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# PILOT RELAYS: 10-15 AMPS

Enclosed | T Style | Track Mount



# Prepackaged For Convenience – Great Time Saver

- LED indicator
- Multi-voltage coil input
- Several different contact ratings
- True override switch on load side of relay
- High/low voltage separation

- 10-15 Amp models
- Pre-wired
- Track mount panel style
- Time delay models

# **ENCLOSED PILOT RELAYS**

		COIL VOLTAGE						
MODEL #	(h)	AC/DC	AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBU1C	•	10-30	120	1	SPDT			4
RIBH1C	•	10-30	208-277	1	SPDT			4
RIBU2C	•	10-30	120	2	2 SPDT			5
RIBH2C	•	10-30	208-277	2	2 SPDT			5
RIBL3C	•	10-30		3	3 SPST			5
RIBL4C	•	10-30		4	3 SPST, 1 SPDT			5
RIBU1S	•	10-30	120	1	SPST	1		6
RIBH1S	•	10-30	208-277	1	SPST	1		6
RIBU1SM-250	•	10-30	120	1	SPST	1+monitor		6
RIBH1SM-250	•	10-30	208-277	1	SPST	1+monitor		6
RIB2401D	•	24	120	1	DPDT			7
RIB2402D	•	24	208-277	1	DPDT			7
RIBU1SC	•	10-30	120	1	SPDT	2 <sup>3</sup>		7
RIBH1SC	•	10-30	208-277	1	SPDT	2 <sup>3</sup>		7
RIBL1C-DC	•	10-30 <sup>1</sup>		1	SPDT			8
RIB2421C	•	24	120-277	1	SPDT			8
RIBD2421C	•	24	120-277	1	SPDT		2	9
RIBU2SC	•	10-30	120	2	1 SPST, 1 SPDT	1		10
RIBU2S2	•	10-30	120	2	2 SPST	2		10

# **T STYLE PILOT RELAYS**

		COIL VOLTAGE						
MODEL #	(Կ	AC/DC	AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBTU1C	•	10-30	120	1	SPDT			11
RIBTH1C	•	10-30	208-277	1	SPDT			11
RIBTU2C	•	10-30	120	2	2 SPDT			11
RIBTH2C	•	10-30	208-277	2	2 SPDT			11
RIBU1CW	•	10-30	120	1	SPDT			12
RIBH1CW	•	10-30	208-277	1	SPDT			12
RIBTU1S	•	10-30	120	1	SPST	1		12
RIBTH1S	•	10-30	208-277	1	SPST	1		12
RIBTU1SC	•	10-30	120	1	SPDT	2 <sup>3</sup>		13
RIBTH1SC	•	10-30	208-277	1	SPDT	2 <sup>3</sup>		13
RIBT2401D	•	24	120	1	DPDT			13

🕒 = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

**1** = DC Only **2** = Tir

2 = Time Delay

**3** = SPDT with override requires 2 switches

# **TRACK MOUNT PILOT RELAYS**

		COIL V	OLTAGE					
MODEL #		AC/DC	AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBAN12C	• 1	12		1	SPDT			14
RIBAN24C	• 1	24		1	SPDT			14
RIBM12C	•	12		1	SPDT			15
RIBM12S	•	12		1	SPST	1		15
RIBM24C	•	24		1	SPDT			15
RIBM24S	•	24		1	SPST	1		15
RIBM2401D	•	24	120	1	DPDT			16
RIBM2402D	•	24	208-277	1	DPDT			16
RIBMU1C	•	10-30	120	1	SPDT			16
RIBMU1S	•	10-30	120	1	SPST	1		17
RIBMH1C	•	10-30	208-277	1	SPDT			16
RIBMH1S	•	10-30	208-277	1	SPST	1		17
RIBMU2C	•	10-30	120	2	2 SPDT			17
RIBMH2C	•	10-30	208-277	2	2 SPDT			17
RIBMU1SM-250	•	10-30	120	1	SPST	1+monitor		18
RIBMH1SM-250	•	10-30	208-277	1	SPST	1+monitor		18
RIBMU1SC	•	10-30	120	1	SPDT	2 <b>2</b>		18
RIBMH1SC	•	10-30	208-277	1	SPDT	2 <sup>2</sup>		18
RIBMN12C	•	12		1	SPDT			19
RIBMN12S	•	12		1	SPST	1		19
RIBMN24C	•	24		1	SPDT			19
RIBMN24S	•	24		1	SPST	1		19
RIBMN24S-J	•	24		1	SPST	1		20
RIBMN24C-4T	•	24		4	4 SPDT			20
RIBMN24S-4T	•	24		4	4 SPST	4		20
RIBMN2401D	•	24	120	1	DPDT			21
RIBMNU1C	•	10-30	120	1	SPDT			21
RIBMNU1S	•	10-30	120	1	SPST	1		22
RIBMNH1C	•	10-30	208-277	1	SPDT			21
RIBMNH1S	•	10-30	208-277	1	SPST	1		22

(H) = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

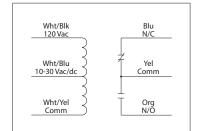
1 = UL Listed : UL508 only ; USA & Canada

2 = SPDT with override requires 2 switches

# **10 AMP PILOT CONTROL RELAYS**

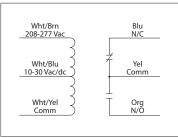
# **RIBU1C**

Enclosed Relay 10 Amp SPDT with 10-30 Vac/dc/120 Vac Coil



# RIBH1C

Enclosed Relay 10 Amp SPDT with 10-30 Vac/dc/208-277 Vac Coil





# SPECIFICATIONS

, ,,	One (1) SPDT Continuous Duty Coil 10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	1.70″ x 2.80″ x 1.50″ with .50″ NPT nipple
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	No

#### Contact Ratings:

10 Amp Resistive @ 277 Vac 10 Amp Resistive @ 28 Vdc 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/O) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)

#### Coil Current:

 33 mA @ 10 Vac
 13 mA @ 10 Vdc

 35 mA @ 12 Vac
 15 mA @ 12 Vdc

 46 mA @ 24 Vac
 18 mA @ 24 Vdc

 55 mA @ 30 Vac
 20 mA @ 30 Vdc

 28 mA @ 120 Vac (RIBU1C)
 39 mA @ 208-277 Vac (RIBH1C)

#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1C) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH1C) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

# **10 AMP PILOT CONTROL RELAYS**

# **RIBU2C**

Wht/Blk

120 Vac

Wht/Blu

10-30 Vac/dc

Wht/Yel

Comm

Wht/Red

120 Vac

Gry/Wht

Wht/Prp

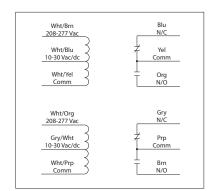
Comm

10-30 Vac/d

Enclosed Relays 10 Amp 2 SPDT with 10-30 Vac/dc/120 Vac Coil

# RIBH2C

Enclosed Relays 10 Amp 2 SPDT with 10-30 Vac/dc/208-277 Vac Coil





# **SPECIFICATIONS**

	Two (2) SPDT Continuous Duty Coil 10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	2.30″ x 3.20″ x 1.80″ with .75″ NPT nipple
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	No

Blu

N/C

Yel

Comm

Ora

N/O

Gry N/C

Prn

omm

Rrn

N/O

<b>Contact Ratings:</b>	
10 Amp Resistive	@

10 Amp Resistive @ 277 Vac 10 Amp Resistive @ 28 Vdc 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac *Not rated for Electronic Ballast* 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/C) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/C) 1/8 HP @ 277 Vac (N/C)

# Coil Current:

33 I	mΑ	@	10 Vac	13 mA	@	10 Vdc
35 i	mΑ	@	12 Vac	15 mA	@	12 Vdc
46 I	mΑ	@	24 Vac	18 mA	@	24 Vdc
55 I	mΑ	@	30 Vac	20 mA	@	30 Vdc
28 I	mΑ	@	120 Vac (RII	BU2C)		
39 i	mΑ	@	208-277 Va	c (RIBH2	2C)	

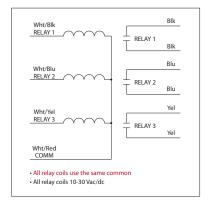
#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU2C) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH2C) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

# **10 AMP PILOT CONTROL RELAYS**

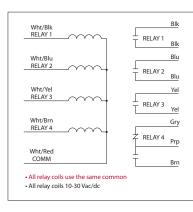
### **RIBL3C**

Enclosed Relays 10 Amp 3 SPST-N/O with 10-30 Vac/dc Coil



# **RIBL4C**

Enclosed Relays 10 Amp 3 SPST-N/O + 1 SPDT with 10-30 Vac/dc Coil





# SPECIFICATIONS

# Relays & Contact Type:	Three (3) SPST Continuous Duty Coil (RIBL3C) Three (3) SPST + One (1) SPDT Continuous Duty Coil (RIBL4C)
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	4.00″ x 4.00″ x 1.80″ with .50″ NPT nipple
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	No

#### Contact Ratings:

10 Amp Resistive @ 277 Vac 10 Amp Resistive @ 28 Vdc 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/C) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/C) 1/8 HP @ 277 Vac (N/C)

#### Coil Current:

33 mA @ 10 Vac 13 m, 35 mA @ 12 Vac 15 m, 46 mA @ 24 Vac 18 m, 55 mA @ 30 Vac 20 m,

13 mA @ 10 Vdc 15 mA @ 12 Vdc 18 mA @ 24 Vdc 20 mA @ 30 Vdc

#### Coil Voltage Input:

10-30 Vac/dc ; 50-60 Hz Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

#### Notes:

Order Normally Closed by adding "-NC" to end of model number

# **RIBU1S**

Wht/Blk

120 Vac

Wht/Blu

10-30 Vac/de

Wht/Ye

Comm

RELAYS

Enclosed Relay 10 Amp SPST-N/O + Override with 10-30 Vac/dc/120 Vac Coil

CLOSED OPEN AUTO

Org

Org

# **RIBH1S**

Enclosed Relay 10 Amp SPST-N/O + Override with 10-30 Vac/dc/208-277 Vac Coil

# Wht/Brn 208-277 Vac Wht/Blu 10-30 Vac/dc Wht/Yel Comm Org



# SPECIFICATIONS

# Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.30" x 3.20" x 1.80" with .50" NPT nipple
Wires: 16", 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes
Override Switch: Yes

#### **Contact Ratings:**

10 Amp Resistive @ 277 Vac 480 VA Pilot Duty @ 277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/C) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/C) 1/8 HP @ 277 Vac (N/C)

#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1S) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH1S) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

#### Coil Current:

	33 mA	@	10 Vac	13 mA	@	10 Vdc
	35 mA	@	12 Vac	15 mA	@	12 Vdc
,	46 mA	@	24 Vac	18 mA	@	24 Vdc
	55 mA	@	30 Vac	20 mA	@	30 Vdc
	28 mA	@	120 Vac (RI	BU1S)		
	39 mA	@	208-277 Va	c (RIBH	1S)	

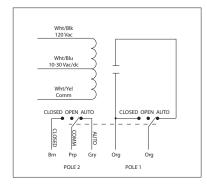
#### Notes:

Order Normally Closed by adding "-NC" to end of model number

#### **10 AMP PILOT CONTROL RELAYS**

### RIBU1SM-250

Enclosed Relay 10 Amp SPST-N/O + Override + Monitor with 10-30 Vac/dc/120 Vac Coil

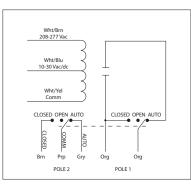


### SPECIFICATIONS

# Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT nipple Wires: 16″, 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes
Override Switch: Yes + Monitor

# RIBH1SM-250

Enclosed Relay 10 Amp SPST-N/O + Override + Monitor with 10-30 Vac/dc/208-277 Vac Coil





#### **Contact Ratings:**

10 Amp Resistive @ 120/250 Vac 345 VA Pilot Duty @ 120/240 Vac 211 VA Pilot Duty @ 120/240 Vac 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C)

#### Coil Current:

55 mA @ 30 Vac 28 mA @ 120 Vac (RIBU1SM-250) 39 mA @ 208-277 Vac (RIBH1SM-250) 20 mA @ 30 Vdc

#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1SM-250) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH1SM-250) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

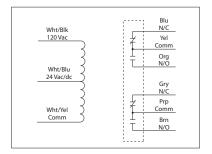
#### Notes:

- Second pole of override switch can be connected to digital-in of controller to report position of override switch
- Rating of second pole is 250 Vac max and 5 Amp max
   Order Normally Closed by adding "-NC" to end of model number

# **10 AMP PILOT CONTROL RELAYS**

### **RIB2401D**

Enclosed Relay 10 Amp DPDT with 24 Vac/dc/120 Vac Coil

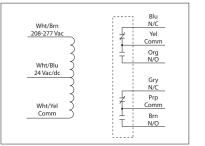


# SPECIFICATIONS

# Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 8ms Relay Status: LED On = Activated Dimensions: 1.70" x 2.80" x 1.50" with .50" NPT nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: No

# **RIB2402D**

Enclosed Relay 10 Amp DPDT with 24 Vac/dc/208-277 Vac Coil





#### **Contact Ratings:**

10 Amp Resistive @ 30 Vdc 10 Amp General Use @ 277 Vac 1/2 HP @ 120/240 Vac (N/O) 1/3 HP @ 120/240 Vac (N/C) B300 Pilot Duty

120 Vac 30A Make 3A Break (360 VA) 240 Vac 15 A Make 1.5A Break (360 VA) 208 Vac 17.3A Make 1.73A Break (360 VA) 277 Vac 13A Make 1.3A Break (360 VA) 24 Vac 30A Make 5A Break (120VA) 5A Max

#### Coil Current:

20 mA @ 20 Vdc 24 mA @ 18 Vac 24 mA @ 24 Vdc 32 mA @ 24 Vac 40 mA @ 30 Vac 36 mA @ 30 Vdc 31 mA @ 120 Vac (RIB2401D) 36 mA @ 208-277 Vac (RIB2402D)

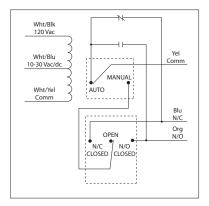
#### **Coil Voltage Input:**

24 Vac/dc; 120 Vac; 50-60 Hz (RIB2401D) 24 Vac/dc; 208-277 Vac; 50-60 Hz (RIB2402D) Drop Out = 3 Vac / 3.8 Vdc Pull In = 18 Vac / 20 Vdc

# **10 AMP PILOT CONTROL RELAYS**

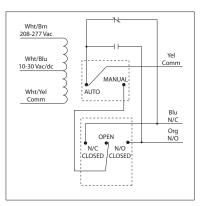
#### **RIBU1SC**

Enclosed Relay 10 Amp SPDT + Override with 10-30 Vac/dc/120 Vac Coil



# **RIBH1SC**

Enclosed Relay 10 Amp SPDT + Override with 10-30 Vac/dc/208-277 Vac Coil







	One (1) SPDT Continuous Duty Coil 10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	2.30″ x 3.20″ x 1.80″ with .50″ NPT nipple
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	Yes (2)

#### **Contact Ratings:**

10 Amp Resistive @ 277 Vac 480 VA Pilot Duty @ 277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)

#### **Coil Current:**

13 mA @ 10 Vdc 33 mA @ 10 Vac 35 mA @ 12 Vac 15 mA @ 12 Vdc 46 mA @ 24 Vac 18 mA @ 24 Vdc 55 mA @ 30 Vac 20 mA @ 30 Vdc 28 mA @ 120 Vac (RIBU1SC) 39 mA @ 208-277 Vac (RIBH1SC)

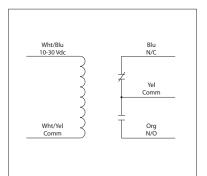
#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1SC) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH1SC) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

RELAYS

# **RIBL1C-DC**

Enclosed Relay 10 Amp SPDT with 10-30 Vdc Limited Inrush Coil







# SPECIFICATIONS

RELAYS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 1.70" x 2.80" x 1.50" with .50" NPT nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: No

#### Contact Ratings:

10 Amp Resistive @ 277 Vac 10 Amp Resistive @ 28 Vdc 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)

Coil Current: 13 mA @ 10 Vdc 15 mA @ 12 Vdc 18 mA @ 24 Vdc 20 mA @ 30 Vdc

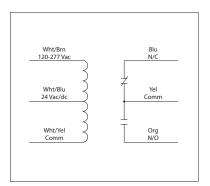
Coil Voltage Input: 10-30 Vdc

Drop Out = 2.8 Vdc Pull In = 10 Vdc

# **10 AMP PILOT CONTROL RELAYS**

# **RIB2421C**

Enclosed Relay 10 Amp SPDT with 24 Vac/dc/120-277 Vac Coil















### **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 1.70" x 2.80" x 1.50" with .50" NPT nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: No

#### **Contact Ratings:**

10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac C300 Pilot Duty

#### Coil Current:

66 mA @ 24 Vac 38 mA @ 24 Vdc 40 mA @ 120-277 Vac

#### **Coil Voltage Input:**

24 Vac/dc ; 120-277 Vac ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc

**Contact Ratings:** 

1/2 HP @ 125 Vac

1 HP @ 250 Vac

1/4 HP @ 277 Vac

10 Amp General Use @ 277 Vac

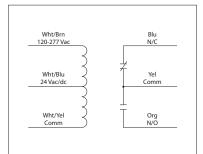
10 Amp Resistive @ 30 Vdc (N/O)

7 Amp Resistive @ 30 Vdc (N/C)

# **10 AMP PILOT CONTROL RELAY**

# RIBD2421C

Enclosed Time Delay Relay 10 Amp SPDT with 24 Vac/dc/120-277 Vac Coil

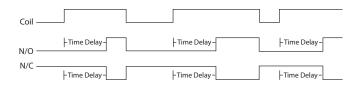


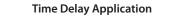
# **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 6ms after time delay Relay Status: RED LED On = Activated Time Delay Status: PINK LED FLASHING = Timing Timing Mode: Delay On Make (N/O) Timing Range: 6 seconds - 20 minutes Timing Adjustment: 4 position DIP switch for range selection and single turn potentiometer for timing adjustment within range **Timing Tolerance:** Switches  $1\& 2 = \pm 10\%$ Switches 3 & 4 =  $\pm 5\%$ Timing Repeatability: ±1% Temperature Timing Variance: ±1% Voltage Timing Variance: ±1% Recycle Time: 750ms Maximum Dimensions:  $4.00^{"} \times 4.00^{"} \times 1.80^{"}$  with .50" NPT nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: No

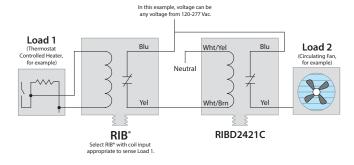
TIMING TABLE								
Switch Ranges	Close Dip Switch	Potentiometer Setting $A \iff B \iff C \iff D \iff E$						
nanges	Dip Switch	A						
6s-20s	1	бs	9s	13s	16s	20s		
22s-1min15s	2	22s	36s	50s	1min4s	1min15s		
1min30s-5min	3	1min30s	2min10s	3min20s	4min16s	5min		
6min-20min	4	6min	9min	13min20s	17min20s	20min		

#### **Timing Diagram**





Load 2 stays on selected amount of time after Load 1 goes off.



