

RELAYS & CONTACTORS

FUNCTIONAL DEVICES RELAY IN A BOX RIB, RIBT POWER SERIES



DESCRIPTION

The **Functional Devices Relay In a Box (RIB) Power Series** controls most BAS, HVAC, low-horsepower motor and lighting applications. The relays come mounted and pre-wired in a housing, saving the installer the time, trouble and expense of buying separate components (relay, socket, mounting rail, and enclosure) and assembling them on the job or at the shop.

The **RIB Power Series** has a protruding 1/2" or 3/4" NPT nipple from which all wires exit (except **T series**). To install, remove a conduit knockout in the equipment, insert the wires and nipple through the hole, tighten the locknut, and connect the wires.

RIB Power Series - 20, 30A Relays

The **RIB Power Series** has relay contacts rated for 20 and 30A. They require modest coil drive current and are used for direct switching and control of heavy electrical circuits, such as large resistive, motor, and lighting loads.

RIBT Series - High/Low Voltage Separation

The **RIBT Series** is designed to provide physically separate entrances for connections to the relay input coil and output contacts. Relay contact wires exit the housing through a 1/2" or 3/4" NPT nipple. The cover of the **RIBT Series** is removable and, with star bushings or 1/2" conduit, the coil drive wires can enter the housing through one of two convenient openings. The coil drive wires are secured to screw terminals within a separate wiring compartment in the **RIBT**. Most of the **RIBs** in the **Power Series** are also available in the **T Series**.

Functional Devices, Inc. **RIB**



RIB, RIBT Power Series



FEATURES

- **Convenient and economical to use**
- **Relay status indicator via LED**
- **Coil uses low current and accepts a wide range of AC and DC voltages**
- **Closed/Open/Auto switch option available**
- **Nipple or screw mountable**
- **Compact, gray plastic enclosure**
- **Color-coded wires for eliminating errors**
- **UL listed for UL916 Energy Management and UL864 Fire**
- **Made in the USA**

SPECIFICATIONS - GENERAL																														
Frequency	50/60 Hz																													
Wire Length	16" (40.6 cm)																													
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																													
Housing Type	NEMA 1, plenum rated																													
Conduit Hub	1/2" NPT, 3/4" NPT																													
Dimensions																														
A and G size enclosures	2.3" H x 3.2" W x 1.8" D (5.84 x 8.13 x 4.57 cm)																													
B size enclosures	4" H x 4" W x 1.8" D (10.16 x 10.16 x 4.57 cm)																													
Approvals	UL listed, UL 916 Energy Management, UL 864 Fire, cUL listed, CSFM, UL File S7312																													
Warranty	1 year																													
Coil pull-in/drop-out (nominal values)																														
	<table border="1"> <thead> <tr> <th rowspan="2">COIL DRIVE</th> <th colspan="2">PULL-IN</th> <th colspan="2">DROP-OUT</th> </tr> <tr> <th>DC</th> <th>AC</th> <th>DC</th> <th>AC</th> </tr> </thead> <tbody> <tr> <td>24 VAC/VDC</td> <td>20</td> <td>20</td> <td>3.8</td> <td>3</td> </tr> <tr> <td>120 VAC</td> <td>—</td> <td>85</td> <td>—</td> <td>35</td> </tr> <tr> <td>208-277 VAC</td> <td>—</td> <td>160</td> <td>—</td> <td>60</td> </tr> <tr> <td>480 VAC</td> <td>—</td> <td>340</td> <td>—</td> <td>140</td> </tr> </tbody> </table>	COIL DRIVE	PULL-IN		DROP-OUT		DC	AC	DC	AC	24 VAC/VDC	20	20	3.8	3	120 VAC	—	85	—	35	208-277 VAC	—	160	—	60	480 VAC	—	340	—	140
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FUNCTIONAL DEVICES RELAY IN A BOX

