



# RELAYS & CONTACTORS

## FUNCTIONAL DEVICES RELAY IN A BOX

### RIB, RIBT PILOT SERIES

#### DESCRIPTION

The **Relay In A Box (RIB) Pilot 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 Pilot 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 Pilot Series - 10A Relays

The **RIB Pilot Series** has relay contacts rated for 10A and is used to control light electrical loads, drive power relays/contactors, or sense the voltage being fed to electrical loads. The **RIB Pilot Series** requires a low coil-drive current and is provided with circuitry to allow powering the relay coil from a wide range of AC or DC voltages.

#### 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 the coil drive wires can enter the housing through one of two convenient openings with star bushings or 1/2" conduit. The coil drive wires are secured to screw terminals within a separate wiring compartment in the **RIBT Series**. Most of the **RIB's** in the **Pilot Series** are also available in the **RIBT Series**.



RIBU1C



RIBU1S



#### 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>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°F), -30° to 140°F (-34° to 60°C)
<b>Operating Humidity</b>	5 to 95% non-condensing
<b>Housing Type</b>	Plenum rated, NEMA 1, NEMA 4
<b>Conduit Hub</b>	1/2" NPT, 3/4" NPT
<b>Dimensions</b>	<b>A size enclosures:</b> 1.7" H x 2.8" W x 1.5" D (4.32 x 7.11 x 3.81 cm), <b>B size enclosures:</b> 4.0" H x 4.0" W x 1.8" D (10.16 x 10.16 x 4.57 cm), <b>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>Approvals</b>	UL listed, UL 916 Energy Management UL 864 Fire, cUL listed, CSFM
<b>Weight</b>	1.0 lb (0.45 kg)
<b>Warranty</b>	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	20	18	3.8	3
120 VAC	—	102	—	9
208-277 VAC	—	176	—	13