CE RoHS

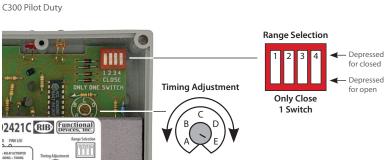
Made in USA Meets **Buy American** of ARRA 2009

**Coil Voltage Input:** 

24 Vac/dc ; 120-277 Vac ; 50-60 Hz

Drop Out = 3 Vac / 3.8 Vdc

Pull In = 20 Vac / 20 Vdc



Input Current:

66 mA @ 24 Vac

38 mA @ 24 Vdc

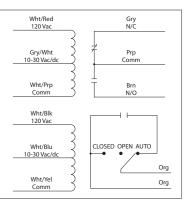
40 mA @ 120-277 Vac

9

# **RIBU2SC**

RELAYS

Enclosed Relays 10 Amp SPST-N/O + Override + 1 SPDT with 10-30 Vac/dc/120 Vac Coil





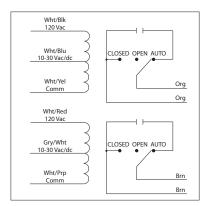
# SPECIFICATIONS

# Relays & Contact Type:	One (1) SPST + One (1) SPDT
	Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	2.30" x 3.20" x 1.80" with .75" NPT nipple
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	Yes

# **10 AMP PILOT CONTROL RELAY**

#### **RIBU2S2**

Enclosed Relays 10 Amp 2 SPST-N/O + 2 Overrides with 10-30 Vac/dc/120 Vac Coil



# SPECIFICATIONS

# Relays & Contact Type:	Two (2) SPST Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	4.00" x 4.00" x 1.80" with .50" NPT nipple
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	Yes (2)

#### Contact Ratings:

**Contact Ratings:** 

10 Amp Resistive @ 277 Vac

480 VA Pilot Duty @ 277 Vac

Not rated for Electronic Ballast

1/3 HP @ 120-240 Vac (N/O)

1/6 HP @ 120-240 Vac (N/C)

1/4 HP @ 277 Vac (N/O)

1/8 HP @ 277 Vac (N/C)

600 Watt Tungsten @ 120 Vac (N/O)

240 Watt Tungsten @ 120 Vac (N/C)

480 VA Ballast @ 277 Vac

10 Amp Resistive @ 277 Vac 480 VA Pilot Duty @ 277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/C) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/C)

#### Coil Current:

33 mA @ 10 Vac 35 mA @ 12 Vac 46 mA @ 24 Vac 55 mA @ 30 Vac 28 mA @ 120 Vac 13 mA @ 10 Vdc 15 mA @ 12 Vdc 18 mA @ 24 Vdc 20 mA @ 30 Vdc

#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

#### Notes:

• Order Normally Closed by adding "-NC" to end of model number



Coil Current:

33 mA @ 10 Vac

35 mA @ 12 Vac

46 mA @ 24 Vac

55 mA @ 30 Vac

28 mA @ 120 Vac

13 mA @ 10 Vdc

15 mA @ 12 Vdc

18 mA @ 24 Vdc

20 mA @ 30 Vdc



### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

#### Notes:

• Order Normally Closed by adding "-NC" to end of model number

Gold Fl Override Sw

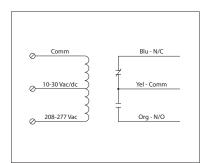
# **RIBTU1C**

Enclosed Relay Hi/Low Separation 10 Amp SPDT with 10-30 Vac/dc/120 Vac Coil

# O Comm Blu - N/C O 10-30 Vac/dc Yel - Comm O 120 Vac Org - N/O

# **RIBTH1C**

Enclosed Relay Hi/Low Separation 10 Amp SPDT with 10-30 Vac/dc/208-277 Vac Coil





# SPECIFICATIONS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00° x 4.00° x 1.80° with .50° NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, ROHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes
Override Switch: No

#### Contact Ratings:

10 Amp Resistive @ 277 Vac 10 Amp Resistive @ 28 Vdc 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/O) 1/3 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)

#### Coil Current:

33 mA @ 10 Vac 13 mA @ 10 Vdc 35 mA @ 12 Vac 15 mA @ 12 Vdc 46 mA @ 24 Vac 18 mA @ 24 Vdc 55 mA @ 30 Vac 20 mA @ 30 Vdc 28 mA @ 120 Vac (RIBTU1C) 39 mA @ 208-277 Vac (RIBTH1C)

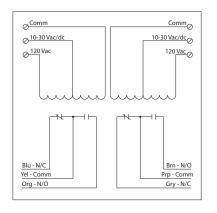
#### **Coil Voltage Input:**

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTU1C) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTH1C) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

# **10 AMP PILOT CONTROL RELAYS**

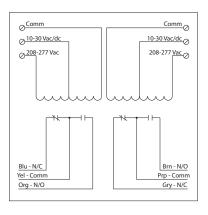
# **RIBTU2C**

Enclosed Relays Hi/Low Separation 10 Amp 2 SPDT with 10-30 Vac/dc/120 Vac Coil



# **RIBTH2C**

Enclosed Relays Hi/Low Separation 10 Amp 2 SPDT with 10-30 Vac/dc/208-277 Vac Coil





# SPECIFICATIONS

# Relays & Contact Type: Two (2) SPDT Continuous Duty Coil
 Expected Relay Life: 10 million cycles minimum mechanical
 Operating Temperature: -30 to 140° F
 Humidity Range: 5 to 95% (noncondensing)
 Operate Time: 20ms
 Relay Status: LED On = Activated
 Dimensions: 4.00° x 4.00° x 1.80° with .50° NPT nipple
 Wires: 16°, 600V Rated
 Approvals: UL Listed, UL916, UL864, C-UL
 California State Fire Marshal, CE, RoHS
 Housing Rating: UL Accepted for Use in Plenum, NEMA 1
 Gold Flash: Yes
 Override Switch: No

#### Contact Ratings:

10 Amp Resistive @ 277 Vac 10 Amp Resistive @ 28 Vdc 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/C) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/C) 1/8 HP @ 277 Vac (N/C)

#### Coil Current:

33 mA @ 10 Vac 13 mA @ 10 Vdc 35 mA @ 12 Vac 15 mA @ 12 Vdc 46 mA @ 24 Vac 18 mA @ 24 Vdc 55 mA @ 30 Vac 20 mA @ 30 Vdc 28 mA @ 120 Vac (RIBTU2C) 39 mA @ 208-277 Vac (RIBTH2C)

#### **Coil Voltage Input:**

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTU2C) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTH2C) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

# **RIBU1CW**

Comm ⊘

10-30 Vac/dc ⊘

120 0

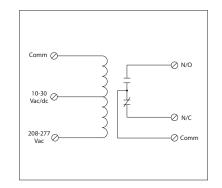
Vac

RELAYS

Enclosed Relay Hi/Low Separation 15 Amp SPDT with 10-30 Vac/dc/120 Vac Coil

# **RIBH1CW**

Enclosed Relay Hi/Low Separation 15 Amp SPDT with 10-30 Vac/dc/208-277 Vac Coil





# Meets "Buy American" of ARRA 2009

### **SPECIFICATIONS**

- # Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated
  - Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT nipple Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS

-0/ N/O

-0 N/C

-🔿 Comm

Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: No

#### **Contact Ratings:**

15 Amp Resistive @ 150 Vac, 28Vdc 15 Amp Inductive @ 150 Vac 10 Amp Resistive @ 277 Vac 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)

33 mA @	10 Vac	13 mA	@	10 Vdc
35 mA @	12 Vac	15 mA	@	12 Vdc
46 mA @	24 Vac	18 mA	@	24 Vdc
55 mA @	30 Vac	20 mA	@	30 Vdc
28 mA @	120 Vac (F	RIBU1CW	)	
39 mA @	208-277 V	ac (RIBH	1C	W)

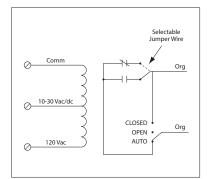
#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1CW) 10-30 Vac/dc; 208-277 Vac; 50-60 Hz (RIBH1CW) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

#### **10 AMP PILOT CONTROL RELAYS**

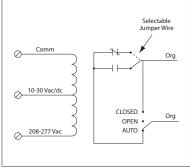
### **RIBTU1S**

Enclosed Relay Hi/Low Separation 10 Amp SPST + Override with 10-30 Vac/dc/ 120 Vac Coil



# **RIBTH1S**

Enclosed Relay Hi/Low Separation 10 Amp SPST + Override with 10-30 Vac/dc/ 208-277 Vac Coil





#### SPECIFICATIONS

# Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: Yes

#### **Contact Ratings:**

10 Amp Resistive @ 277 Vac 480 VA Pilot Duty @ 277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)

#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire

#### Coil Current:

33 mA @ 10 Vac 13 mA @ 10 Vdc 35 mA @ 12 Vac 15 mA @ 12 Vdc 18 mA @ 24 Vdc 46 mA @ 24 Vac 55 mA @ 30 Vac 20 mA @ 30 Vdc 28 mA @ 120 Vac (RIBTU1S) 39 mA @ 208-277 Vac (RIBTH1S)

#### Coil Voltage Input:

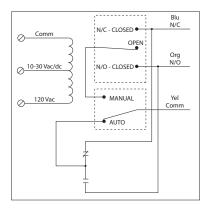
10-30 Vac/dc; 120 Vac; 50-60 Hz (RIBTU1S) 10-30 Vac/dc : 208-277 Vac : 50-60 Hz (RIBTH1S) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc



# **10 AMP PILOT CONTROL RELAYS**

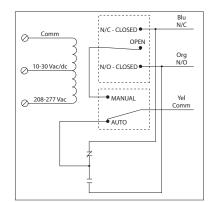
# **RIBTU1SC**

Enclosed Relay Hi/Low Separation 10 Amp SPDT + Override with 10-30 Vac/dc/ 120 Vac Coil



**RIBTH1SC** 

Enclosed Relay Hi/Low Separation 10 Amp SPDT + Override with 10-30 Vac/dc/ 208-277 Vac Coil



Contact Ratings:

10 Amp Resistive @ 277 Vac

480 VA Pilot Duty @ 277 Vac

Not rated for Electronic Ballast

1/3 HP @ 120-240 Vac (N/O)

1/6 HP @ 120-240 Vac (N/C)

1/4 HP @ 277 Vac (N/O)

1/8 HP @ 277 Vac (N/C)

600 Watt Tungsten @ 120 Vac (N/O)

240 Watt Tungsten @ 120 Vac (N/C)

480 VA Ballast @ 277 Vac



13 mA @ 10 Vdc

15 mA @ 12 Vdc

18 mA @ 24 Vdc

20 mA @ 30 Vdc

Coil Current:

33 mA @ 10 Vac

35 mA @ 12 Vac

46 mA @ 24 Vac

55 mA @ 30 Vac

Coil Voltage Input:

28 mA @ 120 Vac (RIBTU1SC)

Drop Out = 2.1 Vac / 2.8 Vdc

Pull In = 9 Vac / 10 Vdc

39 mA @ 208-277 Vac (RIBTH1SC)

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTU1SC)

10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTH1SC)

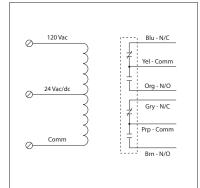
# **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: Yes (2)

# **10 AMP PILOT CONTROL RELAY**

# RIBT2401D

Enclosed Relay Hi/Low Separation 10 Amp DPDT with 24 Vac/dc/120 Vac Coil



# UL) us LISTED ( WARNING: ELECTRICAL SHOP AVERTISSEMENT: RoHS Made in USA Meets "Buy American of ARRA 2009

# **SPECIFICATIONS**

# Relays & Contact Type:	One (1) DPDT Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	8ms
Relay Status:	LED On = Activated
Dimensions:	4.00″ x 4.00″ x 1.80″ with .50″ NPT nipple
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No
Override Switch:	No

#### **Contact Ratings:**

10 Amp Resistive @ 30 Vdc 10 Amp General Use @ 277 Vac 1/2 HP @ 120/240 Vac (N/O) 1/3 HP @ 120/240 Vac (N/C) B300 Pilot Duty 120 Vac 30A Make 3A Break (360 VA) 240 Vac 15 A Make 1.5A Break (360 VA) 208 Vac 17.3A Make 1.73A Break (360 VA) 277 Vac 13A Make 1.3A Break (360 VA) 24 Vac 30A Make 5A Break (120VA) 5A Max

# **Coil Current:** 24 mA @ 18 Vac

32 mA @ 24 Vac 40 mA @ 30 Vac 31 mA @ 120 Vac 20 mA @ 20 Vdc 24 mA @ 24 Vdc 36 mA @ 30 Vdc

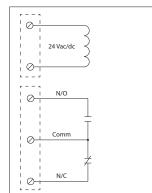
#### **Coil Voltage Input:**

24 Vac/dc ; 120 Vac ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 18 Vac / 20 Vdc

# **RIBAN24C**

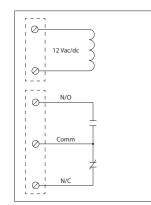
RELAYS

Track Mount Relay 10 Amp SPDT with 24 Vac/dc Coil



# **RIBAN12C**

Track Mount Relay 10 Amp SPDT with 12 Vac/dc Coil





# **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Operating Temperature: -30 to 140° F Operate Time: 6ms

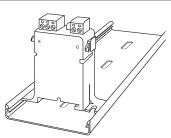
Expected Relay Life: 10 million cycles minimum mechanical Relay Status: LED On = Activated Dimensions: 1.025" x 2.750" x 2.850" Terminals: Removable, Accepts 22-16 AWG copper wires

- Mounting: A: 2.750" Track Mount, See MT212 Series on page 152. MT212 Mounting Track Sold Separately.
  - B: 35mm x 7.5mm symmetrical DIN rail EN50022 C: Screw Mount, See DS80625 on page 153. DS80625 Self-Tapping Drill Screws Sold Separately.
  - D: Current Sensor Mount, See RIBXG Series on page 94 or RIBXK Series on page 93. Current Sensors Sold Separately.

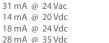
Approvals: UL Listed, UL508, C-UL, CE, RoHS Gold Flash: No Override Switch: No

# **RELAY MOUNTING OPTIONS A & B**

Mounting Option A: 2.75" Track Mount MT212 Series



**Mounting Option B:** 35mm x 7.5mm symmetrical DIN rail EN50022



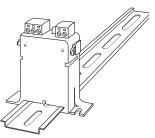
Coil Current (RIBAN24C):

26 mA @ 20 Vac

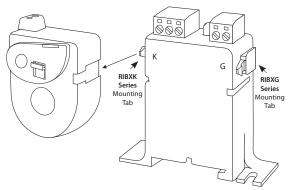
Coil Current (RIBAN12C): 53 mA @ 10 Vac 62 mA @ 12 Vac 29 mA @ 11 Vdc 35 mA @ 12 Vdc

#### Notes:

 Set of replacement terminals available. Order model number: TS-AN



# CURRENT SENSOR MOUNTING OPTION D



1. Slide current sensor onto corresponding mounting tab.

Contact Ratings:

1/2 HP @ 125 Vac

1/4 HP @ 277 Vac

24 Vac/dc; 50-60 Hz

12 Vac/dc ; 50-60 Hz

Pull In = 9 Vac / 11 Vdc

Drop Out = 3 Vac / 3.8 Vdc

Drop Out = 2 Vac / 2.5 Vdc

Pull In = 20 Vac / 20 Vdc

1 HP @ 250 Vac

C300 Pilot Duty

10 Amp General Use @ 277 Vac

10 Amp Resistive @ 30 Vdc (N/O)

7 Amp Resistive @ 30 Vdc (N/C)

Coil Voltage Input (RIBAN24C):

Coil Voltage Input (RIBAN12C):

- 2. Snap into place.
- 3. Depress tab to remove current sensor.



# **15 AMP TRACK MOUNT CONTROL RELAYS**

### RIBM12C

4.00<sup>"</sup>Track Mount Relay 15 Amp SPDT with 12 Vac/dc Coil

# Comr N/C 0 -0 Comm -0 12 Vac/d N/O $\bigcirc$ 0

### **SPECIFICATIONS**

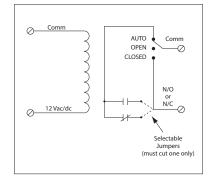
# # Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIBM12C)

Operating Temperature: -30 to 140° F Operate Time: 6ms

One (1) SPST Continuous Duty Coil (RIBM12S) Expected Relay Life: 10 million cycles minimum mechanical Humidity Range: 5 to 95% (noncondensing) Relay Status: LED On = Activated Dimensions: 1.250" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: No Override Switch: No (RIBM12C) Yes (RIBM12S)

# RIBM12S

4.00" Track Mount Relay 15 Amp SPST + Override with 12 Vac/dc Coil





E



Cut N/C RELAYS

# **Contact Ratings:**

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac C300 Pilot Duty

**Coil Current:** 53 mA @ 10 Vac 62 mA @ 12 Vac 29 mA @ 11 Vdc 36 mA @ 12 Vdc **Coil Voltage Input:** 

12 Vac/dc : 50-60 Hz Drop Out = 2 Vac / 2.5 Vdc Pull In = 9 Vac / 11 Vdc

#### Notes:

(UL

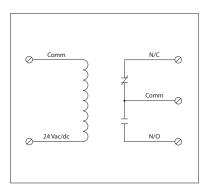
US

 Must cut appropriate jumper to select Normally Open or Normally Closed (RIBM12S)

# **15 AMP TRACK MOUNT CONTROL RELAYS**

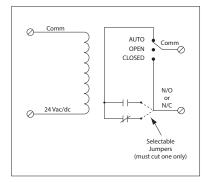
# RIBM24C

4.00" Track Mount Relay 15 Amp SPDT with 24 Vac/dc Coil



# RIBM24S

4.00" Track Mount Relay 15 Amp SPST + Override with 24 Vac/dc Coil







### **SPECIFICATIONS**

# Relays & Contact Type:	One (1) SPDT Continuous Duty Coil (RIBM24C) One (1) SPST Continuous Duty Coil (RIBM24S)
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	бms
Relay Status:	LED On = Activated
Dimensions:	1.250″ x 4.000″ x 1.750″
Track Mount:	4.000", See MT4 Series on page 152
	MT4 Mounting Track Sold Separately
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Gold Flash:	No
Override Switch:	No (RIBM24C)
	Yes (RIBM24S)

#### **Contact Ratings:**

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac C300 Pilot Duty

#### **Coil Current:** 26 mA @ 20 Vac 31 mA @ 24 Vac 48 mA @ 35 Vac 14 mA @ 20 Vdc 18 mA @ 24 Vdc 28 mA @ 35 Vdc

#### **Coil Voltage Input:** 24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc

#### Notes:

 Must cut appropriate jumper to select Normally Open or Normally Closed (RIBM24S)

15

Cut for N/C

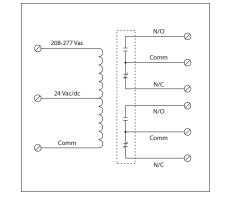
# **RIBM2401D**

4.00" Track Mount Relay 10 Amp DPDT with 24 Vac/dc/120 Vac Coil

#### N/O -0 120 Va 0 Comm 0 N/C 0 24 Vac/do N/O -0 Comm Comm $\bigcirc$ -0 N/C

# RIBM2402D

4.00" Track Mount Relay 10 Amp DPDT with 24 Vac/dc/208-277 Vac Coil









# **SPECIFICATIONS**

RELAYS

# Relays & Contact Type: One (1) DPDT Continuous Duty Coil Operating Temperature: -30 to 140° F Operate Time: 8ms

Expected Relay Life: 10 million cycles minimum mechanical Humidity Range: 5 to 95% (noncondensing) Relay Status: LED On = Activated Dimensions: 1.700" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS

Gold Flash: No Override Switch: No

#### **Contact Ratings:**

10 Amp Resistive @ 30 Vdc 10 Amp General Use @ 277 Vac 1/2 HP @ 120/240 Vac (N/O) 1/3 HP @ 120/240 Vac (N/C) B300 Pilot Duty 120 Vac 30A Make 3A Break (360 VA) 240 Vac 15 A Make 1.5A Break (360 VA) 208 Vac 17.3A Make 1.73A Break (360 VA) 277 Vac 13A Make 1.3A Break (360 VA) 24 Vac 30A Make 5A Break (120VA) 5A Max

#### Coil Current:

24 mA @ 18 Vac 20 mA @ 20 Vdc 32 mA @ 24 Vac 24 mA @ 24 Vdc 40 mA @ 30 Vac 36 mA @ 30 Vdc 31 mA @ 120 Vac (RIBM2401D) 36 mA @ 208-277 Vac (RIBM2402D)

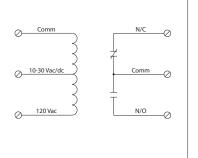
### Coil Voltage Input:

24 Vac/dc; 120 Vac; 50-60 Hz (RIBM2401D) 24 Vac/dc; 208-277 Vac; 50-60 Hz (RIBM2402D) Drop Out = 3 Vac / 3.8 Vdc Pull In = 18 Vac / 20 Vdc

# **15 AMP TRACK MOUNT CONTROL RELAYS**

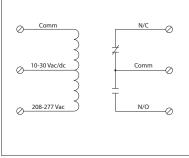
# RIBMU1C

4.00" Track Mount Relay 15 Amp SPDT with 10-30 Vac/dc/120 Vac Coil



# **RIBMH1C**

4.00" Track Mount Relay 15 Amp SPDT with 10-30 Vac/dc/208-277 Vac Coil









# **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 1.250" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: Yes

