

# 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																														
<b>Frequency</b>	50/60 Hz																													
<b>Wire Length</b>	16" (40.6 cm)																													
<b>Life Rating</b>	10 million cycles minimum mechanical																													
<b>Relay Status</b>	LED, ON - relay activated																													
<b>Operating Temperature</b>	-30° to 140°F (-34° to 60°C)																													
<b>Operating Humidity</b>	5% to 95% non-condensing																													
<b>Housing Type</b>	NEMA 1, plenum rated																													
<b>Conduit Hub</b>	1/2" NPT, 3/4" NPT																													
<b>Dimensions</b>																														
<b>A and G size enclosures</b>	2.3" H x 3.2" W x 1.8" D (5.84 x 8.13 x 4.57 cm)																													
<b>B size enclosures</b>	4" H x 4" W x 1.8" D (10.16 x 10.16 x 4.57 cm)																													
<b>Approvals</b>	UL listed, UL 916 Energy Management, UL 864 Fire, cUL listed, CSFM, UL File S7312																													
<b>Warranty</b>	1 year																													
<b>Coil pull-in/drop-out (nominal values)</b>																														
	<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
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																										



# RELAYS & CONTACTORS

## 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 1 hp 2 hp	277 VAC 120 VAC 277 VAC	(blue) N.C. (yellow) Common (orange) N.O.	<b>Wiring</b> 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. 10A ballast N.C. 10A tungsten N.O. 770 VA pilot duty 1110 VA pilot duty	120/277 VAC 120/277 VAC 120 VAC 120 VAC 277 VAC			
RIB2401SB**	1-SPST-NO	24 VAC/VDC 120 VAC	G-1/2	Yes	20A resistive 1 hp 2 hp	277 VAC 120 VAC 277 VAC	(orange) Closed (orange) Open (orange) Auto	<b>Input Current</b> 75 mA @ 24 VAC    32 mA @ 24 VDC 42 mA @ 120 VAC 62 mA @ 208/277 VAC	
RIB2402SB**	1-SPST-NO	24 VAC/VDC 208 - 277 VAC	G-1/2	Yes	20A ballast N.O. 10A ballast N.C. 10A tungsten N.O. 770 VA pilot duty 1110 VA pilot duty	120/277 VAC 120/277 VAC 120 VAC 120 VAC 277 VAC	For normally closed, add <b>-NC</b> after model number when ordering.		
RIB01P	1-DPDT	120 VAC	B-1/2	—	20A resistive	300 VAC	(blue) N.C. (yellow) Common (orange) N.O.	<b>Wiring</b> 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	—	20A resistive 15A resistive 1 hp 2 hp 3 hp	28 VDC, 15 VDC 600 VAC 120 VAC 240-277 VAC 480-600 VAC	(gray) N.C. (purple) Common (brown) N.O.	<b>Input Current</b> 100 mA @ 120-480 VAC	
RIB04P	1-DPDT	480 VAC	B-1/2	—	20A ballast 770 VA pilot duty 1,158 VA pilot duty 1,110 VA pilot duty 1,640 VA pilot duty	277-480 VAC 120 VAC 240 VAC 277 VAC 480 VAC		<b>Wiring</b> 24 VAC White/Yellow wires <b>Input Current</b> 125 mA @ 24 VAC    50 mA @ 24 VDC	
RIB24P**	1-DPDT	24 VAC/VDC	G-1/2	—					
RIB2401SBC**	1-SPDT	24 VAC/VDC 120 VAC	G-1/2	Yes-2	20A resistive 1 hp 2 hp	277 VAC 120 VAC 277 VAC	Auto Manual N.C. - Closed Open N.O. - Closed	<b>Wiring</b> Common - White/Yellow wire 24 VAC/VDC - White/Blue wire 120 VAC - White/Black wire 208-277 VAC - White/Brown wire <b>Input Current</b> 75 mA @ 24 VAC    32 mA @ 24 VDC 42 mA @ 120 VAC	
RIB2402SBC**	1-SPDT	24 VAC/VDC 208 - 277 VAC	G-1/2	Yes-2	20A ballast N.O. 10A ballast N.C. 10A tungsten N.O. 770 VA pilot duty 1110 VA pilot duty	120/277 VAC 120/277 VAC 120 VAC 120 VAC 277 VAC			
RIB24S2*	1-DPST-NO	24 VAC/VDC	B-1/2	Yes Double Pole	20A resistive 1 hp 2 hp	277 VAC 120 VAC 240-277 VAC	<b>Double Pole Switch</b> Relay Pole #1    Relay Pole #2 (orange) Closed    (brown) Closed (orange) Open    (brown) Open Auto		<b>Wiring</b> 24 VAC/VDC White/Yellow wires 120 VAC White/Black wires 208-277 VAC White/Brown wires 480 VAC White/Green wires <b>Input Current</b> 125 mA @ 24 VAC    50 mA @ 24 VDC 75 mA @ 120 VAC 95 mA @ 208-277 VAC 95 mA @ 480 VAC
RIB01S2		120 VAC			10A tungsten 20A ballast	120 VAC 277-480 VAC			
RIB02S2		208-277 VAC			770 VA pilot duty 1,110 VA pilot duty	120 VAC 277 VAC			
RIB04S2		480 VAC							
RIB243P**	1-3PST-NO	24 VAC/VDC	B-1/2	—	20A resistive 20A resistive 15A resistive	300 VAC 28 VDC 600 VAC	(blue) N.O. (blue) N.O.	<b>Wiring</b> 24 VAC/VDC - White/Yellow wires 120 VAC - White/Black wires 208-277 VAC - White/Brown wires 480 VAC - White/Green wires <b>Input Current</b> 190 mA @ 24 VAC    140 mA @ 30 VDC 140 mA @ 120 VAC 170 mA @ 208-277 VAC 120 mA @ 480 VAC	
RIB013P	1-3PST-NO	120 VAC	B-1/2	—	1 hp 2 hp 3 hp	120 VAC, 1 PH 240-277 VAC, 1 PH 480-600 VAC, 1 PH	(yellow) N.O. (yellow) N.O.		
RIB023P	1-3PST-NO	208-277 VAC	B-1/2	—	5 hp 7.5 hp	240 VAC, 3 PH 480 VAC, 3 PH	(orange) N.O. (orange) N.O.		
RIB043P	1-3PST-NO	480 VAC	B-1/2	—	20A ballast 1466 VA 2112 VA	277-480 VAC 240 VAC, 3 PH 480 VAC, 3 PH			
RIB24P30	1-DPDT	24 VAC/VDC	A-3/4	—	30A resistive 25A resistive 15A resistive 1 hp 2 hp 3 hp	300 VAC 28 VDC 600 VAC 120 VAC 240-277 VAC 480-600 VAC	(blue) N.C. (yellow) Common (orange) N.O. (gray) N.C. (purple) Common (brown) N.O.	<b>Wiring</b> 24 VAC/VDC - White/Yellow wires <b>Input Current</b> 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