 208-277 VAC
RIBMNH1SM			L	Yes + Status	1/6 hp for N.O. 1/4 hp for N.C. 1/8 hp for N.C.	120/240 VAC 277 VAC		

* See Specification on previous page for dimensions.

SPECIFICATIONS - POWER RELAY MODULES									
RIBM2401B	1-SPDT	24 VAC/VDC 120 VAC	C	-	20A resistive 1 hp 2 hp 20A ballast N.O. 10A ballast N.C. 10A tungsten N.O. 770 VA pilot duty 1,110 VA pilot duty	277 VAC 120 VAC 277 VAC 120-277 VAC 120-277 VAC 120 VAC 120 VAC 277 VAC	Relay Without Override Switch Relay With Override Switch 	Wiring either - 208-277 VAC or - 120 VAC Current Input 45 mA @ 18 VAC 30 mA @ 22 VDC 75 mA @ 24 VAC 32 mA @ 24 VDC 42 mA @ 120 VAC 42 mA @ 30 VDC 62 mA @ 208-277 VAC	
RIBM2401SBC			F	Yes-2					
RIBM2402B		24 VAC/VDC 208-277 VAC	C	-					
RIBM2402SBC		50/60 Hz	F	Yes-2					
RIBM2401SB	1-SPST-NO	24 VAC/VDC 120 VAC	D	Yes	20A resistive 15A resistive 1 hp 2 hp 3 hp 20A ballast 770 VA pilot duty 1,158 VA pilot duty 1,110 VA pilot duty 1,640 VA pilot duty 24ZL and 24ZN: 30A res. @ 300 VAC	300 VAC, 28 VDC 600 VAC 120 VAC 240-277 VAC 480-600 VAC 277-480 VAC 120 VAC 240 VAC 277 VAC 480 VAC	Relay Without Override Switch Relay With Override Switch 	Wiring 24 VAC/VDC Current Input 100 mA @ 20 VAC 50 mA @ 24 VDC 125 mA @ 24 VAC 70 mA @ 30 VDC	
RIBM2402SB		24 VAC/VDC 208-277 VAC							
RIBM24ZL	DPST-NO	24 VAC/VDC	F	-			24ZL and 24ZN: 30A res. @ 300 VAC	300 VAC, 28 VDC 600 VAC 120 VAC 240-277 VAC 480-600 VAC 277-480 VAC 120 VAC 240 VAC 277 VAC 480 VAC	Wiring 24 VAC/VDC Current Input 100 mA @ 20 VAC 50 mA @ 24 VDC 125 mA @ 24 VAC 70 mA @ 30 VDC
RIBM24ZN	DPDT	24 VAC/VDC	F	-					

ORDERING INFORMATION

MH1000 MH3500 MH3800 MT212-12 MT212-2 MT4-12 MT4-2	ACCESSORIES Screw-cover housing Hinge-cover housing Hinge-cover housing Relay track, 12" x 2.75" (30.48 x 6.99 cm) Relay track, 2" x 2.75" (5.08 x 6.99 cm) Relay track, 12" x 4" (30.48 x 10.16 cm) Relay track, 2" x 4" (5.08 x 10.16 cm)
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