Override Switch: No

# **Contact Ratings:** 15 Amp Inductive @ 150 Vac 15 Amp Resistive @ 150 Vac, 28 Vdc 10 Amp Resistive @ 277 Vac

480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)

Coil Current:				
33 mA @	10 Vac	13 mA	@	10 Vdc
35 mA @	12 Vac	15 mA	@	12 Vdc
46 mA @	24 Vac	18 mA	@	24 Vdc
55 mA @	30 Vac	20 mA	@	30 Vdc
28 mA @	120 Vac (	RIBMU1	C)	
39 mA @	208-277	Vac (RIB	ΛН	1C)

#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMU1C) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMH1C) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

# RIBMU1S

4.00" Track Mount Relay 15 Amp SPST-N/O + Override with 10-30 Vac/dc/120 Vac Coil

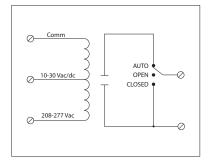
#### Comm 0 AUTO 10-30 Vac/do OPEN . 0 0-CLOSED 120 Vac 0 0

# **SPECIFICATIONS**

#### # Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 1.275" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: Yes Override Switch: Yes

# **RIBMH1S**

4.00" Track Mount Relay 15 Amp SPST-N/O + Override with 10-30 Vac/dc/208-277 Vac Coil



**Contact Ratings:** 

15 Amp Resistive @ 150 Vac

10 Amp Resistive @ 277 Vac

480 VA Pilot Duty @ 277 Vac

Not rated for Electronic Ballast

1/6 HP @ 120-240 Vac (N/C)

Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

1/4 HP @ 277 Vac (N/O)

1/8 HP @ 277 Vac (N/C)

Coil Voltage Input:

600 Watt Tungsten @ 120 Vac (N/O)

240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O)

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMU1S) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMH1S)

480 VA Ballast @ 277 Vac

# CE Ande in US/ Buy American' of ARRA 2009



RELAYS

#### Coil Current:

33 mA @	10 Vac	13 mA @	10 Vdc
35 mA @	12 Vac	15 mA @	12 Vdc
46 mA @	24 Vac	18 mA @	24 Vdc
55 mA @	30 Vac	20 mA @	30 Vdc
28 mA @	120 Vac (RIBN	1U1S)	
39 mA @	208-277 Vac (	RIBMH1S)	

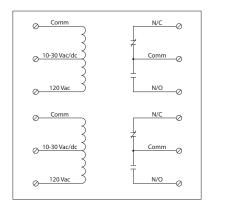
#### Notes:

 Order Normally Closed by adding "-NC" to end of model number

# **15 AMP TRACK MOUNT CONTROL RELAYS**

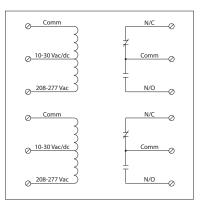
#### **RIBMU2C**

4.00" Track Mount Relays 15 Amp 2 SPDT with 10-30 Vac/dc/120 Vac Coil



# RIBMH2C

4.00<sup>°′</sup> Track Mount Relays 15 Amp 2 SPDT with 10-30 Vac/dc/208-277 Vac Coil









LISTED

Made in USA Meets **"Buy American** of ARRA 2009

# **SPECIFICATIONS**

# Relays & Contact Type: Two (2) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 2.450" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: Yes Override Switch: No

#### **Contact Ratings:**

15 Amp Inductive @ 150 Vac 15 Amp Resistive @ 150 Vac, 28 Vdc 10 Amp Resistive @ 277 Vac 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)

#### Coil Current

Con Curre	:n.		
33 mA @	10 Vac	13 mA @	10 Vdc
35 mA @	12 Vac	15 mA @	12 Vdc
46 mA @	24 Vac	18 mA @	24 Vdc
55 mA @	30 Vac	20 mA @	30 Vdc
28 mA @	120 Vac (RI	IBMU2C)	
39 mA @	208-277 Va	ac (RIBMH20	<u>(</u> )

#### Coil Voltage Input:

10-30 Vac/dc; 120 Vac; 50-60 Hz (RIBMU2C) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMH2C) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

# RIBMU1SM-250

**SPECIFICATIONS** 

Operating Temperature: -30 to 140° F

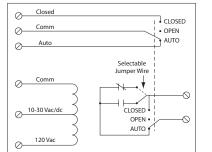
Operate Time: 20ms

Gold Flash: Yes

Override Switch: Yes + Monitor

RELAYS

4.00" Track Mount Relay 15 Amp SPST + Override + Monitor with 10-30 Vac/dc/ 120 Vac Coil



# Relays & Contact Type: One (1) SPST Continuous Duty Coil

Humidity Range: 5 to 95% (noncondensing)

Dimensions: 2.000" x 4.000" x 1.750"

Relay Status: LED On = Activated

Expected Relay Life: 10 million cycles minimum mechanical

Track Mount: 4.000", See MT4 Series on page 152

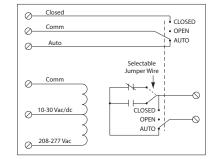
Approvals: UL Listed, UL916, UL864, C-UL

MT4 Mounting Track Sold Separately

California State Fire Marshal, CE, RoHS

# **RIBMH1SM-250**

4.00" Track Mount Relay 15 Amp SPST + Override + Monitor with 10-30 Vac/dc/ 208-277 Vac Coil



**Contact Ratings:** 

Coil Voltage Input:

15 Amp Resistive @ 125 Vac

10 Amp Resistive @ 250 Vac

1/3 HP for N/O @ 120-240 Vac

1/6 HP for N/C @ 120-240 Vac

Drop Out = 2.1 Vac / 2.8 Vdc

Pull In = 9 Vac / 10 Vdc

345 VA Pilot Duty @ 120/240 Vac (N/O)

211 VA Pilot Duty @ 120/240 Vac (N/C)

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMU1SM-250)

10-30 Vac/dc; 208-277 Vac; 50-60 Hz (RIBMH1SM-250)







**Coil Current:** 

33 mA @ 10 Vac 13 mA @ 10 Vdc 15 mA @ 12 Vdc 35 mA @ 12 Vac 46 mA @ 24 Vac 18 mA @ 24 Vdc 20 mA @ 30 Vdc 55 mA @ 30 Vac 28 mA @ 120 Vac (RIBMU1SM-250) 39 mA @ 208-277 Vac (RIBMH1SM-250)

#### Notes:

Normally Open or Normally Closed

selected by yellow jumper wire Second pole of override switch can be

connected to digital-in of controller to

report position of override switch

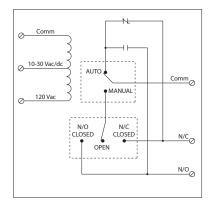
• Rating of second pole is 50 Vac/dc,

0.25 Amp max

### **15 AMP TRACK MOUNT CONTROL RELAYS**

# **RIBMU1SC**

4.00" Track Mount Relay 15 Amp SPDT + Override with 10-30 Vac/dc/120 Vac Coil



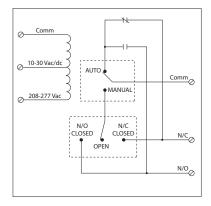
### **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 1.500" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS

Gold Flash: Yes Override Switch: Yes (2)

# RIBMH1SC

4.00" Track Mount Relay 15 Amp SPDT + Override with 10-30 Vac/dc/208-277 Vac Coil



Contact Ratings:

15 Amp Resistive @ 150 Vac

10 Amp Resistive @ 277 Vac

480 VA Pilot Duty @ 277 Vac

Not rated for Electronic Ballast

1/3 HP @ 120-240 Vac (N/O)

1/6 HP @ 120-240 Vac (N/C)

1/4 HP @ 277 Vac (N/O)

1/8 HP @ 277 Vac (N/C)

600 Watt Tungsten @ 120 Vac (N/O)

240 Watt Tungsten @ 120 Vac (N/C)

480 VA Ballast @ 277 Vac

US E Made in USA RoHS Meets **"Buy American** of ARRA 2009





#### **Coil Current:**

33 mA @ 10 Vac 13 mA @ 10 Vdc 15 mA @ 12 Vdc 35 mA @ 12 Vac 18 mA @ 24 Vdc 46 mA @ 24 Vac 55 mA @ 30 Vac 20 mA @ 30 Vdc 28 mA @ 120 Vac (RIBMU1SC) 39 mA @ 208-277 Vac (RIBMH1SC)

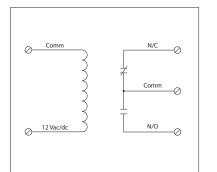
#### Coil Voltage Input:

10-30 Vac/dc; 120 Vac; 50-60 Hz (RIBMU1SC) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMH1SC) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

# **15 AMP TRACK MOUNT CONTROL RELAYS**

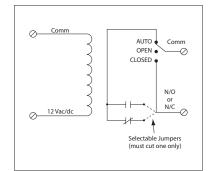
# RIBMN12C

2.75" Track Mount Relay 15 Amp SPDT with 12 Vac/dc Coil



# RIBMN12S

2.75" Track Mount Relay 15 Amp SPST + Override with 12 Vac/dc Coil





# RELAYS

for N/C

### SPECIFICATIONS

# # Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIBMN12C)

One (1) SPST Continuous Duty Coil (RIBMN12S) Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 6ms Relay Status: LED On = Activated Dimensions: 1.100" x 2.750" x 1.750" (RIBMN12C) 1.250" x 2.750" x 1.750"(RIBMN12S) Track Mount: 2.750", See MT212 Series on page 152 MT212 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: No Override Switch: No (RIBMN12C) Yes (RIBMN12S)

# **Contact Ratings:**

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac C300 Pilot Duty

Coil Voltage Input:

12 Vac/dc ; 50-60 Hz Drop Out = 2 Vac / 2.5 Vdc Pull In = 9 Vac / 11 Vdc

#### Notes:

Coil Current:

53 mA @ 10 Vac

62 mA @ 12 Vac

29 mA @ 11 Vdc

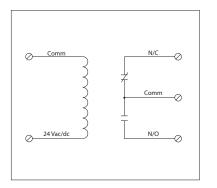
35 mA @ 12 Vdc

 Must cut appropriate jumper to select Normally Open or Normally Closed (RIBMN12S)

# **15 AMP TRACK MOUNT CONTROL RELAYS**

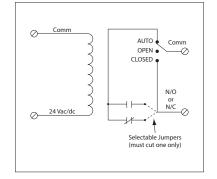
# **RIBMN24C**

2.75" Track Mount Relay 15 Amp SPDT with 24 Vac/dc Coil

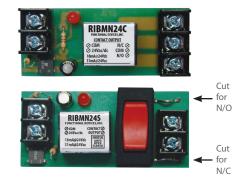


# RIBMN24S

2.75" Track Mount Relay 15 Amp SPST + Override with 24 Vac/dc Coil







#### **SPECIFICATIONS**

# Relays & Contact Type:	One (1) SPDT Continuous Duty Coil (RIBMN24C) One (1) SPST Continuous Duty Coil (RIBMN24S)
Expected Relay Life:	10 million cycles minimum mechanical
Operating Temperature:	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	6ms
Relay Status:	LED On = Activated
Dimensions (RIBMN24C):	1.100″ x 2.750″ x 0.750″ (without track)
	1.100″ x 2.750″ x 1.250″ (including track)
Dimensions (RIBMN24S):	1.250″ x 2.750″ x 1.000″ (without track)
	1.250″ x 2.750″ x 1.500″ (including track)
Track Mount:	2.750", See MT212 Series on page 152
	MT212 Mounting Track Sold Separately
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Gold Flash:	No
O State Construction	

#### **Contact Ratings:**

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac C300 Pilot Duty

# Coil Current:

26 mA @ 20 Vac 31 mA @ 24 Vac 48 mA @ 35 Vac 14 mA @ 20 Vdc 18 mA @ 24 Vdc 28 mA @ 35 Vdc

#### Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc

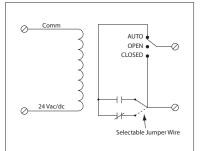
#### Notes:

 Must cut appropriate jumper to select Normally Open or Normally Closed (RIBMN24S)

Override Switch: No (RIBMN24C), Yes (RIBMN24S)

# **RIBMN24S-J**

2.75" Track Mount Relay 15 Amp SPST + Override with 24 Vac/dc Coil and Jumper Selectable Output



# **SPECIFICATIONS**

RELAYS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical
 Operating Temperature: -30 to 140° F
 Humidity Range: 5 to 95% (noncondensing)
 Operate Time: 6ms
 Relay Status: LED On = Activated
 Dimensions: 1.250″ x 2.750″ x 1.750″
 Track Mount: 2.750″, See MT212 Series on page 152 MT212 Mounting Track Sold Separately
 Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
 Gold Flash: No

Override Switch: Yes

#### **Contact Ratings:**

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac C300 Pilot Duty Coil Current: 26 mA @ 20 Vac 31 mA @ 24 Vac 48 mA @ 35 Vac 14 mA @ 20 Vdc 18 mA @ 24 Vdc 28 mA @ 35 Vdc Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc

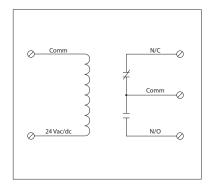
#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire.

# **15 AMP TRACK MOUNT CONTROL RELAYS**

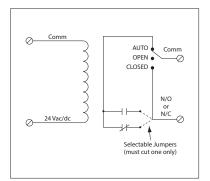
# **RIBMN24C-4T**

Four 2.75" Track Mount Relays 15 Amp SPDT with 24 Vac/dc Coil and 2.75" x 6.00" Mounting Track



# RIBMN24S-4T

Four 2.75" Track Mount Relays 15 Amp SPST + Override with 24 Vac/dc Coil and 2.75" x 6.00" Mounting Track











Made in USA Meets "Buy American" of ARRA 2009

Drop Out = 3 Vac / 3.8 Vdc

. Pull In = 20 Vac / 20 Vdc

# **SPECIFICATIONS**

# Relays & Contact Type:	Four (4) SPDT Continuous Duty Coils (RIBMN24C-4T)	Co
	Four (4) SPST Continuous Duty Coils (RIBMN24S-4T)	15
Expected Relay Life:	10 million cycles minimum mechanical	10
<b>Operating Temperature:</b>	-30 to 140° F	10
Humidity Range:	5 to 95% (noncondensing)	7 A
Operate Time:	бms	1/2
Relay Status:	LED On = Activated	11
Dimensions:	6.000" x 2.750" x 1.150" (RIBMN24C-4T)	1/4
	6.000" x 2.750" x 1.500" (RIBMN24S-4T)	C3
Track Mount:	2.750″ x 6.000″ ; MT212-6 Mounting Track Included	
Approvals:	UL Listed, UL916, UL864, C-UL	
	California State Fire Marshal, CE, RoHS	
Gold Flash:	No	
Override Switch:	No (RIBMN24C-4T)	
	Yes (RIBMN24S-4T)	

#### ontact Ratings:

5 Amp General Use @ 125 Vac 0 Amp General Use @ 277 Vac 0 Amp Resistive @ 30 Vdc (N/O) Amp Resistive @ 30 Vdc (N/C) /2 HP @ 125 Vac HP @ 250 Vac /4 HP @ 277 Vac 300 Pilot Duty

# Coil Current: Coil Voltage Input: 26 mA @ 20 Vac 24 Vac/dc ; 50-60 Hz

26 mA @ 20 Vac 31 mA @ 24 Vac 48 mA @ 35 Vac 14 mA @ 20 Vdc 18 mA @ 24 Vdc 28 mA @ 35 Vdc

# Notes:

Must cut appropriate jumper to select Normally
 Open or Normally Closed (RIBMN24S-4T)

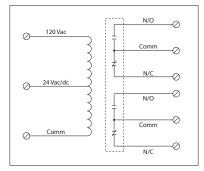






# RIBMN2401D

2.75" Track Mount Relay 10 Amp DPDT with 24 Vac/dc/120 Vac Coil



# SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical
 Operating Temperature: -30 to 140° F
 Humidity Range: 5 to 95% (noncondensing)
 Operate Time: 8ms
 Relay Status: LED On = Activated
 Dimensions: 1.700″ x 2.750″ x 1.750″
 Track Mount: 2.750″, See MT212 Series on page 152
 MT212 Mounting Track Sold Separately
 Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
 Gold Flash: No

#### Contact Ratings:

10 Amp Resistive @ 30 Vdc 10 Amp General Use @ 277 Vac 1/2 HP @ 120/240 Vac (N/O) 1/3 HP @ 120/240 Vac (N/C) <u>8300 Pilot Duty</u> 120 Vac 30A Make 3A Break (360 VA) 240 Vac 15 A Make 1.5A Break (360 VA) 208 Vac 17.3A Make 1.73A Break (360 VA) 277 Vac 13A Make 1.3A Break (360 VA) 24 Vac 30A Make 5A Break (120VA) 5A Max

Coil Current: 36 mA @ 30Vdc 24 mA @ 18 Vac

32 mA @ 24 Vac

40 mA @ 30 Vac

31 mA @ 120 Vac

Coil Voltage Input:

RIB O

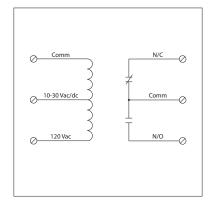
200

24 Vac/dc ; 120 Vac ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 18 Vac / 20 Vdc

# **15 AMP TRACK MOUNT CONTROL RELAYS**

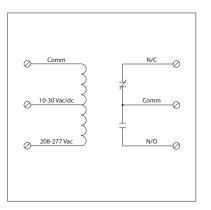
### **RIBMNU1C**

2.75" Track Mount Relay 15 Amp SPDT with 10-30 Vac/dc/120 Vac Coil



# RIBMNH1C

2.75" Track Mount Relay 15 Amp SPDT with 10-30 Vac/dc/208-277 Vac Coil









-

# SPECIFICATIONS

	One (1) SPDT Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	1.700″ x 2.750″ x 1.750″
Track Mount:	2.750", See MT212 Series on page 152
	MT212 Mounting Track Sold Separately
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Gold Flash:	Yes
Override Switch:	No

#### **Contact Ratings:**

15 Amp Resistive @ 150 Vac, 28Vdc 15 Amp Inductive @ 150 Vac 10 Amp Resistive @ 120-277 Vac, 28 Vdc 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/C) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/C) 1/8 HP @ 277 Vac (N/C)

# Coil Current:

33 mA @ 10 Vac 13 mA @ 10 Vdc 35 mA @ 12 Vac 15 mA @ 12 Vdc 46 mA @ 24 Vac 18 mA @ 24 Vdc 55 mA @ 30 Vac 20 mA @ 30 Vdc 28 mA @ 120 Vac (RIBMNU1C) 39 mA @ 208-277 Vac (RIBMNH1C)

#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMNU1C) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMNH1C) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

Made in US

Buy American of ARRA 2009

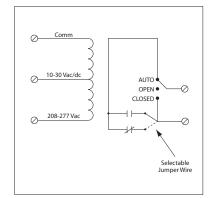
# **RIBMNU1S**

2.75" Track Mount Relay 15 Amp SPST + Override with 10-30 Vac/dc/120 Vac Coil

#### Comm $\oslash$ 10-30 Vac/d 0 AUTO OPEN • 0 CLOSED ( 120 Va $\oslash$ 0 Selectable Jumper Wir

# **RIBMNH1S**

2.75" Track Mount Relay 15 Amp SPST + Override with 10-30 Vac/dc/208-277 Vac Coil





# CE Made in USA



# **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 2.500" x 2.750" x 1.750" Track Mount: 2.750", See MT212 Series on page 152 MT212 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: Yes Override Switch: Yes

# Contact Ratings:

15 Amp Resistive @ 150 Vac 10 Amp Resistive @ 277 Vac 480 VA Pilot Duty @ 277 Vac 480 VA Ballast @ 277 Vac Not rated for Electronic Ballast 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)

#### Coil Voltage Input:

10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMNU1S) 10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMNH1S) Drop Out = 2.1 Vac / 2.8 Vdc Pull In = 9 Vac / 10 Vdc

#### Coil Current:

COM 10-30Wao/d

13 mA @ 10 Vdc 33 mA @ 10 Vac 35 mA @ 12 Vac 15 mA @ 12 Vdc 46 mA @ 24 Vac 18 mA @ 24 Vdc 55 mA @ 30 Vac 20 mA @ 30 Vdc 28 mA @ 120 Vac (RIBMNU1S) 39 mA @ 208-277 Vac (RIBMNH1S)