RIB, RIBT POWER SERIES

SPECIFICATIONS - POWER SERIES							
MODEL	TYPE	COIL DRIVE	SIZE-HUB	OVR SW	RELAY CONTACT RATINGS*	RELAY CONTACT WIRING	RELAY COIL DRIVE DATA
RIB2401B**	1-SPDT	24 VAC/VDC 120 VAC	G-1/2	—	20A resistive 277 VAC 1 hp 120 VAC 2 hp 277 VAC	(blue) N.C. (yellow) Common (orange) N.O.	Wiring Common - White/Yellow wire 24 VAC/VDC - White/Blue wire 120 VAC - White/Black wire 208-277 VAC - White/Brown wire
RIB2402B**	1-SPDT	24 VAC/VDC 208 - 277 VAC	G-1/2	—	20A ballast N.O. 120/277 VAC 10A ballast N.C. 120/277 VAC 10A tungsten N.O. 120 VAC 770 VA pilot duty 120 VAC 1110 VA pilot duty 277 VAC	(orange) Closed (orange) Open Auto	Input Current 75 mA @ 24 VAC 32 mA @ 24 VDC 42 mA @ 120 VAC 62 mA @ 208/277 VAC
RIB2401SB**	1-SPST-NO	24 VAC/VDC 120 VAC	G-1/2	Yes	20A resistive 277 VAC 1 hp 120 VAC 2 hp 277 VAC	For normally closed, add -NC after model number when ordering.	
RIB2402SB**	1-SPST-NO	24 VAC/VDC 208 - 277 VAC	G-1/2	Yes	20A ballast N.O. 120/277 VAC 10A ballast N.C. 120/277 VAC 10A tungsten N.O. 120 VAC 770 VA pilot duty 120 VAC 1110 VA pilot duty 277 VAC		
RIB01P	1-DPDT	120 VAC	B-1/2	—	20A resistive 300 VAC 20A resistive 28 VDC, 15 VDC 15A resistive 600 VAC	(blue) N.C. (yellow) Common (orange) N.O.	Wiring 120 VAC - White/Black wires 208-277 VAC - White/Brown wires 480 VAC - White/Green wires
RIB02P	1-DPDT	208-277 VAC	B-1/2	—	1 hp 120 VAC 2 hp 240-277 VAC 3 hp 480-600 VAC	(gray) N.C. (purple) Common (brown) N.O.	Input Current 100 mA @ 120-480 VAC
RIB04P	1-DPDT	480 VAC	B-1/2	—	20A ballast 277-480 VAC 770 VA pilot duty 120 VAC 1,158 VA pilot duty 240 VAC 1,110 VA pilot duty 277 VAC 1,640 VA pilot duty 480 VAC		Wiring 24 VAC White/Yellow wires
RIB24P**	1-DPDT	24 VAC/VDC	G-1/2	—			Input Current 125 mA @ 24 VAC 50 mA @ 24 VDC
RIB2401SBC**	1-SPDT	24 VAC/VDC 120 VAC	G-1/2	Yes-2	20A resistive 277 VAC 1 hp 120 VAC 2 hp 277 VAC	Auto Manual N.C. - Closed Open N.O. - Closed	Wiring Common - White/Yellow wire 24 VAC/VDC - White/Blue wire 120 VAC - White/Black wire 208-277 VAC - White/Brown wire
RIB2402SBC**	1-SPDT	24 VAC/VDC 208 - 277 VAC	G-1/2	Yes-2	20A ballast N.O. 120/277 VAC 10A ballast N.C. 120 VAC 10A tungsten N.O. 120 VAC 770 VA pilot duty 120 VAC 1110 VA pilot duty 277 VAC	(yellow) Common (blue) N.C. (orange) N.O.	Input Current 75 mA @ 24 VAC 32 mA @ 24 VDC 42 mA @ 120 VAC
RIB24S2*	1-DPST-NO	24 VAC/VDC	B-1/2	Yes Double Pole	20A resistive 277 VAC 1 hp 120 VAC 2 hp 240-277 VAC	Double Pole Switch Relay Pole #1 Relay Pole #2 (orange) Closed (brown) Open (brown) Auto	Wiring 24 VAC/VDC White/Yellow wires 120 VAC White/Black wires 208-277 VAC White/Brown wires 480 VAC White/Green wires
RIB01S2		120 VAC			10A tungsten 277-480 VAC 20A ballast 120 VAC		
RIB02S2		208-277 VAC			770 VA pilot duty 120 VAC		
RIB04S2		480 VAC			1,110 VA pilot duty 277 VAC		
RIB243P**	1-3PST-NO	24 VAC/VDC	B-1/2	—	20A resistive 300 VAC 20A resistive 28 VDC 15A resistive 600 VAC	(blue) N.O. (blue) N.O.	Wiring 24 VAC/VDC - White/Yellow wires 120 VAC - White/Black wires 208-277 VAC - White/Brown wires 480 VAC - White/Green wires
RIB013P	1-3PST-NO	120 VAC	B-1/2	—	1 hp 120 VAC, 1 PH 2 hp 240-277 VAC, 1 PH 3 hp 480-600 VAC, 1 PH	(yellow) N.O. (yellow) N.O.	Input Current 190 mA @ 24 VAC 140 mA @ 30 VDC 140 mA @ 120 VAC 170 mA @ 208-277 VAC 120 mA @ 480 VAC
RIB023P	1-3PST-NO	208-277 VAC	B-1/2	—	5 hp 240 VAC, 3 PH 7.5 hp 480 VAC, 3 PH 20A ballast 277-480 VAC 1466 VA 240 VAC, 3 PH 2112 VA 480 VAC, 3 PH	(orange) N.O. (orange) N.O.	
RIB043P	1-3PST-NO	480 VAC	B-1/2	—			
RIB24P30	1-DPDT	24 VAC/VDC	A-3/4	—	30A resistive 300 VAC 25A resistive 28 VDC 15A resistive 600 VAC	(blue) N.C. (yellow) Common (orange) N.O.	Wiring 24 VAC/VDC - White/Yellow wires
					1 hp 120 VAC 2 hp 240-277 VAC 3 hp 480-600 VAC 20A ballast 277-480 VAC 770 VA pilot duty 120 VAC 1,158 VA pilot duty 240 VAC 1,110 VA pilot duty 277 VAC 1,640 VA pilot duty 480 VAC	(gray) N.C. (purple) Common (brown) N.O.	Input Current 125 mA @ 24 VAC 50 mA @ 24 VDC

*Not rated for electronic ballast

ORDERING INFORMATION

Order by model number

** Models may be ordered in RIBT Series with high/low voltage separation.

*** Can be ordered normally closed by adding - NC after the model number.

† N4 has NEMA 4 housing