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SPECIFICATIONS - PILOT SERIES							
MODEL	TYPE	COIL DRIVE	SIZE/HUB	OVR SW	RELAY CONTACT RATINGS	RELAY CONTACT WIRING	RELAY COIL DRIVE DATA
<b>RIBU1C*</b> <b>RIBU1C-N4†</b>	1-SPDT	10-30 VAC/VDC 120 VAC 50/60 Hz	A-1/2	-	10A resistive 120/240/277 VAC 10A resistive 28 VDC 480 VA pilot duty 240/277 VAC 480 VA ballast 277 VAC 600W tungsten 120 VAC N.O. 240W tungsten 120 VAC N.C. 1/3 hp for N.O. 120/240 VAC 1/6 hp for N.C. 120/240 VAC 1/4 hp for N.O. 277 VAC 1/8 hp for N.C. 277 VAC	<b>Relay #1</b> NC (blue) COM (yellow) NO (orange)	<b>Wiring</b> <b>Relay #1</b> Common - White/Yellow wire 10-30 VAC/VDC - White/Blue wire 120 VAC - White/Black wire 208-277 VAC - White/Brown wire <b>Relay #2 (if present)</b> Common - White/Purple wire 10-30 VAC/VDC - Gray/White wire 120 VAC - White/Red wire 208-277 VAC - White/Orange wire
<b>RIBU2C*</b>	2-SPDT		G-3/4	-		<b>Relay #2 (if present)</b> NC (gray) COM (purple) NO (brown)	
<b>RIBH1C*</b> <b>RIBH1C-N4†</b>	1-SPDT	10-30 VAC 208-277 VAC 50/60 Hz	A-1/2	-	10A resistive 277 VAC 480 VA pilot duty 277 VAC 480 VA ballast 277 VAC 600W tungsten 120 VAC N.O. 240W tungsten 120 VAC N.C. 1/3 hp for N.O. 120-240 VAC 1/6 hp for N.C. 120-240 VAC 1/4 hp for N.O. 277 VAC 1/8 hp for N.C. 277 VAC	<b>Relay #1</b> NC (blue) COM (yellow) NO (orange)	<b>Wiring</b> <b>Relay #1</b> Common - White/Yellow wire 10-30 VAC/VDC - White/Blue wire 120 VAC - White/Black wire 208-277 VAC - White/Brown wire <b>Relay #2 (if present)</b> Common - White/Purple wire 10-30 VAC/VDC - Gray/White wire 120 VAC - White/Red wire 208-277 VAC - White/Orange wire
<b>RIBH2C*</b>	2-SPDT		G-3/4	-		<b>Relay #2 (if present)</b> NC (gray) COM (purple) NO (brown)	
<b>RIBU1SC*</b>	1-SPDT	10-30 VAC/VDC 120 VAC 50/60 Hz	G-1/2	Yes-2	10A resistive 277 VAC 480 VA pilot duty 277 VAC 480 VA ballast 277 VAC 600W tungsten 120 VAC N.O. 240W tungsten 120 VAC N.C. 1/3 hp for N.O. 120-240 VAC 1/6 hp for N.C. 120-240 VAC 1/4 hp for N.O. 277 VAC 1/8 hp for N.C. 277 VAC		<b>Wiring</b> <b>Relay #1</b> Common - White/Yellow wire 10-30 VAC/VDC - White/Blue wire 120 VAC - White/Black wire 208-277 VAC - White/Brown wire <b>Relay #2 (if present)</b> Common - White/Purple wire 10-30 VAC/VDC - Gray/White wire 120 VAC - White/Red wire 208-277 VAC - White/Orange wire
<b>RIBH1SC*</b>	1-SPDT	10-30 VAC 208-277 VAC 50/60 Hz	G-1/2	Yes-2		<b>Relay #1</b> (orange) Closed (orange) Open Auto	
<b>RIBU1S*</b>	1-SPST-NO**	10-30 VAC/VDC 120 VAC 50/60 Hz	G-1/2	Yes	10A resistive 277 VAC 480 VA pilot duty 277 VAC 480 VA ballast 277 VAC 600W tungsten 120 VAC N.O. 240W tungsten 120 VAC N.C. 1/3 hp for N.O. 120-240 VAC 1/6 hp for N.C. 120-240 VAC 1/4 hp for N.O. 277 VAC 1/8 hp for N.C. 277 VAC	<b>Relay #1</b> (orange) Closed (orange) Open Auto	<b>Input Current</b> 30 mA @ 10 VAC 32 mA @ 12 VAC 42 mA @ 24 VAC 50 mA @ 30 VAC 25 mA @ 120 VAC 35 mA @ 208-277 VAC  12 mA @ 10 VDC 14 mA @ 12 VDC 16 mA @ 24 VDC 18 mA @ 30 VDC
<b>RIBU2SC</b>	1-SPST-NO**		G-3/4	Yes		<b>Relay #2 of RIBU2S2</b> Closed (brown) Open (brown) Auto	
<b>RIBU2S2</b>	2-SPST-NO**		B-3/4	Yes-2		<b>Relay #2 of RIBU2SC</b> NC (gray) COM (purple) NO (brown)	
<b>RIBU1SM</b>	1-SPST-NO**		G-1/2	Yes + Status		<b>STATUS</b> = 2nd Pole of switch of <b>RIBU1SM, RIBH1SM</b> Closed (brown) Open (purple) Auto (gray)	
<b>RIBH1S*</b>	1-SPST-NO**	10-30 VAC/VDC 208-277 VAC 50/60 Hz	G-1/2	Yes	Status Contact on <b>RIBU1SM</b> and <b>RIBH1SM</b> : 5A max @ 277 VAC	<b>Relay #2 of RIBU2SC</b> NC (gray) COM (purple) NO (brown)	<b>Input Current</b> 30 mA @ 10 VAC 32 mA @ 12 VAC 42 mA @ 24 VAC 50 mA @ 30 VAC 25 mA @ 120 VAC 35 mA @ 208-277 VAC  12 mA @ 10 VDC 14 mA @ 12 VDC 16 mA @ 24 VDC 18 mA @ 30 VDC
<b>RIBH1SM</b>	1-SPST-NO**		G-1/2	Yes + Status			
<b>RIB2401D*</b> <b>RIB2401D-N4†</b>	1-DPDT	24 VAC/VDC 120 VAC 50/60- Hz	A-1/2	-	10A resistive 30 VDC 10A resistive 277 VAC 1/2 hp for N.O. 120/240 VAC 1/3 hp for N.C. 120/240 VAC	<b>Relay #1</b> NC (blue) COM (yellow) NO (orange)	<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>RIB2402D</b> <b>RIB2402D-N4†</b>	1-DPDT	24 VAC/VDC 208-277 VAC 50/60 Hz	A-1/2	-	10A resistive 30 VDC 10A resistive 277 VAC 180 VA pilot duty 120 VAC 1/8 hp for N.C. 120 VAC	<b>Relay #1</b> NC (gray) COM (purple) NO (brown)	<b>Input Current</b> 24 mA @ 18 VAC      20 mA @ 20 VDC 32 mA @ 24 VAC      24 mA @ 30 VDC 40 mA @ 30 VAC      36 mA @ 30 VDC 31 mA @ 120 VAC (RIB2401D) 36 mA @ 208-277 VAC (RIB2402D)
<b>RIBL3C</b>	3-SPST-NO	10-30 VAC/VDC 50/60 Hz	B-1/2	-	10A resistive 120-277 VAC 10A resistive 28 VDC 480 VA pilot duty 240-277 VAC 480 VA ballast 277 VAC 600W tungsten 120 VAC N.O. 240W tungsten 120 VAC N.C. 1/3 hp for N.O. 120-240 VAC 1/6 hp for N.C. 120-240 VAC 1/4 hp for N.O. 277 VAC 1/8 hp for N.C. 277 VAC	<b>Relay #1</b> (black) (black)	<b>Wiring</b> Common - White/Red wire Relay#1 - White/Black wire Relay#2 - White/Blue wire Relay#3 - White/Yellow wire Relay#4 - White/Brown wire (if present)
<b>RIBL4C</b>	3-SPST-NO 1-SPDT		B-1/2	-		<b>Relay #2</b> (blue) (blue) <b>Relay #3</b> (yellow) (yellow) <b>Relay #4 (if present)</b> NC (gray) COM (purple) NO (brown)	
<b>SIB02S</b>	SPDT Manual Switch	-	A-1/2	Yes	Switch ratings 20A      277 VAC	<b>Relay #1</b> (blue) (yellow) (orange)	No Relay Switch Only

### 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 model number.

† **N4** has NEMA 4 housing