#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire

# **POWER RELAYS: 20–30 AMPS**

Enclosed | T Style | Track Mount



Made in the U.S.A. Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

# **ENCLOSED POWER RELAYS**

		COIL	VOLTAGE					
MODEL #	(h)	AC/DC	AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIB2401B	•	24	120	1	SPDT			24
RIB2402B	•	24	208-277	1	SPDT			24
RIB2401SB	•	24	120	1	SPST	1		25
RIB2402SB	•	24	208-277	1	SPST	1		25
RIB2421B	•	24	120/208-277	1	SPDT			25
RIB2421SB	•	24	120/208-277	1	SPST	1		25
RIB01P	•		120	1	DPDT			26
RIB02P	•		208-277	1	DPDT			27
RIB347P	•		347	1	DPDT		NEW	27
RIB04P	•		480	1	DPDT			28
RIB2401SBC	•	24	120	1	SPDT	2 <sup>1</sup>		26
RIB2402SBC	•	24	208-277	1	SPDT	2 <sup>1</sup>		26
RIB243P	• 3	24		1	3PST			28
RIB013P	•		120	1	3PST			29
RIB023P	•		208-277	1	3PST			29
RIB043P	•		480	1	3PST			30
RIB24Z	•	24		1	1 SPST N/O, 1 SPST N/C			30
RIB12P	•	12		1	DPDT			31
RIB12P30	•	12		1	DPDT			31
RIB24P	•	24		1	DPDT			31
RIB24P30	•	24		1	DPDT			31
RIB01P30	•		120	1	DPST			32
RIB01P30-S	•		120	1	DPST	1		32
RIB02P30	•		208-277	1	DPST			32

# **T STYLE POWER RELAYS**

		COIL	OLTAGE					
MODEL #	$( \label{eq:matrix} )$	AC/DC	AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBT24B	•	24		1	SPDT			33
RIBT2401B	•	24	120	1	SPDT			33
RIBTD2401B	•	24	120	1	SPDT		2	35
RIBT2402B	•	24	208-277	1	SPDT			33
RIBT242B	•	24		2	2 SPDT			36
RIBT243B	• 3	24		3	2 SPST, 1 SPDT			36
RIBT24SB	•	24		1	SPST	1		33
RIBT2401SB	•	24	120	1	SPST	1		34
RIBT2402SB	•	24	208-277	1	SPST	1		34
RIBT2401SBC	•	24	120	1	SPDT	2 <sup>1</sup>		34
RIBT2402SBC	•	24	208-277	1	SPDT	2 <sup>1</sup>		34
RIBT24P	•	24		1	DPDT			36
RIBT24Z	•	24		1	1 SPST N/O, 1 SPST N/C			37
RIBT243P	• 3	24		1	3PST			37

🕒 = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

 $\mathbf{1} = SPDT$  with override requires 2 switches

2 = Time Delay

3 = UL Listed : UL916 Energy Management ; USA & Canada

# **TRACK MOUNT POWER RELAYS**

COIL VOLTAGE								
MODEL #	(h)	AC/DC	AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBM2401B	•	24	120	1	SPDT			38
RIBM2402B	•	24	208-277	1	SPDT			38
RIBM2401SB	•	24	120	1	SPST	1		38
RIBM2402SB	•	24	208-277	1	SPST	1		38
RIBM2401SBC	•	24	120	1	SPDT	2 <sup>1</sup>		39
RIBM2402SBC	•	24	208-277	1	SPDT	2 <sup>1</sup>		39
RIBM24ZN	<i>91</i>	24		1	DPDT			39
RIBM24ZL	•	24		1	DPST			40
RIBMN24ZL	•	24		1	DPST			40
RIBM243PN	91	24		1	3PDT			41
RIBM013PN	<i>91</i>		120	1	3PDT			41
RIBM023PN	<i>91</i>		208-277	1	3PDT			42
RIBM043PN	<i>91</i>		480	1	3PDT			42
RIBM043PN-HD	<i>91</i>		480	1	3PDT			43

(U) = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

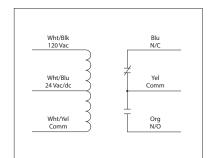
🔁 = UL Component Recognized : UL916 Energy Management; USA & Canada

```
1 = SPDT with override requires 2 switches
```

# **20 AMP POWER CONTROL RELAYS**

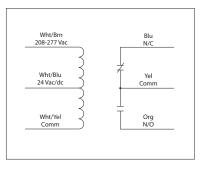
# **RIB2401B**

Enclosed Relay 20 Amp SPDT with 24 Vac/dc/120 Vac Coil



# **RIB2402B**

Enclosed Relay 20 Amp SPDT with 24 Vac/dc/208-277 Vac Coil





# SPECIFICATIONS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30° x 3.20° x 1.80° with .50° NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No
Override Switch: No

# Contact Ratings:

20 Amp Resistive @ 277 Vac 5 Amp Resistive @ 480 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

## Coil Current:

 S0 mA @ 18 Vac
 33 mA @ 22 Vdc

 83 mA @ 24 Vac
 35 mA @ 24 Vdc

 47 mA @ 120 Vac (RIB2401B)
 47 mA @ 30 Vdc

 69 mA @ 208-277 Vac (RIB2402B)

#### Coil Voltage Input:

24 Vac/dc; 120 Vac; 50-60 Hz (RIB2401B) 24 Vac/dc; 208-277 Vac; 50-60 Hz (RIB2402B) Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

# **20 AMP POWER CONTROL RELAYS**

# **RIB2401SB**

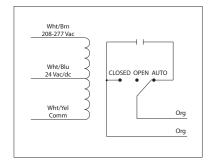
Enclosed Relay 20 Amp SPST-N/O + Override with 24 Vac/dc/120 Vac Coil

# Wht/Blk 120 Vad Wht/Blu CLOSED OPEN AUTO 24 Vac/do Wht/Yel Org Comm Org

# SPECIFICATIONS

# **RIB2402SB**

Enclosed Relay 20 Amp SPST-N/O + Override with 24 Vac/dc/208-277 Vac Coil



Contact Ratings:

20 Amp Resistive @ 277 Vac

Not rated for Electronic Ballast

20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C)

10 Amp Tungsten @ 120 Vac (N/O)



#### Coil Current

con curre					
50 mA @	18 Vac	33 mA	@	22 Vdc	
83 mA @	24 Vac	35 mA	@	24 Vdc	
47 mA @	120 Vac (RIB2401SB)	47 mA	@	30 Vdc	
69 mA @	208-277 Vac (RIB2402SE	3)			

#### Notes:

 Order Normally Closed by adding "-NC" to end of model number

# Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 2.30" x 3.20" x 1.80" with .50" NPT Nipple Wires: 16″, 600V Rated Approvals: UL Listed, UL916, UL864, UL508, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: Yes

#### 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac

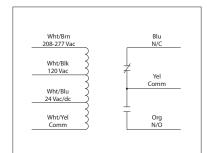
1 HP @ 120 Vac

Coil Voltage Input: 24 Vac/dc ; 120 Vac ; 50-60 Hz (RIB2401SB) 24 Vac/dc; 208-277 Vac; 50-60 Hz (RIB2402SB) Drop Out = 2.1 Vac / 3.8 Vdc . Pull In = 18 Vac / 22 Vdc

### **20 AMP POWER CONTROL RELAYS**

# **RIB2421B**

Enclosed Relay 20 Amp with 24 Vac/dc/208-277 Vac/120 Vac Coil

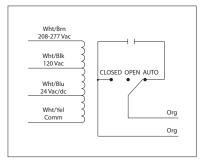


### SPECIFICATIONS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIB2421B) One (1) SPST Continuous Duty Coil (RIB2421SB) Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 2.30" x 3.20" x 1.80" with .50" NPT Nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: No (RIB2421B) Yes (RIB2421SB)

# RIB2421SB

Enclosed Relay 20 Amp + Override with 24 Vac/dc/208-277 Vac/120 Vac Coil



Contact Ratings (RIB2421B):

20 Amp Resistive @ 277 Vac

5 Amp Resistive @ 480 Vac

20 Amp Ballast @ 277 Vac

770 VA Pilot Duty @ 120 Vac

1,110 VA Pilot Duty @ 277 Vac

16 Amp Electronic Ballast @ 277 Vac (N/O)

Coil Voltage Input:

120 Vac ; 50-60 Hz

24 Vac/dc; 208-277 Vac;

10 Amp Tungsten @ 120 Vac (N/O)



# **GREAT SERVICE TRUCK RELAY** ONE RELAY COVERS MOST APPLICATIONS

#### Contact Ratings (RIB2421SB):

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) Not rated for Electronic Ballast 10 Amp Tungsten @ 120 Vac (N/O) . 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

#### Notes:

 Order Normally Closed by adding "-NC" to end of model number (RIB2421SB)

69 mA @ 208-277 Vac Drop Out = 2.1 Vac / 3.8 Vdc . Pull In = 18 Vac / 22 Vdc 47 mA @ 30 Vdc

2 HP @ 277 Vac

1 HP @ 120 Vac

83 mA @ 24 Vac

47 mA @ 120 Vac

Coil Current:

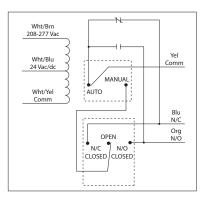
# RIB2401SBC

Enclosed Relay 20 Amp SPDT + Override with 24 Vac/dc/120 Vac Coil

#### Wht/Blk 120 Vac Yel Wht/Blu Comm 24 Vac/do MANUAL Wht/Yel AUTO Comm Rh N/C Org N/O OPEN ¶ N/O N/C CLOSED CLOSED

# RIB2402SBC

Enclosed Relay 20 Amp SPDT + Override with 24 Vac/dc/208-277 Vac Coil





# **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms **Relay Status:** LED On = Activated Dimensions: 2.30" x 3.20" x 1.80" with .50" NPT Nipple Wires: 16″, 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: Yes (2)

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) Not rated for Electronic Ballast 10 Amp Tungsten @ 120 Vac (N/O) 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

Coil Cu	irre	ent:
50 mA	0	18

con curre					
50 mA @	18 Vac	33	mΑ	@	22 Vdc
83 mA @	24 Vac	35	mΑ	@	24 Vdc
47 mA @	120 Vac (RIB2401SBC)	47	mΑ	@	30 Vdc
69 mA @	208-277 Vac (RIB2402SBC)				

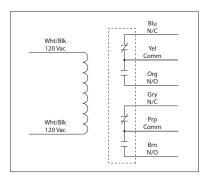
#### **Coil Voltage Input:**

24 Vac/dc; 120 Vac; 50-60 Hz (RIB2401SBC) 24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIB2402SBC) Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

# **20 AMP POWER CONTROL RELAY**

# RIB01P

Enclosed Relay 20 Amp DPDT with 120 Vac Coil



# **SPECIFICATIONS**

# Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT Nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: No

# **Contact Ratings:**

20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

Coil Current: 105 mA @ 120 Vac

.

**Coil Voltage Input:** 120 Vac : 50-60 Hz Drop Out = 35 Vac Pull In = 85 Vac

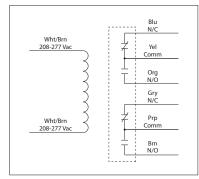
LISTED

HS

Made in USA "Buy American" of ARRA 2009

# **RIB02P**

Enclosed Relay 20 Amp DPDT with 208-277 Vac Coil



CUU US LISTED CE CE CE CE CE Made in DA Meets "By American" of ARRA 2009

# SPECIFICATIONS

· · · ·	One (1) DPDT Continuous Duty Coil 10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	4.00" x 4.00" x 1.80" with .50" NPT Nipple
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	No

Contact Ratings: 20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac *Not rated for Electronic Ballast* 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 2 HP @ 480-600 Vac

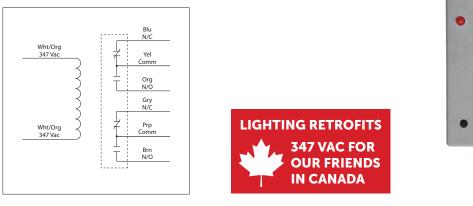
1 HP @ 120 Vac

**Coil Current:** 105 mA @ 208-277 Vac **Coil Voltage Input:** 208-277 Vac ; 50-60 Hz Drop Out = 60 Vac Pull In = 160 Vac

# 20 AMP POWER CONTROL RELAY

# RIB347P

Enclosed Relay 20 Amp DPDT with 347 Vac Coil





# **SPECIFICATIONS**

# Relays & Contact Type:	One (1) DPDT Continuous Duty Coil	c
Expected Relay Life:	10 million cycles minimum mechanical	2
<b>Operating Temperature:</b>	-30 to 140° F	2
Humidity Range:	5 to 95% (noncondensing)	1
Operate Time:	18ms	2
Relay Status:	LED On = Activated	Λ
Dimensions:	4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple	7
Wires:	16″, 600V Rated	1
Approvals:	UL Listed, UL916, C-UL, CE, RoHS	
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1	
Gold Flash:	Yes	
Override Switch:	No	

#### Contact Ratings:

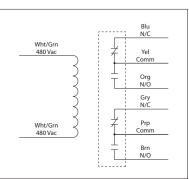
20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac Coil Current: 105 mA @ 347 Vac

**Coil Voltage Input:** 347 Vac ; 50-60 Hz Drop Out = 70 Vac Pull In = 295 Vac

# **20 AMP POWER CONTROL RELAY**

# RIB04P

Enclosed Relay 20 Amp DPDT with 480 Vac Coil



# SPECIFICATIONS

# Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relav Status: LED On = Activated Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT Nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: No

#### **Contact Ratings:**

20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

Coil Current: 105 mA @ 480 Vac

Coil Voltage Input: 480 Vac ; 50-60 Hz Drop Out = 140 Vac Pull In = 340 Vac

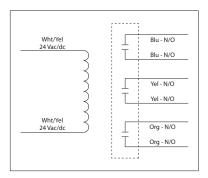
Made in USA

Meets **"Buy Americar** of ARRA 2009

#### **20 AMP POWER CONTROL RELAY**

### RIB243P

Enclosed Relay 20 Amp 3PST-N/O with 24 Vac/dc Coil



# **SPECIFICATIONS**

# Relays & Contact Type: One (1) 3PST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT Nipple Wires: 16″, 600V Rated Approvals: UL Listed, UL916, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: No

#### Contact Ratings:

20 Amp Resistive @ 300 Vac, 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac, 1 Phase 1158 VA Pilot Duty @ 240 Vac, 1 Phase 1110 VA Pilot Duty @ 277 Vac, 1 Phase 1640 VA Pilot Duty @ 480 Vac, 1 Phase 1466 VA Pilot Duty @ 240 Vac, 3 Phase 2112 VA Pilot Duty @ 480 Vac, 3 Phase Heavy Pilot Duty @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240-277 Vac, 1 Phase 1 HP @ 120 Vac, 1 Phase





**Coil Current:** 210 mA @ 24 Vac

154 mA @ 30 Vdc

#### Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 22 Vdc

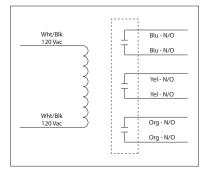
#### Notes:

 Order Normally Closed by adding "-NC" to end of model number

# **20 AMP POWER CONTROL RELAY**

# RIB013P

Enclosed Relay 20 Amp 3PST-N/O with 120 Vac Coil



# SPECIFICATIONS

# Relays & Contact Type: One (1) 3PST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 4.00° x 4.00° x 1.80° with .50° NPT Nipple Wires: 16°, 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No
Override Switch: No

# Contact Ratings:

20 Amp Resistive @ 300 Vac, 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac, 1 Phase 1158 VA Pilot Duty @ 240 Vac, 1 Phase 1110 VA Pilot Duty @ 277 Vac, 1 Phase 1640 VA Pilot Duty @ 480 Vac, 1 Phase 1466 VA Pilot Duty @ 240 Vac, 3 Phase 2112 VA Pilot Duty @ 480 Vac, 3 Phase Heavy Pilot Duty @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240-277 Vac, 1 Phase 1 HP @ 120 Vac, 1 Phase

ISTED

RoHS

Made in USA Meets "Buy American of ARRA 2009

Coil Current: 154 mA @ 120 Vac

#### Coil Voltage Input:

120 Vac ; 50-60 Hz Drop Out = 35 Vac Pull In = 85 Vac

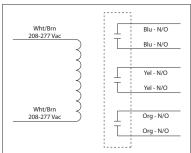
#### Notes:

• Order Normally Closed by adding "-NC" to end of model number

# 20 AMP POWER CONTROL RELAY

# RIB023P

Enclosed Relay 20 Amp 3PST-N/O with 208-277 Vac Coil



# •



Made in USA Meets Buy American

### Coil Current: 187 mA @ 208-277 Vac

#### Coil Voltage Input:

208-277 Vac ; 50-60 Hz Drop Out = 60 Vac Pull In = 160 Vac

#### Notes:

 Order Normally Closed by adding "-NC" to end of model number

# SPECIFICATIONS

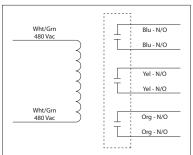
# Relays & Contact Type: One (1) 3PST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT Nipple Wires: 16", 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, ROHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No
Override Switch: No

# Contact Ratings:

20 Amp Resistive @ 300 Vac, 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac, 1 Phase 1158 VA Pilot Duty @ 240 Vac, 1 Phase 1110 VA Pilot Duty @ 277 Vac, 1 Phase 1640 VA Pilot Duty @ 480 Vac, 1 Phase 1466 VA Pilot Duty @ 240 Vac, 3 Phase 2112 VA Pilot Duty @ 480 Vac, 3 Phase Heavy Pilot Duty @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240-277 Vac, 1 Phase 1 HP @ 120 Vac, 1 Phase

# RIB043P

Enclosed Relay 20 Amp 3PST-N/O with 480 Vac Coil



# **SPECIFICATIONS**

	One (1) 3PST Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	4.00" x 4.00" x 1.80" with .50" NPT Nipple
Wires:	16", 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No
Override Switch:	No

#### **Contact Ratings:**

20 Amp Resistive @ 300 Vac, 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac, 1 Phase 1158 VA Pilot Duty @ 240 Vac, 1 Phase 1110 VA Pilot Duty @ 277 Vac, 1 Phase 1640 VA Pilot Duty @ 480 Vac, 1 Phase 1466 VA Pilot Duty @ 240 Vac, 3 Phase 2112 VA Pilot Duty @ 480 Vac, 3 Phase Heavy Pilot Duty @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240-277 Vac, 1 Phase 1 HP @ 120 Vac, 1 Phase

. CE RoHS Made in USA Buy American of ARRA 2009

#### **Coil Current:**

132 mA @ 480 Vac

#### Coil Voltage Input:

480 Vac ; 50-60 Hz Drop Out = 140 Vac Pull In = 340 Vac

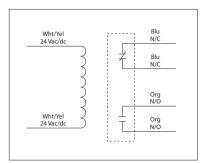
#### Notes:

• Order Normally Closed by adding "-NC" to end of model number

# **30 AMP POWER CONTROL RELAY**

### RIB24Z

Enclosed Relay 30 Amp SPST-N/O + SPST-N/C with 24 Vac/dc Coil



### **SPECIFICATIONS**

# Relays & Contact Type:	One (1) SPST-N/O + SPST-N/C Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
Operating Temperature:	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	2.30" x 3.20" x 1.80" with .50" NPT Nipple
Wires:	16", 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	No



### Coil Current:

110 mA @ 20 Vac 138 mA @ 24 Vac 55 mA @ 20 Vdc 55 mA @ 24 Vdc 77 mA @ 30 Vdc

Coil Voltage Input: 24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc

CE

 $\checkmark$ 

Made in USA

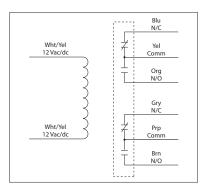
# RIB12P

Enclosed Relay 20 Amp DPDT with 12 Vac/dc Coil

#### Blu N/C Wht/Ye 12 Vac/d Yel Comm Ora N/0 Gry N/C Wht/Ye Prp 12 Vac/dc lomm Ι Brn Τ N/O

# **RIB12P30**

Enclosed Relay 30 Amp DPDT with 12 Vac/dc Coil





RELAYS

# **SPECIFICATIONS**

# Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 2.30" x 3.20" x 1.80" with .50" NPT Nipple (RIB12P) 2.30" x 3.20" x 1.80" with .75" NPT Nipple (RIB12P30) Wires: 16", 600V Rated Approvals: UL Listed, UL60947, C-UL, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: No

Contact Ratings: (RIB12P) 20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

Contact Ratings: (RIB12P30) 30 Amp Resistive @ 300 Vac 25 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1110 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

#### **Coil Current:**

115 mA @ 10 Vac 180 mA @ 12 Vac 79 mA @ 11 Vdc 90 mA @ 12 Vdc 115 mA @ 15 Vdc

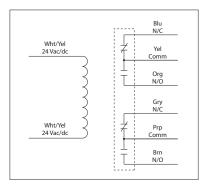
#### **Coil Voltage Input:**

12 Vac/dc ; 50-60 Hz Drop Out = 4.5 Vac / 4.8 Vdc Pull In = 9.7 Vac / 11 Vdc

# 20 / 30 AMP POWER CONTROL RELAYS

# RIB24P

Enclosed Relay 20 Amp DPDT with 24 Vac/dc Coil

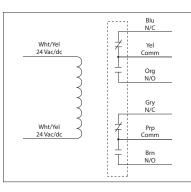


# **SPECIFICATIONS**

# Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 2.30" x 3.20" x 1.80" with .50" NPT Nipple (RIB24P) 2.30" x 3.20" x 1.80" with .75" NPT Nipple (RIB24P30) Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, UL60947, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: No

# **RIB24P30**

Enclosed Relay 30 Amp DPDT with 24 Vac/dc Coil





Contact Ratings: (RIB24P) 20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

Contact Ratings: (RIB24P30) 30 Amp Resistive @ 300 Vac 25 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1110 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

#### **Coil Current:**

110 mA @ 20 Vac 138 mA @ 24 Vac 55 mA @ 20 Vdc 55 mA @ 24 Vdc 77 mA @ 30 Vdc

#### Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc . Pull In = 20 Vac / 20 Vdc

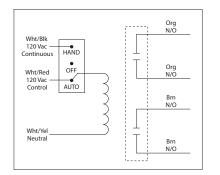
# **RIB01P30**

Enclosed Relay 30 Amp DPST-N/O with 120 Vac Coil

# Wht/Blk 0rg 120 Vac I Wht/Blk I Wht/Blk Brn N/O I Brn N/O Wht/Blk I 120 Vac I

# RIB01P30-S

Enclosed Relay 30 Amp DPST-N/O + Coil Side Override with 120 Vac Coil





# SPECIFICATIONS

RELAYS

# Relays & Contact Type: One (1) DPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00° x 4.00° x 1.80° with .50° NPT Nipple
Wires: 16°, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, ROHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes
Override Switch: No (RIB01P30) Coil Side (RIB01P30-S)

#### Contact Ratings:

30 Amp Resistive @ 300 Vac 25 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac *Not rated for Electronic Ballast* 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1110 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac Coil Current: 105 mA @ 120 Vac

Control Input: (RIB01P30-S) Wht/BIk = 120 Vac Continuous Wht/Red = 120 Vac Control Wht/Yel = Neutral

#### Notes:

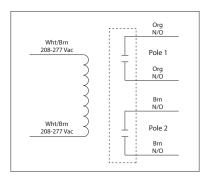
- Order Both Poles Normally Closed by adding "-NC" to end of model number
- Order Pole 1 Normally Open and Pole 2 Normally Closed by adding "-NONC" to end of model number

#### Coil Voltage Input: 120 Vac ; 50-60 Hz Drop Out = 35 Vac Pull In = 85 Vac

# **30 AMP POWER CONTROL RELAY**

# **RIB02P30**

Enclosed Relay 30 Amp DPST-N/O with 208-277 Vac Coil



### **SPECIFICATIONS**

# Relays & Contact Type: One (1) DPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 4.00° x 4.00° x 1.80° with .50° NPT Nipple Wires: 16°, 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: No

#### **Contact Ratings:**

30 Amp Resistive @ 300 Vac 25 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac *Not rated for Electronic Ballast* 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac 1110 VA Pilot Duty @ 240 Vac 1110 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac



**Coil Voltage Input:** 208-277 Vac ; 50-60 Hz Drop Out = 60 Vac Pull In = 160 Vac

### Notes:

Coil Current:

105 mA @ 208-277 Vac

- Order Both Poles Normally Closed by adding "-NC" to end of model number
- Order Pole 1 Normally Open and Pole 2 Normally Closed by adding "-NONC" to end of model number

# **20 AMP POWER CONTROL RELAYS**

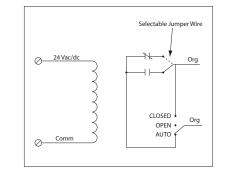
### **RIBT24B**

Enclosed Relay Hi/Low Separation 20 Amp SPDT with 24 Vac/dc Coil

# Blu ⊘ 24 Vac/dc Yel Comn Org Comm N/Ō 0

# **RIBT24SB**

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override with 24 Vac/dc Coil







# SPECIFICATIONS

#### # Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIBT24B) One (1) SPST Continuous Duty Coil (RIBT24SB) Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT Nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: No (RIBT24B) Yes (RIBT24SB)

Contact Ratings (RIBT24B): 20 Amp Resistive @ 277 Vac 5 Amp Resistive @ 480 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

Coil Current:

75 mA @ 24 Vac

30 mA @ 22 Vdc

32 mA @ 24 Vdc 42 mA @ 30 Vdc

#### Coil Voltage Input: 45 mA @ 18 Vac

24 Vac/dc ; 50-60 Hz Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

С

#### Contact Ratings (RIBT24SB):

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) Not rated for Electronic Ballast 10 Amp Tungsten @ 120 Vac (N/O) 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

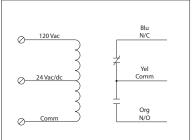
#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire (RIBT24SB)

### **20 AMP POWER CONTROL RELAYS**

# **RIBT2401B**

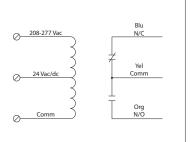
Enclosed Relay Hi/Low Separation 20 Amp SPDT with 24 Vac/dc/120 Vac Coil



# **SPECIFICATIONS**

# Enclosed Relay Hi/Low Separation 20 Amp SPDT with 24 Vac/dc/208-277 Vac Coil

RIBT2402B





	One (1) SPDT Continuous Duty Coil 10 million cycles minimum mechanical
Operating Temperature:	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No
Override Switch:	No

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 5 Amp Resistive @ 480 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

#### C

Coll Curre	ent:				
50 mA @	18 Vac	33	mΑ	@	22 Vdc
83 mA @	24 Vac	35	mΑ	@	24 Vdc
47 mA @	120 Vac (RIBT2401B)	47	mΑ	@	30 Vdc
69 mA @	208-277 Vac (RIBT2402B	)			

#### **Coil Voltage Input:**

24 Vac/dc; 120 Vac; 50-60 Hz (RIBT2401B) 24 Vac/dc; 208-277 Vac; 50-60 Hz (RIBT2402B) Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

# RIBT2401SB

120 Va

24 Vac/do

Comr

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RELAYS

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override with 24 Vac/dc/120 Vac Coil

# eparation 20 Amp Enclosed Relay Hi/Low Separation 20 Amp SPST Vac/dc/120 Vac Coil + Override with 24 Vac/dc/208-277 Vac Coil

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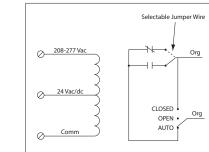
Org

Selectable Jumper Wire

CLOSED

OPEN •

AUTO



RIBT2402SB



CE

# SPECIFICATIONS

# Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT Nipple
Wires: 16", 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No
Override Switch: Yes

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) Not rated for Electronic Ballast 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

### Coil Voltage Input:

24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBT2401SB) 24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBT2402SB) Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

#### Coil Current:

50 mA @ 18 Vac 83 mA @ 24 Vac 47 mA @ 120 Vac (RIBT24015B) 69 mA @ 208-277 Vac (RIBT2402SB) 33 mA @ 22 Vdc 35 mA @ 24 Vdc 47 mA @ 30 Vdc

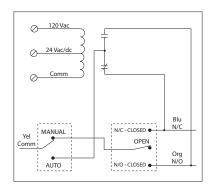
#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire

#### **20 AMP POWER CONTROL RELAYS**

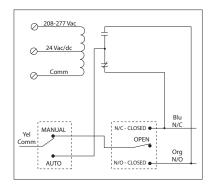
# RIBT2401SBC

Enclosed Relay Hi/Low Separation 20 Amp SPDT + Override with 24 Vac/dc/120 Vac Coil



# RIBT2402SBC

Enclosed Relay Hi/Low Separation 20 Amp SPDT + Override with 24 Vac/dc/208-277 Vac Coil







#### SPECIFICATIONS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 4.00° x 4.00° x 1.80° with .50° NPT Nipple Wires: 16°, 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: Yes (2)

#### Contact Ratings:

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) *Not rated for Electronic Ballast* 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

#### Coil Voltage Input:

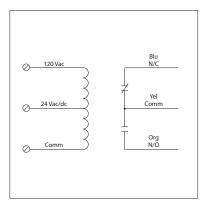
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBT2401SBC) 24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBT2402SBC) Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

# Coil Current:

50 mA @ 18 Vac 83 mA @ 24 Vac 47 mA @ 120 Vac (RIBT24015BC) 69 mA @ 208-277 Vac (RIBT24025BC) 33 mA @ 22 Vdc 35 mA @ 24 Vdc 47 mA @ 30 Vdc

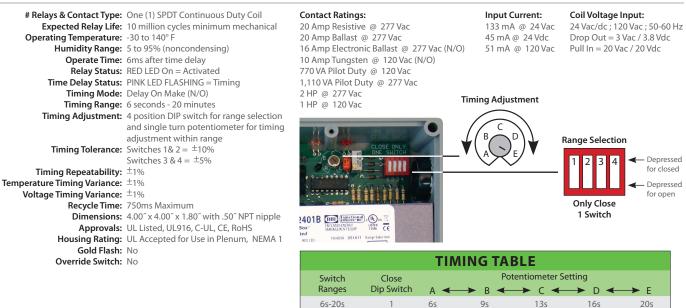
# RIBTD2401B

Enclosed Time Delay Relay 20 Amp SPDT with 24 Vac/dc/120 Vac Coil





# **SPECIFICATIONS**



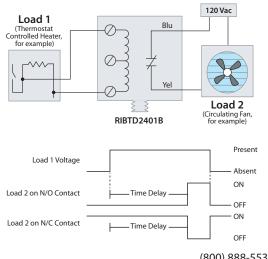
22s-1min15s

1min30s-5min

6min-20min

#### Time Delay Application Example #1

Load 2 stays ON selected amount of time after Load 1 turns ON (N/C) Load 2 stays OFF selected amount of time after Load 1 turns ON (N/O)



### Time Delay Application Example #2 (Requires an Inverting Relay)

50s

3min20s

13min20s

365

2min10s

9min

225

1min30s

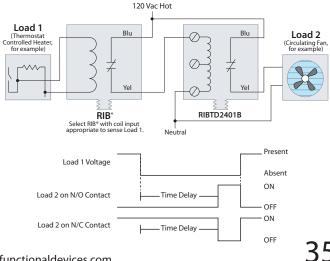
6min

2

3

4

Load 2 stays ON selected amount of time after Load 1 turns OFF (N/C) Load 2 stays OFF selected amount of time after Load 1 turns OFF (N/O)



35

1min15s

5min

20min

1min4s

4min16s

17min20s

(800) 888-5538 www.functionaldevices.com

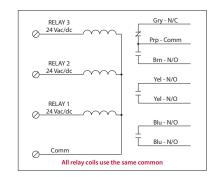
# RIBT242B

Enclosed Relays Hi/Low Separation 20 Amp 2 SPDT with 24 Vac/dc Coil

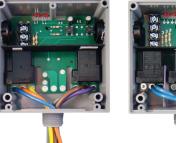
# RELAY 2 24 Vac/dc RELAY 1 24 Vac/dc RELAY 1 24 Vac/dc Blu - N/C Yel - Comm Org - N/O All relay coils use the same common

# RIBT243B

Enclosed Relays Hi/Low Separation 20 Amp 2 SPST + 1 SPDT with 24 Vac/dc Coil









# SPECIFICATIONS

RELAYS

# # Relays & Contact Type: Two (2) SPDT Continuous Duty Coil (RIBT242B) Two (2) SPST + One (1) SPDT Continuous Duty Coil (RIBT243B) Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT Nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: No

# Contact Ratings:

20 Amp Resistive @ 277 Vac 5 Amp Resistive @ 480 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

#### Coil Current: 50 mA @ 18 Vac 83 mA @ 24 Vac 33 mA @ 22 Vdc 35 mA @ 24 Vdc 47 mA @ 30 Vdc

**Coil Voltage Input:** 24 Vac/dc ; 50-60 Hz Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

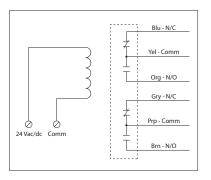
#### Notes:

RIBT243B not rated for UL864.

# **20 AMP POWER CONTROL RELAY**

# **RIBT24P**

Enclosed Relay Hi/Low Separation 20 Amp DPDT with 24 Vac/dc Coil



# SPECIFICATIONS

# Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00° x 4.00° x 1.80° with .50° NPT Nipple
Wires: 16°, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, ROHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes
Override Switch: No

# **Contact Ratings:**

20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 240 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

# Coil Current:

110 mA @ 20 Vac 138 mA @ 24 Vac 55 mA @ 20 Vdc 55 mA @ 24 Vdc 77 mA @ 30 Vdc

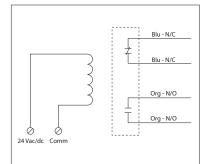
#### Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc

Meets Buy America of ARRA 200

# **RIBT24Z**

Enclosed Relay Hi/Low Separation 30 Amp SPST-N/O + SPST-N/C with 24 Vac/dc Coil



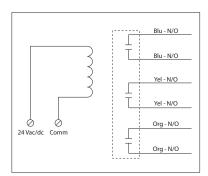
# SPECIFICATIONS

# Relays & Contact Type:	One (1) SPST-N/O + One (1) SPST-N/C Continuous Duty Coil
Expected Relay Life: Operating Temperature:	10 million cycles minimum mechanical -30 to 140° F
Humidity Range: Operate Time:	5 to 95% (noncondensing) 18ms
Relay Status:	LED On = Activated
	4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple 16″, 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Gold Flash:	165
Override Switch:	No

# **20 AMP POWER CONTROL RELAY**

### **RIBT243P**

Enclosed Relay Hi/Low Separation 20 Amp 3PST-N/O with 24 Vac/dc Coil



# **SPECIFICATIONS**

# Relays & Contact Type:	One (1) 3PST Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires:	16", 600V Rated
Approvals:	UL Listed, UL916, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No
Override Switch:	No

# Contact Ratings:

**Contact Ratings:** 

30 Amp Resistive @ 300 Vac 25 Amp Resistive @ 28 Vdc

20 Amp Ballast @ 277-480 Vac

Not rated for Electronic Ballast

15 Amp Resistive @ 600 Vac

770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

20 Amp Resistive @ 300 Vac, 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac, 1 Phase 1158 VA Pilot Duty @ 240 Vac, 1 Phase 1110 VA Pilot Duty @ 277 Vac, 1 Phase 1640 VA Pilot Duty @ 480 Vac, 1 Phase 1466 VA Pilot Duty @ 240 Vac, 3 Phase 2112 VA Pilot Duty @ 480 Vac, 3 Phase Heavy Pilot Duty @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240-277 Vac, 1 Phase 1 HP @ 120 Vac, 1 Phase



Coil Current: 110 mA @ 20 Vac 138 mA @ 24 Vac 55 mA @ 20 Vdc 55 mA @ 24 Vdc

77 mA @ 30 Vdc

**Coil Voltage Input:** 24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc



**Coil Current:** 210 mA @ 24 Vac 154 mA @ 30 Vdc Coil Voltage Input: 24 Vac/dc ; 50-60 Hz

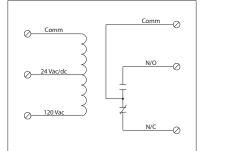
Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 22 Vdc

#### Notes:

Order Normally Closed by adding "-NC" to end of model number

### **RIBM2401B**

4.00" Track Mount Relay 20 Amp SPDT with 24 Vac/dc/120 Vac Coil



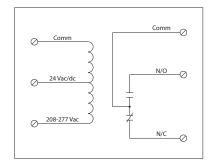
### SPECIFICATIONS

RELAYS

#### # Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 1.250" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: No Override Switch: No

**RIBM2402B** 

4.00<sup>"</sup> Track Mount Relay 20 Amp SPDT with 24 Vac/dc/208-277 Vac Coil



**Contact Ratings:** 





#### Coil Curront

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

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50 mA @	18 Vac	33 mA	@	22 Vdc
83 mA @	24 Vac	35 mA	@	24 Vdc
47 mA @	120 Vac (RIBM2401B)	47 mA	@	30 Vdc
69 mA @	208-277 Vac (RIBM2402B)			

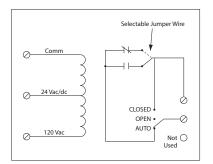
#### Coil Voltage Input:

24 Vac/dc; 120 Vac; 50-60 Hz (RIBM2401B) 24 Vac/dc; 208-277 Vac; 50-60 Hz (RIBM2402B) Drop Out = 2.1 Vac / 3.8 Vdc . Pull In = 18 Vac / 22 Vdc

#### **20 AMP TRACK MOUNT CONTROL RELAYS**

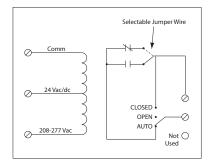
#### RIBM2401SB

4.00" Track Mount Relay 20 Amp SPST + Override with 24 Vac/dc/120 Vac Coil



#### RIBM2402SB

4.00" Track Mount Relay 20 Amp SPST + Override with 24 Vac/dc/208-277 Vac Coil





#### **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 1.600" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: No Override Switch: Yes

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) Not rated for Electronic Ballast 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

#### Coil Voltage Input:

24 Vac/dc; 120 Vac; 50-60 Hz (RIBM2401SB) 24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBM2402SB) Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

## Coil Current:

50 mA @ 18 Vac 33 mA @ 22 Vdc 83 mA @ 24 Vac 35 mA @ 24 Vdc 47 mA @ 120 Vac (RIBM2401SB) 47 mA @ 30 Vdc 69 mA @ 208-277 Vac (RIBM2402SB)

#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire

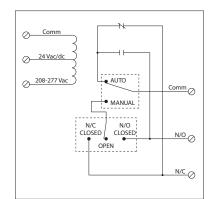
#### RIBM2401SBC

4.00" Track Mount Relay 20 Amp SPDT + Override with 24 Vac/dc/120 Vac Coil

#### Comm 0 24 Vac/do 0 AUTO 120 Vac $\mathcal{O}$ Comm Ø MANUAL N/C N/O <u>N/0</u> CLOSED CLOSED OPEN N/C Ø

### RIBM2402SBC

4.00" Track Mount Relay 20 Amp SPDT + Override with 24 Vac/dc/208-277 Vac Coil







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### SPECIFICATIONS

**Contact Ratings:** 20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) Not rated for Electronic Ballast 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

Coil	Current:

50 mA @	18 Vac	33 mA @	22 Vdc
83 mA @	24 Vac	35 mA @	24 Vdc
47 mA @	120 Vac (RIBM2401SBC)	47 mA @	30 Vdc
69 mA @	208-277 Vac (RIBM2402SBC)		

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#### **Coil Voltage Input:**

24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBM2401SBC) 24 Vac/dc; 208-277 Vac; 50-60 Hz (RIBM2402SBC) Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

California State Fire Marshal, CE, RoHS Gold Flash: No

Override Switch: Yes (2)

Operating Temperature: -30 to 140° F

Operate Time: 18ms

#### **30 AMP TRACK MOUNT CONTROL RELAY**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil

Humidity Range: 5 to 95% (noncondensing)

Dimensions: 2.350" x 4.000" x 1.750"

Relay Status: LED On = Activated

Expected Relay Life: 10 million cycles minimum mechanical

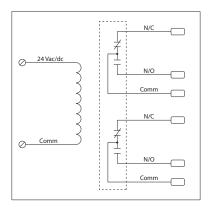
Track Mount: 4.000", See MT4 Series on page 152

Approvals: UL Listed, UL916, UL864, C-UL

MT4 Mounting Track Sold Separately

#### **RIBM24ZN**

4.00" Track Mount Relay 30 Amp DPDT with 24 Vac/dc Coil



### **SPECIFICATIONS**

# Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 1.600" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Component Recognized, UL916 C-UL, CE, RoHS Gold Flash: Yes Override Switch: No

#### **Contact Ratings:**

30 Amp Resistive @ 300 Vac 25 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 3 HP @ 480-600 Vac 2 HP @ 240/277 Vac 1 HP @ 120 Vac NEMA B600 Pilot Duty

# Coil Current:

110 mA @ 20 Vac 125 mA @ 24 Vac 55 mA @ 20 Vdc 55 mA @ 24 Vdc 70 mA @ 30 Vdc

#### **Coil Voltage Input:**

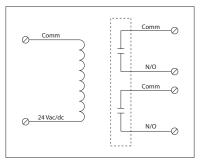
24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc

Functional CID : t CALUS MADE IN THE USA DB LED ON = RELAY ACTIVATE

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### RIBM24ZL

4.00" Track Mount Relay 30 Amp DPST-N/O with 24 Vac/dc Coil



### SPECIFICATIONS

RELAYS

· · · ·	One (1) DPST Continuous Duty Coil 10 million cycles minimum mechanical
1 5 1	5 to 95% (noncondensing)
Operate Time:	5,
	LED On = Activated
,	2.350" x 4.000" x 2.750"
	4.000 <sup>°</sup> , See MT4 Series on page 152
Hack Moulit.	
Approvals:	MT4 Mounting Track Sold Separately UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, ROHS
Gold Flash: Override Switch:	

#### **Contact Ratings:**

30 Amp Resistive @ 300 Vac 25 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 3 HP @ 480-600 Vac 2 HP @ 240/277 Vac 1 HP @ 120 Vac 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac



#### Coil Current:

110 mA @ 20 Vac 138 mA @ 24 Vac 55 mA @ 20 Vdc 55 mA @ 24 Vdc 77 mA @ 30 Vdc

#### Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

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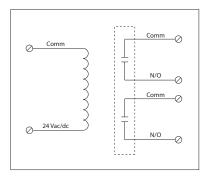
#### Notes:

· Order Normally Closed by adding "-NC" to end of model number

#### **30 AMP TRACK MOUNT CONTROL RELAY**

#### **RIBMN24ZL**

2.75" Track Mount Relay 30 Amp DPST-N/O with 24 Vac/dc Coil



#### **SPECIFICATIONS**

# Relays & Contact Type: One (1) DPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 2.350" x 2.750" x 2.750" Track Mount: 2.750", See MT212 Series on page 152 MT212 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: Yes Override Switch: No

#### **Contact Ratings:**

30 Amp Resistive @ 300 Vac 25 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240/277 Vac 1 HP @ 120 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1109 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac Heavy Pilot Duty @ 600 Vac

#### Coil Current:

110 mA @ 20 Vac 138 mA @ 24 Vac 55 mA @ 20 Vdc 55 mA @ 24 Vdc 77 mA @ 30 Vdc

**RIBMN24ZL** 

Functional RIB

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LED ON = RELAY ACTIVATED

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⊘ 24Vac ⊘ COM

#### Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

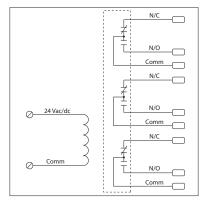
#### Notes:

 Order Normally Closed by adding "-NC" to end of model number

#### **30 AMP TRACK MOUNT CONTROL RELAY**

#### **RIBM243PN**

4.00" Track Mount Relay 30 Amp 3PDT with 24 Vac/dc Coil



#### **SPECIFICATIONS**

# Relays & Contact Type: One (1) 3PDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 2.450" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Component Recognized, UL916 C-UL, California State Fire Marshal, CE, RoHS Gold Flash: No Override Switch: No



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#### **Contact Ratings:**

30 Amp General Use @ 300 Vac 30 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240-277 Vac, 1 Phase 1 HP @ 120 Vac, 1 Phase

Heavy Pilot Duty @ 600 Vac 770 VA @ 120 Vac, 1 Phase 1158 VA @ 240 Vac, 1 Phase 1110 VA @ 277 Vac, 1 Phase 1640 VA @ 480 Vac, 1 Phase 1466 VA @ 240 Vac, 3 Phase 2122 VA @ 480 Vac, 3 Phase

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Coil Current: 190 mA @ 24 Vac

140 mA @ 30 Vdc

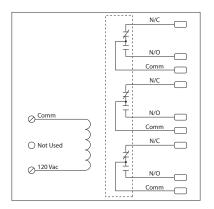
Coil Voltage Input:

24 Vac/dc; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 22 Vdc

#### **30 AMP TRACK MOUNT CONTROL RELAY**

#### **RIBM013PN**

4.00" Track Mount Relay 30 Amp 3PDT with 120 Vac Coil



#### SPECIFICATIONS

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Relays & Contact Type:	One (1) 3PDT Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechani
perating Temperature:	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	2.450″ x 4.000″ x 1.750″
Track Mount:	4.000", See MT4 Series on page 152
	MT4 Mounting Track Sold Separately
Approvals:	UL Component Recognized, UL916,
	C-UL, California State Fire Marshal, C
Gold Flash:	No
Override Switch:	No

nimum mechanical nsing) 50″ es on page 152 Sold Separately ognized, UL916, UL864 e Fire Marshal, CE, RoHS

#### **Contact Ratings:**

30 Amp General Use @ 300 Vac 30 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240-277 Vac, 1 Phase 1 HP @ 120 Vac, 1 Phase

Heavy Pilot Duty @ 600 Vac 770 VA @ 120 Vac, 1 Phase 1158 VA @ 240 Vac, 1 Phase 1110 VA @ 277 Vac, 1 Phase 1640 VA @ 480 Vac, 1 Phase 1466 VA @ 240 Vac, 3 Phase 2122 VA @ 480 Vac, 3 Phase

### Coil Current:

140 mA @ 120 Vac

Coil Voltage Input: 120 Vac ; 50-60 Hz Drop Out = 35 Vac Pull In = 85 Vac

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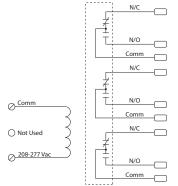
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### RIBM023PN

4.00" Track Mount Relay 30 Amp 3PDT with 208-277 Vac Coil



### **SPECIFICATIONS**

RELAYS

# Relays & Contact Type: One (1) 3PDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 2.450" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Component Recognized, UL916, UL864

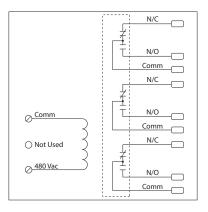
Override Switch: No

C-UL, California State Fire Marshal, CE, RoHS Gold Flash: No

### **30 AMP TRACK MOUNT CONTROL RELAY**

### RIBM043PN

4.00" Track Mount Relay 30 Amp 3PDT with 480 Vac Coil



### **SPECIFICATIONS**

# Relays & Contact Type: One (1) 3PDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms **Relay Status:** LED On = Activated Dimensions: 2.450" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Component Recognized, UL916, UL864 C-UL, California State Fire Marshal, CE, RoHS

Gold Flash: No Override Switch: No

#### Contact Ratings:

**Contact Ratings:** 

30 Amp General Use @ 300 Vac

20 Amp Ballast @ 277-480 Vac

Not rated for Electronic Ballast

15 Amp Resistive @ 600 Vac

3 HP @ 480-600 Vac, 1 Phase

2 HP @ 240-277 Vac, 1 Phase

7.5 HP @ 480 Vac, 3 Phase

5 HP @ 240 Vac, 3 Phase

1 HP @ 120 Vac, 1 Phase

30 Amp Resistive @ 28 Vdc

30 Amp General Use @ 300 Vac 30 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240-277 Vac, 1 Phase 1 HP @ 120 Vac, 1 Phase

Heavy Pilot Duty @ 600 Vac 770 VA @ 120 Vac, 1 Phase 1158 VA @ 240 Vac, 1 Phase 1110 VA @ 277 Vac, 1 Phase 1640 VA @ 480 Vac, 1 Phase 1466 VA @ 240 Vac, 3 Phase 2122 VA @ 480 Vac, 3 Phase

### Coil Current:

140 mA @ 480 Vac

#### Coil Voltage Input:

480 Vac/dc ; 50-60 Hz Drop Out = 140 Vac Pull In = 340 Vac

#### Notes:

 See model RIBM043PN-HD for use in more transient prone environments





#### 1158 VA @ 240 Vac, 1 Phase **Coil Voltage Input:** 208-277 Vac ; 50-60 Hz 1110 VA @ 277 Vac, 1 Phase 1640 VA @ 480 Vac, 1 Phase Drop Out = 60 Vac 1466 VA @ 240 Vac, 3 Phase Pull In = 160 Vac 2122 VA @ 480 Vac, 3 Phase

Heavy Pilot Duty @ 600 Vac

770 VA @ 120 Vac, 1 Phase

Coil Current:

170 mA @ 208-277 Vac

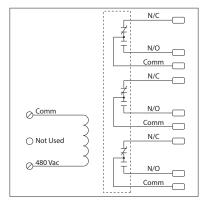






### **RIBM043PN-HD**

4.00" Track Mount Relay 30 Amp 3PDT with 480 Vac Coil (-HD for More Transient Prone Environments)



### **SPECIFICATIONS**

# Relays & Contact Type: One (1) 3PDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 20ms Relay Status: LED On = Activated Dimensions: 3.250" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Component Recognized, UL916, UL864 C-UL, California State Fire Marshal, CE, RoHS Gold Flash: No Override Switch: No

- **Contact Ratings:** 30 Amp General Use @ 300 Vac 30 Amp Resistive @ 28 Vdc 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 15 Amp Resistive @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240-277 Vac, 1 Phase 1 HP @ 120 Vac, 1 Phase



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Heavy Pilot Duty @ 600 Vac

770 VA @ 120 Vac, 1 Phase

1158 VA @ 240 Vac, 1 Phase

1110 VA @ 277 Vac, 1 Phase

1640 VA @ 480 Vac, 1 Phase

1466 VA @ 240 Vac, 3 Phase

2122 VA @ 480 Vac, 3 Phase

#### **Coil Current:** 140 mA @ 480 Vac

### Coil Voltage Input:

480 Vac/dc ; 50-60 Hz Drop Out = 140 Vac Pull In = 340 Vac

# **LATCHING RELAYS**

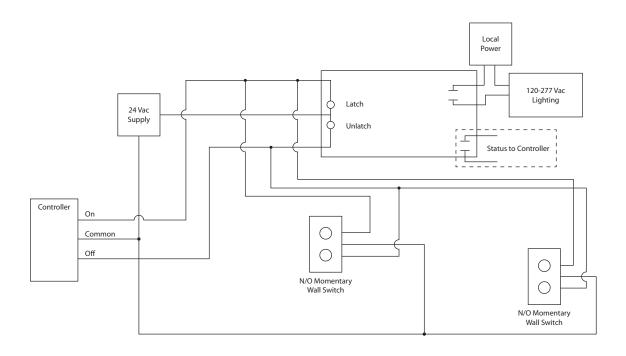
Enclosed



## **Features**

- Prepackaged for convenience
- Electromechanical relay
- Mechanically latching

- Status output contact
- Electronic ballast rating
- 20 Amp rating



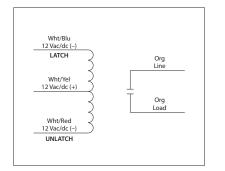
## **ENCLOSED LATCHING RELAYS**

		COIL VOLTAGE						
MODEL #	(h)	AC/DC	RELAYS	CONTACTS	OVERRIDE SWITCH	AUXILIARY OUTPUT	NOTES	SPEC PAGE
RIBL12B	•	12	1	SPST				45
RIBL12BM	•	12	1	SPST		•		45
RIBL12SB	•	12	1	SPST	•			45
RIBL12SBM	•	12	1	SPST	•	•		45
RIBL24B	•	24	1	SPST				46
RIBL24BM	•	24	1	SPST		•		46
RIBL24SB	•	24	1	SPST	•			46
RIBL24SBM	•	24	1	SPST	•	•		46

(U) = UL Listed : UL60947 Low-Voltage Switchgear and Controlgear

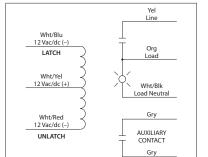
### RIBL12B

Enclosed Mechanically Latching Relay 20 Amp SPST with 12 Vac/dc Coil



## RIBL12BM

Enclosed Mechanically Latching Relay 20 Amp SPST with 12 Vac/dc Coil, Status LED and Auxiliary Output





**Coil Current:** 

182 mA @ 10 Vac

250 mA @ 12 Vac

165 mA @ 10 Vdc

198 mA @ 12 Vdc

250 mA @ 15 Vdc

Min. 10 Vdc / 11 Vac

Auxiliary Contact:

3 Amp @ 30 Vac/dc max.

Latch / Unlatch:

#### **SPECIFICATIONS**

 # Relays & Contact Type:
 One (1) SPST Latching Relay, Dual Coil Expected Relay Life:
 1 million cycles minimum mechanical
 Operating Temperature:
 -30 to 140° F
 Humidity Range:
 5 to 95% (noncondensing)
 Operate Time:
 50ms
 Maximum Pulse Length:
 30 seconds
 Relay Status / Auxiliary
 Contact Closed:
 LED On = Voltage Detected on Load Wire (RIBL12BM)
 Dimensions:
 1.70" x 2.80" x 1.50" with .50" NPT Nipple (RIBL12B)
 2.30" x 3.20" x 1.80" with .50" NPT Nipple (RIBL12BM)
 Wires:
 16", 600V Rated
 Approvals:
 UL Listed, UL60947, C-UL, CE, RoHS
 Housing Rating:
 UL Accepted for Use in Plenum, NEMA 1
 Gold Flash:
 No Contact Ratings:

20 Amp Resistive @ 120-277 Vac 20 Amp Ballast @ 120-277 Vac 16 Amp Electronic Ballast @ 120-277 Vac 5540 Watt Tungsten @ 277 Vac 720 VA Pilot Duty @ 120-277 Vac 2 HP @ 277 Vac 3 HP @ 240 Vac 1.5 HP @ 120 Vac

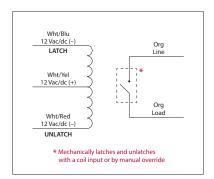
#### Notes:

- Application of voltage on latch coil (Wht/Blu & Wht/Yel) will close the contact.
- Application of voltage on unlatch coil (Wht/Red & Wht/Yel) will open the contact.
- Auxiliary contact and status LED activate when 120-277 Vac is applied between
- Load (Org) wire and Load Neutral (Wht/Blk) wire. (RIBL12BM)

### LATCHING RELAYS

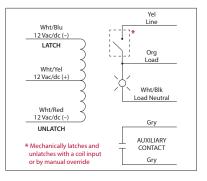
### **RIBL12SB**

Enclosed Mechanically Latching Relay 20 Amp SPST + Override with 12 Vac/dc Coil



### **RIBL12SBM**

Enclosed Mechanically Latching Relay 20 Amp SPST + Override with 12 Vac/dc Coil, Status LED and Auxiliary Output







Coil Current:

182 mA @ 10 Vac

250 mA @ 12 Vac

165 mA @ 10 Vdc

198 mA @ 12 Vdc

250 mA @ 15 Vdc

Min. 10 Vdc / 11 Vac

Auxiliary Contact: 3 Amp @ 30 Vac/dc max.

Latch / Unlatch:

#### **SPECIFICATIONS**

Expected Relay Life: Operating Temperature: Humidity Range: Operate Time: Maximum Pulse Length:	5 to 95% (noncondensing) 50ms
Relay Status / Auxiliary	
Contact Closed:	LED On = Voltage Detected on Load Wire (RIBL12SBM)
Dimensions:	1.70" x 2.80" x 1.50" with .50" NPT Nipple (RIBL12SB) 2.30" x 3.20" x 1.80" with .50" NPT Nipple (RIBL12SBM)
Wires:	16″, 600V Rated
Approvals:	UL Listed, UL60947, C-UL, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No
Override Switch:	Yes

#### **Contact Ratings:**

20 Amp Resistive @ 120-277 Vac 20 Amp Ballast @ 120-277 Vac 16 Amp Electronic Ballast @ 120-277 Vac 5540 Watt Tungsten @ 277 Vac 720 VA Pilot Duty @ 120-277 Vac 2 HP @ 277 Vac 3 HP @ 240 Vac 1.5 HP @ 120 Vac

#### Notes:

• Application of voltage on latch coil (Wht/Blu & Wht/Yel) will close the contact.

- Application of voltage on unlatch coil (Wht/Red & Wht/Yel) will close the contact.
- Application of voltage of unlater con (whit/ked & whit/ked whit/ked white contact
   Auxiliary contact and status LED activate when 120-277 Vac is applied between

Load (Org) wire and Load Neutral (Wht/Blk) wire. (RIBL12SBM)

### LATCHING RELAYS

### RIBL24B

Wht/Blu

24 Vac/dc (-

LATCH

Wht/Yel

24 Vac/dc (+)

Wht/Red

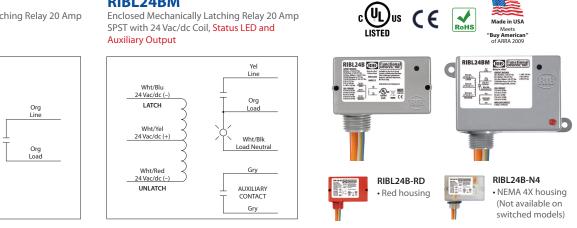
24 Vac/dc (-)

UNLATCH

RELAYS

Enclosed Mechanically Latching Relay 20 Amp SPST with 24 Vac/dc Coil

## **RIBL24BM**



### **SPECIFICATIONS**

Expected Relay Life:	5 to 95% (noncondensing)
Operating Temperature:	50ms
Dimensions: Wires: Approvals:	LED On = Voltage Detected on Load Wire (RIBL24BM) 1.70" x 2.80" x 1.50" with .50" NPT Nipple (RIBL24B) 2.30" x 3.20" x 1.80" with .50" NPT Nipple (RIBL24BM) 16", 600V Rated UL Listed, UL60947, C-UL, CE, RoHS UL Accepted for Use in Plenum, NEMA 1 No

#### **Contact Ratings:**

20 Amp Resistive @ 120-277 Vac 20 Amp Ballast @ 120-277 Vac 16 Amp Electronic Ballast @ 120-277 Vac 5540 Watt Tungsten @ 277 Vac 720 VA Pilot Duty @ 120-277 Vac 2 HP @ 277 Vac 3 HP @ 240 Vac 1.5 HP @ 120 Vac

#### Notes:

• Application of voltage on latch coil (Wht/Blu & Wht/Yel) will close the contact.

• Application of voltage on unlatch coil (Wht/Red & Wht/Yel) will open the contact.

**Coil Current:** 

175 mA @ 20 Vac

210 mA @ 24 Vac

92 mA @ 20 Vdc

110 mA @ 24 Vdc

138 mA @ 30 Vdc

Latch / Unlatch:

Min. 20 Vdc / 22 Vac

Auxiliary Contact: 3 Amp @ 30 Vac/dc max.

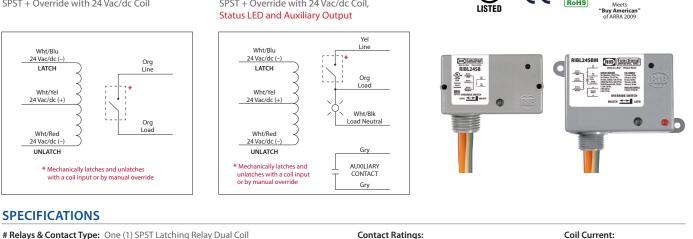
Auxiliary contact and status LED activate when 120-277 Vac is applied between

Load (Org) wire and Load Neutral (Wht/Blk) wire. (RIBL24BM)

### LATCHING RELAYS

### RIBL24SB

Enclosed Mechanically Latching Relay 20 Amp SPST + Override with 24 Vac/dc Coil



SF LCII ICATIONS			
# Relays & Contact Type:	One (1) SPST Latching Relay Dual Coil	Contact Ratings:	C
Expected Relay Life:	1 million cycles minimum mechanical	20 Amp Resistive @ 120-277 Vac	1
<b>Operating Temperature:</b>	-30 to 140° F	20 Amp Ballast @ 120-277 Vac	2
Humidity Range:	5 to 95% (noncondensing)	16 Amp Electronic Ballast @ 120-277 Vac	9
Operate Time:	50ms	5540 Watt Tungsten @ 277 Vac	1
Maximum Pulse Length:	30 seconds	720 VA Pilot Duty @ 120-277 Vac	13
Relay Status / Auxiliary		2 HP @ 277 Vac	Li
Contact Closed:	LED On = Voltage Detected on Load Wire (RIBL24SBM)	3 HP @ 240 Vac	M
Dimensions:	1.70″ x 2.80″ x 1.50″ with .50″ NPT Nipple (RIBL24SB) 2.30″ x 3.20″ x 1.80″ with .50″ NPT Nipple (RIBL24SBM)	1.5 HP @ 120 Vac	A
Wires:	16″, 600V Rated	Notes:	3
Approvals:	UL Listed, UL60947, C-UL, CE, RoHS	Application of voltage on latch coil (Wht/Blu &	Wht/Ye
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1	Application of voltage on unlatch coil (Wht/Re	
Gold Flash:	No	Auxiliary contact and status LED activate when	
Override Switch:	Yes	Load (Org) wire and Load Neutral (Wht/Blk) wi	

**RIBL24SBM** 

Enclosed Mechanically Latching Relay 20 Amp

SPST + Override with 24 Vac/dc Coil,

RoHS

Made in USA

175 mA @ 20 Vac 210 mA @ 24 Vac 92 mA @ 20 Vdc 110 mA @ 24 Vdc 138 mA @ 30 Vdc

Latch / Unlatch: Min. 20 Vdc / 22 Vac

Auxiliary Contact: 3 Amp @ 30 Vac/dc max.

Yel) will close the contact. ht/Yel) will open the contact.

277 Vac is applied between 3L24SBM)

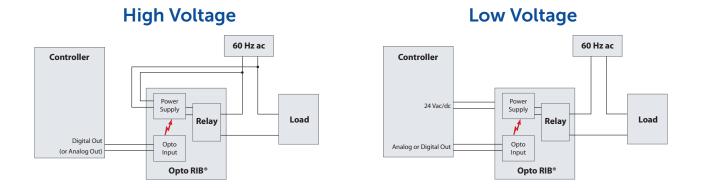
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**LOW-INPUT / OPTOISOLATED RELAYS** 

Enclosed | Track Mount



- Extremely low current draw on the input
- Control input can connect to AO for relay control
- Protect controller from feedback or voltage transients



• Optoisolated relays help isolate noisy loads from the controller. Good for controlling power relays from analog outputs.

### **ENCLOSED LOW-INPUT / OPTOISOLATED RELAYS**

MODEL #	(h)	CONTROL INPUT	POWER INPUT	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBTELC	•	5-25 Vac/dc	10-30 Vac/dc	1	SPDT			48
RIBTELS	•	5-25 Vac/dc	10-30 Vac/dc	1	SPST	1		48
RIBTE24B	•	5-25 Vac/dc	24 Vac/dc	1	SPDT			48
RIBTE01B	•	5-25 Vac/dc	120 Vac	1	SPDT			49
RIBTE02B	•	5-25 Vac/dc	208-277 Vac	1	SPDT			49
RIBTE24SB	•	5-25 Vac/dc	24 Vac/dc	1	SPST	1		50
RIBTE01SB	•	5-25 Vac/dc	120 Vac	1	SPST	1		50
RIBTE02SB	•	5-25 Vac/dc	208-277 Vac	1	SPST	1		51
RIBTE24P	•	5-25 Vac/dc	24 Vac/dc	1	DPDT			51
RIBTE01P	•	5-25 Vac/dc	120 Vac	1	DPDT			52
RIBTE02P	•	5-25 Vac/dc	208-277 Vac	1	DPDT			52
RIBTE01P-S	•	5-25 Vac/dc	120 Vac	1	DPDT	1		53
RIBTE02P-S	•	5-25 Vac/dc	208-277 Vac	1	DPDT	1		53

## **TRACK MOUNT LOW-INPUT / OPTOISOLATED RELAYS**

MODEL #	(h)	CONTROL INPUT	POWER INPUT	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBME2401B	•	5-25 Vac/dc	24 Vac/dc/120 Vac	1	SPDT			53
RIBME2402B	•	5-25 Vac/dc	24 Vac/dc/208-277 Vac	1	SPDT			53
RIBME2401SB	•	5-25 Vac/dc	24 Vac/dc/120 Vac	1	SPST	1		54
RIBME2402SB	•	5-25 Vac/dc	24 Vac/dc/208-277 Vac	1	SPST	1		54
RIBME2401P	•	5-25 Vac/dc	24 Vac/dc/120 Vac	1	DPST			54
RIBME2402P	•	5-25 Vac/dc	24 Vac/dc/208-277 Vac	1	DPST			54

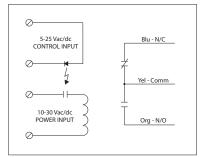
🕒 = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

RELAYS



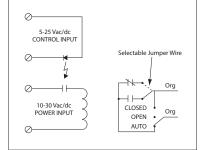
### **RIBTELC**

Enclosed Relay Hi/Low Separation 10 Amp SPDT, 10-30 Vac/dc Power Input + 5-25 Vac/dc Control Input



## RIBTELS

Enclosed Relay Hi/Low Separation 10 Amp SPST + Override, 10-30 Vac/dc Power Input + 5-25 Vac/dc Control Input









**Control Input Ratings:** 

.4 mA @ 5Vdc

.9 mA @ 10 Vdc

1 mA @ 12 Vdc

2 mA @ 24 Vdc

3 mA @ 24 Vac

(Non Polarized)

### SPECIFICATIONS

RELAYS

#

С

Power Input:	10-30 Vac/dc, 50-60 Hz
Control Input:	5-25 Vac/dc, 50-60 Hz
Relays & Contact Type:	One (1) SPDT Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
Operating Temperature:	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	20ms
Relay Status:	LED On = Activated
Dimensions:	4.00" x 4.00" x 1.80" with .50" NPT Nipple
Wires:	16", 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes (RIBTELC), No (RIBTELS)
Override Switch:	No (RIBTELC), Yes (RIBTELS)

#### **Contact Ratings:**

10 Amp Resistive @ 120-277 Vac 10 Amp Resistive @ 28 Vdc 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac *Not rated for Electronic Ballast* 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/C) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/C) 1/8 HP @ 277 Vac (N/C)

Power	Inp	out Ratings:
33 mA	@	10 Vac
35 mA	@	12 Vac
46 mA	@	24 Vac
55 mA	@	30 Vac
13 mA	@	10 Vdc
15 mA	@	12 Vdc
18 mA	@	24 Vdc
20 mA	@	30 Vdc

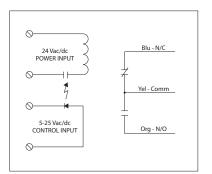
#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire (RIBTELS)

### LOW COIL INPUT RELAY

### **RIBTE24B**

Enclosed Relay Hi/Low Separation 20 Amp SPDT, 24 Vac/dc Power Input + 5-25 Vac/dc Control Input



### **SPECIFICATIONS**

Power Input: 24 Vac/dc, 50-60 Hz Control Input: 5-25 Vac/dc, 50-60 Hz # Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 4.00° x 4.00° x 1.80° with .50° NPT Nipple Wires: 16°, 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No

### Contact Ratings:

20 Amp Resistive @ 277 Vac 5 Amp Resistive @ 480 Vac 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/C) 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac 
 Power Input Ratings:

 50 mA @ 18 Vac

 83 mA @ 24 Vac

 33 mA @ 22 Vdc

 35 mA @ 24 Vdc

 47 mA @ 30 Vdc

Control Input Ratings: .4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc

3 mA @ 24 Vac

(Non Polarized)

LISTED

CE

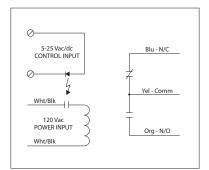
Made in USA

\*Buy American of ARRA 2009

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### **RIBTE01B**

Enclosed Relay Hi/Low Separation 20 Amp SPDT, 120 Vac Power Input + 5-25 Vac/dc Control Input



### **SPECIFICATIONS**

Control Input: # Relays & Contact Type: Expected Relay Life: Operating Temperature: Humidity Range: Operate Time: Relay Status:	5 to 95% (noncondensing)
	16", 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: Gold Flash: Override Switch:	110

Contact Ratings: 20 Amp Resistive @ 277 Vac 5 Amp Resistive @ 480 Vac 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac

RELAYS

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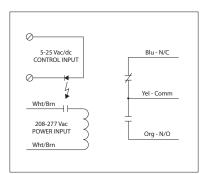
**Power Input Ratings:** 47 mA @ 120 Vac

**Control Input Ratings:** .4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vac (Non Polarized)

### LOW COIL INPUT RELAY

### **RIBTE02B**

Enclosed Relay Hi/Low Separation 20 Amp SPDT, 208-277 Vac Power Input + 5-25 Vac/dc Control Input



#### **SPECIFICATIONS**

	208-277 Vac, 50-60 Hz
	5-25 Vac/dc, 50-60 Hz
	One (1) SPDT Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	4.00" x 4.00" x 1.80" with .50" NPT Nipple
Wires:	16", 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No
Override Switch:	No





Made in USA

Meets "Buy American" of ARRA 2009

Power Input Ratings: 69 mA @ 208-277 Vac

#### Control Input Ratings:

.4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vac (Non Polarized)

Contact Ratings:

2 HP @ 277 Vac 1 HP @ 120 Vac

20 Amp Resistive @ 277 Vac

5 Amp Resistive @ 480 Vac

1110 VA Pilot Duty @ 277 Vac

770 VA Pilot Duty @ 120 Vac

16 Amp Electronic Ballast @ 277 Vac (N/O)

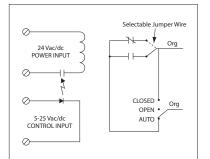
10 Amp Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C)

20 Amp Ballast @ 277 Vac

#### LOW COIL INPUT RELAY

### **RIBTE24SB**

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override, 24 Vac/dc Power Input + 5-25 Vac/dc Control Input



#### SPECIFICATIONS

RELAYS

Control Input: # Relays & Contact Type: Expected Relay Life: Operating Temperature: Humidity Range: Operate Time: Relay Status: Dimensions: Wires:	5 to 95% (noncondensing) 18ms LED On = Activated 4.00" x 4.00" x 1.80" with .50" NPT Nipple 16", 600V Rated

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) *Not rated for Electronic Ballast* 10 Amp Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac



#### Power Input Ratings:

50 mA @ 18 Vac 83 mA @ 24 Vac 33 mA @ 22 Vdc 35 mA @ 24 Vdc 47 mA @ 30 Vdc Control Input Ratings: .4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vdc (Non Polarized)

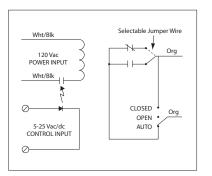
#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire

#### LOW COIL INPUT RELAY

### **RIBTE01SB**

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override, 120 Vac Power Input + 5-25 Vac/dc Control Input



### **SPECIFICATIONS**

 Power Input:
 120 Vac, 50-60 Hz

 Control Input:
 5-25 Vac/dc, 50-60 Hz

 # Relays & Contact Type:
 One (1) SPST Continuous Duty Coil

 Expected Relay Life:
 10 million cycles minimum mechanical

 Operating Temperature:
 -30 to 140° F

 Humidity Range:
 5 to 95% (noncondensing)

 Operate Time:
 18ms

 Relay Status:
 LED On = Activated

 Dimensions:
 4.00° x 4.00° x 1.80° with .50° NPT Nipple

 Wires:
 16°, 600V Rated

 Approvals:
 UL Listed, UL916, UL864, C-UL

 California State Fire Marshal, CE, RoHS
 Housing Rating:

 Gold Flash:
 No

 Override Switch:
 Yes

#### Contact Ratings:

20 Amp Resistive @ 277 Vac 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) *Not rated for Electronic Ballast* 10 Amp Tungsten @ 120 Vac (N/C) 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac



#### **Control Input Ratings:**

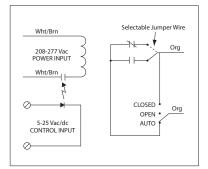
.4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vac (Non Polarized) Power Input Ratings: 47 mA @ 120 Vac

#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire

### **RIBTE02SB**

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override, 208-277 Vac Power Input + 5-25 Vac/dc **Control Input** 



### **SPECIFICATIONS**

Control Input: # Relays & Contact Type: Expected Relay Life: Operating Temperature: Humidity Range: Operate Time: Relay Status: Dimensions: Wires:	5 to 95% (noncondensing)
	California State Fire Marshal, CE, RoHS UL Accepted for Use in Plenum, NEMA 1 No

CUL US

CE

 $\checkmark$ RoHS

Made in USA Meets "Buy American" of ARRA 2009

**Power Input Ratings:** 69 mA @ 208-277 Vac **Control Input Ratings:** 

.4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vac (Non Polarized)

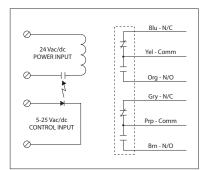
#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire

### LOW COIL INPUT RELAY

#### **RIBTE24P**

Enclosed Relay Hi/Low Separation 20 Amp DPDT, 24 Vac/dc Power Input + 5-25 Vac/dc Control Input



#### **SPECIFICATIONS**

Power Input:	24 Vac/dc, 50-60 Hz
Control Input:	5-25 Vac/dc, 50-60 Hz
# Relays & Contact Type:	One (1) DPDT Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires:	16", 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	No

#### **Contact Ratings:**

**Contact Ratings:** 

2 HP @ 277 Vac

1 HP @ 120 Vac

20 Amp Resistive @ 277 Vac

. 1110 VA Pilot Duty @ 277 Vac

20 Amp Ballast @ 277 Vac (N/O)

10 Amp Ballast @ 277 Vac (N/C)

10 Amp Tungsten @ 120 Vac (N/O)

240 Watt Tungsten @ 120 Vac (N/C)

770 VA Pilot Duty @ 120 Vac

Not rated for Electronic Ballast

20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1110 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac



Power Input Ratings: 110 mA @ 20 Vac 138 mA @ 24 Vac 55 mA @ 20 Vdc 55 mA @ 24 Vdc 77 mA @ 30 Vdc

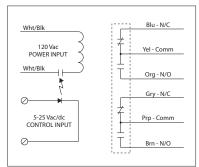
**Control Input Ratings:** 

.4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vac (Non Polarized)

#### LOW COIL INPUT RELAY

### **RIBTE01P**

Enclosed Relay Hi/Low Separation 20 Amp DPDT, 120 Vac Power Input + 5-25 Vac/dc Control Input



### **SPECIFICATIONS**

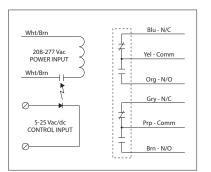
RELAYS

Power Input:120 Vac, 50-60 HzControl Input:5-25 Vac/dc, 50-60 Hz# Relays & Contact Type:One (1) DPDT Continuous Duty CoilExpected Relay Life:10 million cycles minimum mechanicalOperating Temperature:-30 to 140° FHumidity Range:5 to 95% (noncondensing)Operate Time:IBmsRelay Status:LED On = ActivatedDimensions:16", 600V RatedApprovals:UL Listed, UL916, UL864, C-UL<br/>California State Fire Marshal, CE, RoHSHousing Rating:UL Accepted for Use in Plenum, NEMA 1<br/>Gold Flash:YesOverride Switch:No

## LOW COIL INPUT RELAY

#### **RIBTE02P**

Enclosed Relay Hi/Low Separation 20 Amp DPDT, 208-277 Vac Power Input + 5-25 Vac/dc Control Input



#### **SPECIFICATIONS**

Control Input: # Relays & Contact Type:	208-277 Vac, 50-60 Hz 5-25 Vac/dc, 50-60 Hz One (1) DPDT Continuous Duty Coil 10 million cycles minimum mechanical
Operating Temperature:	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	4.00" x 4.00" x 1.80" with .50" NPT Nipple
Wires:	16", 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	No



# CULISTED LISTED CCC CCC RCHS Made in USA Meds "Buy American" of ARRA2007

Power Input Ratings:

105 mA @ 120 Vac

**Control Input Ratings:** .4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc

.9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vac (Non Polarized)

20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1110 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

20 Amp Resistive @ 300 Vac

20 Amp Resistive @ 28 Vdc

15 Amp Resistive @ 600 Vac

**Contact Ratings:** 

**Power Input Ratings:** 

105 mA @ 208-277 Vac





Control Input Ratings: .4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vac (Non Polarized)

Functional Devices, Inc. American Made. American Owned.

**Contact Ratings:** 

20 Amp Resistive @ 300 Vac

20 Amp Resistive @ 28 Vdc

15 Amp Resistive @ 600 Vac

20 Amp Ballast @ 277-480 Vac

Not rated for Electronic Ballast

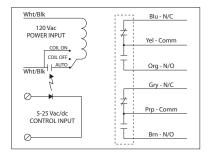
770 VA Pilot Duty @ 120 Vac

1158 VA Pilot Duty @ 240 Vac 1110 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

#### LOW COIL INPUT RELAYS

### **RIBTE01P-S**

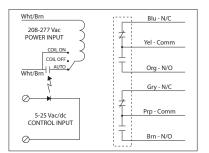
Enclosed Relay Hi/Low Separation 20 Amp DPDT +Override, 120 Vac Power Input + 5-25 Vac/dc **Control Input** 



#### SPECIFICATIONS

### **RIBTE02P-S**

Enclosed Relay Hi/Low Separation 20 Amp DPDT +Override, 208-277 Vac Power Input + 5-25 Vac/dc Control Input





Power Input:	120 Vac, 50-60 Hz (RIBTE01P-S) 208-277 Vac, 50-60 Hz (RIBTE02P-S)
Control Input:	5-25 Vac/dc, 50-60 Hz
# Relays & Contact Type:	One (1) DPDT Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	4.00" x 4.00" x 1.80" with .50" NPT Nipple
Wires:	16", 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	Yes
Override Switch:	Yes*

#### **Contact Ratings:**

20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 770 VA Pilot Duty @ 120 Vac 1158 VA Pilot Duty @ 240 Vac 1110 VA Pilot Duty @ 277 Vac 1640 VA Pilot Duty @ 480 Vac 3 HP @ 480-600 Vac 2 HP @ 240-277 Vac 1 HP @ 120 Vac

#### Notes:

 Override capability is made possible by supplying constant voltage on the Power Input. No Control Input Voltage is necessary to override the relay.

### **Power Input Ratings:**

**Control Input Ratings:** 

.4 mA @ 5 Vdc

.9 mA @ 10 Vdc

1 mA @ 12 Vdc

2 mA @ 24 Vdc

3 mA @ 24 Vac

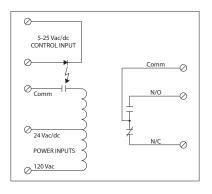
(Non Polarized)

105 mA @ 120 Vac (RIBTE01P-S) 105 mA @ 208-277 Vac (RIBTE02P-S)

#### LOW COIL INPUT TRACK MOUNT RELAYS

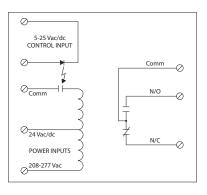
#### RIBME2401B

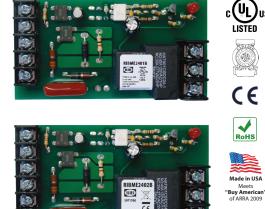
4.00" Track Mount Relay 20 Amp SPDT, 24 Vac/dc/120 Vac Power Input + 5-25 Vac/dc Control Input



#### RIBME2402B

4.00" Track Mount Relay 20 Amp SPDT, 24 Vac/dc/208-277 Vac Power Input + 5-25 Vac/dc Control Input





### SPECIFICATIONS

Power Input:	24 Vac/dc/120 Vac, 50-60 Hz (RIBME2401B) 24 Vac/dc/208-277 Vac, 50-60 Hz (RIBME2402B)
Control Input:	5-25 Vac/dc, 50-60 Hz
# Relays & Contact Type:	One (1) SPDT Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	2.050" x 4.000" x 1.750"
Track Mount:	4.000", See MT4 Series on page 152
	MT4 Mounting Track Sold Separately
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Gold Flash:	No

#### Gold Flash: No Override Switch: No

# **Contact Ratings:**

20 Amp Resistive @ 277 Vac 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac

#### **Power Input Ratings:**

33 mA @ 22 Vdc 50 mA @ 18 Vac 83 mA @ 24 Vac 35 mA @ 24 Vdc 47 mA @ 120 Vac (RIBME2401B) 47 mA @ 30 Vdc 69 mA @ 208-277 Vac (RIBME2402B)

#### Control Input Ratings:

.4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vac (Non Polarized)

Selectable Jumper Wire

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CLOSED

OPEN

AUTO

Not Used 🔘

### RIBME2401SB

5-25 Vac/dc CONTROL INPUT

0

 $\oslash$ 

RELAYS

⊘ Comm

⊘<sub>24 Vac/dc</sub>

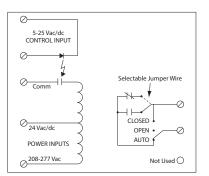
⊘\_\_\_\_\_Vac

POWER INPUTS

4.00" Track Mount Relay 20 Amp SPST + Override, 24 Vac/dc/120 Vac Power Input + 5-25 Vac/dc Control Input

### RIBME2402SB

4.00" Track Mount Relay 20 Amp SPST + Override, 24 Vac/dc/208-277 Vac Power Input + 5-25 Vac/dc Control Input





### **SPECIFICATIONS**

#### Power Input: 24 Vac/dc/120 Vac, 50-60 Hz (RIBME2401SB) 24 Vac/dc/208-277 Vac, 50-60 Hz (RIBME2402SB) Control Input: 5-25 Vac/dc, 50-60 Hz # Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 2.550" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: No Override Switch: Yes

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) Not rated for Electronic Ballast 10 Amp Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac

#### **Control Input Ratings:**

.4 mA @ 5 Vdc 2 mA @ 24 Vdc .9 mA @ 10 Vdc 3 mA @ 24 Vac 1 mA @ 12 Vdc (Non Polarized)

#### Power Input Ratings:

50 mA @ 18 Vac	33 mA	0	22 Vdc
83 mA @ 24 Vac	35 mA	@	24 Vdc
47 mA @ 120 Vac (RIBME2401SB)	47 mA	@	30 Vdc
69 mA @ 208-277 Vac (RIBME2402SB)			

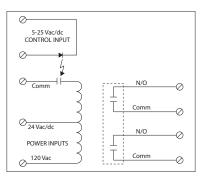
#### Notes:

 Normally Open or Normally Closed selected by yellow jumper wire

### LOW COIL INPUT TRACK MOUNT RELAYS

### RIBME2401P

4.00" Track Mount Relay 20 Amp DPST, 24 Vac/dc/120 Vac Power Input + 5-25 Vac/dc Control Input

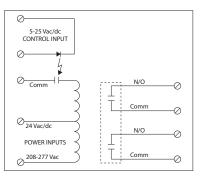


### **SPECIFICATIONS**

Power Input:	24 Vac/dc/120 Vac, 50-60 Hz (RIBME2401P) 24 Vac/dc/208-277 Vac, 50-60 Hz (RIBME2402P)
Control Input:	5-25 Vac/dc, 50-60 Hz
# Relays & Contact Type:	One (1) DPST Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	3.100″ x 4.000″ x 2.750″
Track Mount:	4.000", See MT4 Series on page 152
	MT4 Mounting Track Sold Separately
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Gold Flash:	Yes
Override Switch:	No

### RIBME2402P

#### 4.00" Track Mount Relay 20 Amp DPST, 24 Vac/dc/208-277 Vac Power Input + 5-25 Vac/dc Control Input



**Contact Ratings:** 

20 Amp Resistive @ 300 Vac

20 Amp Ballast @ 277-480 Vac

Not rated for Electronic Ballast

15 Amp Resistive @ 600 Vac 770 VA Pilot Duty @ 120 Vac

1158 VA Pilot Duty @ 240 Vac

1110 VA Pilot Duty @ 277 Vac

1640 VA Pilot Duty @ 480 Vac

3 HP @ 480-600 Vac

2 HP @ 240-277 Vac

1 HP @ 120 Vac

20 Amp Resistive @ 28 Vdc, 15 Vdc





CE





#### **Power Input Ratings:**

138 mA @ 24 Vac 105 mA @ 120 Vac (RIBME2401P) 105 mA @ 208-277 Vac (RIBME2402P) 77 mA @ 30 Vdc

#### **Control Input Ratings:**

.4 mA @ 5 Vdc .9 mA @ 10 Vdc 1 mA @ 12 Vdc 2 mA @ 24 Vdc 3 mA @ 24 Vac (Non Polarized)

# **POLARIZED RELAYS** Enclosed | Track Mount

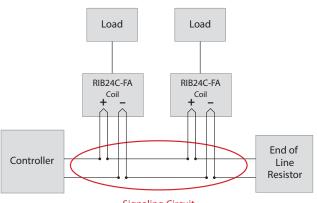


## Same Great Prepackaging

• Relays are polarized to work in a supervised system and may be turned on and off by reversing polarity. For fire alarm systems, smoke control systems, etc.

# **Fire Alarm Systems Application**

- Coil input is polarity sensitive
- For use with fire alarm systems
- System supervision for controllers that utilize end-of-line resistors
- Four wire circuit ensures indication of broken wiring connection with RIB®



Signaling Circuit

### **ENCLOSED ALARM RELAYS**

MODEL #	•	COIL VOLTAGE	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIB12C-FA	•	12 Vac/dc	1	SPDT			56
RIB24C-FA	•	24 Vac/dc	1	SPDT			56
RIB12S-FA	•	12 Vac/dc	1	SPST	1		56
RIB24S-FA	•	24 Vac/dc	1	SPST	1		56
RIBT24B-FA	•	24 Vac/dc	1	SPDT			57
RIB24P-FA	•	24 Vac/dc	1	DPDT			57

### **TRACK MOUNT ALARM RELAYS**

MODEL #	(4)	COIL VOLTAGE	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBMN12C-FA	•	12 Vac/dc	1	SPDT			58
RIBMN24C-FA	•	24 Vac/dc	1	SPDT			58
RIBMN12S-FA	•	12 Vac/dc	1	SPST	1		58
RIBMN24S-FA	•	24 Vac/dc	1	SPST	1		58

( ) = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

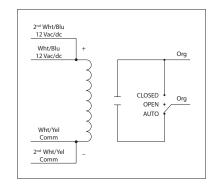
## **RIB12C-FA**

Enclosed Relay 10 Amp, Polarized with 12 Vac/dc Coil

#### 2<sup>rel</sup> Wht/Blu 12 Vac/dc Wht/Blu 12 Vac/dc + Second Wht/Yel Comm 2<sup>rel</sup> Wht/Yel Comm -

## RIB12S-FA

Enclosed Relay 10 Amp + Override, Polarized with 12 Vac/dc Coil





### SPECIFICATIONS

RELAYS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.70" x 2.80" x 1.50" with .50" NPT nipple
Wires: 16", 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS

Housing Rating: UL Accepted for Use in Plenum, NEMA 1

Yes (RIB12S-FA)

#### Contact Ratings:

10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac 470 VA Pilot Duty @ 125 Vac 770 VA Pilot Duty @ 250 Vac

Coil	Cu	rre	ent:	

53 mA @ 10 Vac 62 mA @ 12 Vac 29 mA @ 11 Vdc 36 mA @ 12 Vdc

### Coil Voltage Input:

12 Vac/dc ; 50-60 Hz Drop Out = 2 Vac / 2.5 Vdc Pull In = 9 Vac / 11 Vdc

#### Notes:

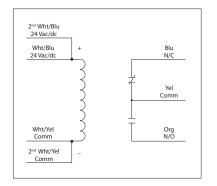
Order Normally Closed by adding "-NC" to end of model number (RIB12S-FA)

#### **FIRE ALARM RELAYS**

### **RIB24C-FA**

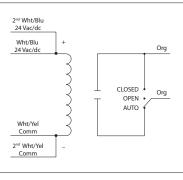
Enclosed Relay 10 Amp, Polarized with 24 Vac/dc Coil

Gold Flash: No Override Switch: No (RIB12C-FA)



### RIB24S-FA

Enclosed Relay 10 Amp + Override, Polarized with 24 Vac/dc Coil





Red housing

SPECIFICATIONS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing) Operate Time: 6ms Relay Status: LED On = Activated Dimensions: 1.70″ x 2.80″ x 1.50″ with .50″ NPT nipple Wires: 16″, 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: No (RIB24C-FA) Yes (RIB24S-FA)

#### Contact Ratings:

10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac 470 VA Pilot Duty @ 125 Vac 770 VA Pilot Duty @ 250 Vac

Coil Current:				
26 mA	@	20 Vac		
31 mA	@	24 Vac		
48 mA	@	35 Vac		
14 mA	@	20 Vdc		
18 mA	@	24 Vdc		
28 mA	@	35 Vdc		

### Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc

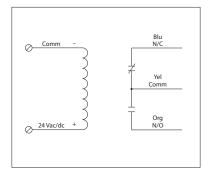
housing, UL508 only

#### Notes:

Order Normally Closed by adding "-NC" to end of model number (RIB24S-FA)

### **RIBT24B-FA**

Enclosed Relay Hi/Low Separation 20 Amp SPDT, Polarized with 24 Vac/dc Coil



## **SPECIFICATIONS**

# Relays & Contact Type:	One (1) SPDT Continuous Duty Coil
Expected Relay Life:	10 million cycles minimum mechanical
<b>Operating Temperature:</b>	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms
Relay Status:	LED On = Activated
Dimensions:	4.00″ x 4.00″ x 1.80″ with .50″ NPT nipple
Wires:	16", 600V Rated
Approvals:	UL Listed, UL916, UL864, C-UL
	California State Fire Marshal, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No
Override Switch:	No

### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 5 Amp Resistive @ 480 Vac 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac

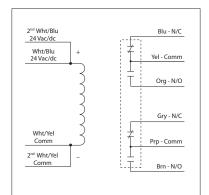
Coil Current: 47 mA @ 18 Vac 83 mA @ 24 Vac 33 mA @ 22 Vdc 35 mA @ 24 Vdc 47 mA @ 30 Vdc Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 2.1 Vac / 3.8 Vdc Pull In = 18 Vac / 22 Vdc

#### **FIRE ALARM RELAY**

### **RIB24P-FA**

Enclosed Relay 20 Amp DPDT, Polarized with 24 Vac/dc Coil





### **SPECIFICATIONS**

# Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: LED On = Activated Dimensions: 2.30" x 3.20" x 1.80" with .50" NPT nipple Wires: 16", 600V Rated Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: Yes Override Switch: No

#### **Contact Ratings:**

20 Amp Resistive @ 300 Vac 20 Amp Resistive @ 28 Vdc, 15 Vdc 15 Amp Resistive @ 600 Vac 1 HP @ 120 Vac 2 HP @ 240-277 Vac 3 HP @ 480 Vac - 600 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast 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

Coil Current: 110 mA @ 20 Vac 138 mA @ 24 Vac 55 mA @ 20 Vdc 55 mA @ 24 Vdc 77 mA @ 30 Vdc

#### Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 3 Vac / 3.8 Vdc Pull In = 20 Vac / 20 Vdc

RELAYS

LISTED

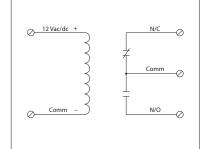
E

RoHS

Made in USA Meets **"Buy American** of ARRA 2009

### **RIBMN12C-FA**

2.75" Track Mount Relay 15 Amp, Polarized with 12 Vac/dc Coil



### SPECIFICATIONS

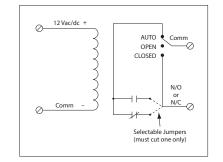
RELAYS

# # Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 6ms Relay Status: LED On = Activated Dimensions: 1.100"x 2.750" x 1.750" Track Moutt: 2.750", See MT212 Series on page 152 MT212 Mounting Track Sold Separately Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS Gold Flash: No Override Switch: No (RIBMN12C-FA)

Yes (RIBMN12S-FA)

### **RIBMN12S-FA**

2.75" Track Mount Relay 15 Amp + Override, Polarized with 12 Vac/dc Coil





#### Contact Ratings:

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac 470 VA Pilot Duty @ 125 Vac 770 VA Pilot Duty @ 250 Vac

(	Coil Current:					
1	53 m/	A @	10 Vac			
6	52 mA	A @	12 Vac			
4	29 mA	A @	11 Vdc			
3	35 m/	0	12 Vdc			

#### Coil Voltage Input:

12 Vac/dc ; 50-60 Hz Drop Out = 2 Vac / 2.5 Vdc Pull In = 9 Vac / 11 Vdc

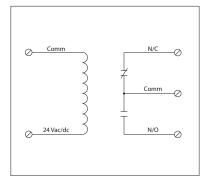
#### Notes:

 Must cut appropriate jumper to select Normally Open or Normally Closed (RIBMN12S-FA)

#### FIRE ALARM TRACK MOUNT RELAYS

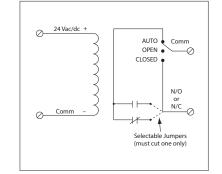
### **RIBMN24C-FA**

2.75" Track Mount Relay 15 Amp, Polarized with 24 Vac/dc Coil

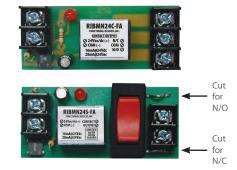


### RIBMN24S-FA

2.75" Track Mount Relay 15 Amp + Override, Polarized with 24 Vac/dc Coil







#### SPECIFICATIONS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.100″ x 2.750″ x 1.750″
Track Mount: 2.750″, See MT212 Series on page 152 MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No (RIBMN24C-FA) Yes (RIBMN245-FA)

#### Contact Ratings:

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac 470 VA Pilot Duty @ 125 Vac 770 VA Pilot Duty @ 250 Vac

rre	ent:
@	20 Vac
@	24 Vac
@	35 Vac
@	20 Vdc
@	24 Vdc
@	35 Vdc
	@ @ @ @

Coil Voltage Input:

24 Vac/dc ; 50-60 Hz Drop Out = 2 Vac / 2.5 Vdc Pull In = 9 Vac / 11 Vdc

#### Notes:

 Must cut appropriate jumper to select Normally Open or Normally Closed (RIBMN24S-FA)

# **DRY CONTACT INPUT RELAYS**

Enclosed | Track Mount

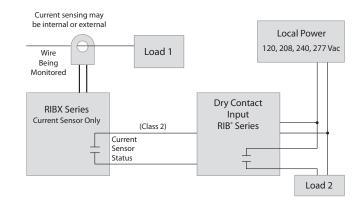


RELAYS

The Dry Contact Input RIB<sup>®</sup> Series offers all the advantages of the standard RIB<sup>®</sup> line plus it can be activated by a wide range of dry contacts such as thermostats, current switches, other relays, solid-state switches, etc. The Dry Contact Input RIB<sup>®</sup> accepts local power to provide the low-voltage (Class 2) power needed to activate the relay; just close the dry contact input. The power to energize the relay can be brought to the relay on a separate pair of wires along with the control output of a controller, or can be a local power source near the relay. The relay contacts are isolated from the input power and the dry contact input; thus, the relay contacts can be wired to switch any other power-load or low-voltage load (see specifications for contact ratings.) One model can be used for many installations (model RIB21CDC can be powered from any voltage from 120 Vac to 277 Vac; see specifications for the input power of other models.)

## Can be activated by dry contacts such as thermostats, current switches, etc.

• Self-powered current switches of the RIBX Series and relays of the Dry Contact Input RIB<sup>®</sup> Series may be applied to interlock Load 2 to Load 1.



## **ENCLOSED DRY CONTACT INPUT RELAYS**

MODEL #	(h)	POWER INPUT	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIB21CDC	•	120-277 Vac	1	SPDT			60
RIB01BDC	•	120 Vac	1	SPDT			60
RIB02BDC	•	208-277 Vac	1	SPDT			60
RIB01SBDC	•	120 Vac	1	SPST	1		61
RIB02SBDC	•	208-277 Vac	1	SPST	1		61
RIB01SBCDC	•	120 Vac	1	SPDT	2		61
RIB02SBCDC	•	208-277 Vac	1	SPDT	2		61
RIBD01BDC	•	120 Vac	1	SPDT		#	62
RIBD02BDC	•	208-277 Vac	1	SPDT		#	62
RIBD01BDC-DOB	•	120 Vac	1	SPDT		#	63
RIBD02BDC-DOB	•	208-277 Vac	1	SPDT		#	63

## TRACK MOUNT DRY CONTACT INPUT RELAYS

MODEL #	91	POWER INPUT	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBM01ZNDC	•	120 Vac	1	DPDT			64
RIBM02ZNDC	•	208-277 Vac	1	DPDT			64
RIBM013PNDC	•	120 Vac	1	3PDT			64

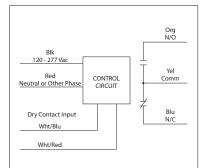
🕒 = UL Listed : UL916 Energy Management; USA & Canada

# = Time Delay

**RU** = UL Component Recognized : UL916 Energy Management; USA & Canada

### **RIB21CDC**

Enclosed Relay 10 Amp SPDT, Class 2 Dry Contact Input, 120-277 Vac Power Input





CE

RIB21CDC-RD

### **SPECIFICATIONS**

RELAYS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 1.8 Seconds
Relay Status: LED On = Activated
Dimensions: 1.70° x 2.80° x 1.50° with .50° NPT Nipple
Wires: 16°, 600V Rated
Approvals: UL Listed, UL916, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No

#### **Contact Ratings:**

10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac 470 VA Pilot Duty @ 125 Vac 770 VA Pilot Duty @ 250 Vac

#### Power Input:

50 mA @ 240 Vac Max.

#### Notes:

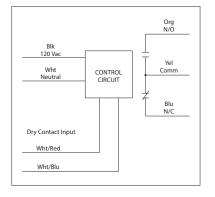
Dry Contact Input Operation:

Close White/Red wire to White/Blue wire to activate relay. If more than one dry contact RIB® shares a single dry contact input, White/Blue must be common.

### DRY CONTACT INPUT RELAYS

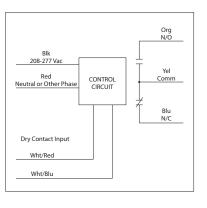
### **RIB01BDC**

Enclosed Relay 20 Amp SPDT, Class 2 Dry Contact Input, 120 Vac Power Input



### **RIB02BDC**

Enclosed Relay 20 Amp SPDT, Class 2 Dry Contact Input, 208-277 Vac Power Input





### SPECIFICATIONS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing) Operate Time: 1.8 Seconds
Relay Status: LED On = Activated
Dimensions: 2.30" x 3.20" x 1.80" with .50" NPT Nipple
Wires: 16", 600V Rated
Approvals: UL Listed, UL916, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No
Override Switch: No

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/C) 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac

#### Power Input:

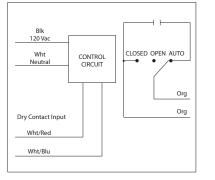
42 mA @ 120 Vac (RIB01BDC) 62 mA @ 208-277 Vac (RIB02BDC)

#### Notes:

 Dry Contact Input Operation: Close White/Red wire to White/Blue wire to activate relay. If more than one dry contact RIB<sup>®</sup> shares a single dry contact input, White/Blue must be common.

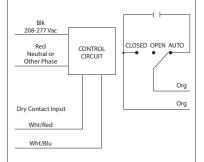
### **RIB01SBDC**

Enclosed Relay 20 Amp SPST-N/O + Override, Class 2 Dry Contact Input, **120 Vac Power Input** 



### **RIB02SBDC**

Enclosed Relay 20 Amp SPST-N/O + Override, Class 2 Dry Contact Input, 208-277 Vac Power Input





### **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 1.8 Seconds
Relay Status: LED On = Activated
Dimensions: 2.30° x 3.20° x 1.80° with .50° NPT Nipple
Wires: 16°, 600V Rated
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No
Override Switch: Yes Contact Ratings:

20 Amp Resistive @ 277 Vac 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) *Not rated for Electronic Ballast* 10 Amp Tungsten @ 120 Vac (N/C) 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac

#### Power Input:

42 mA @ 120 Vac (RIB01SBDC) 62 mA @ 208-277 Vac (RIB02SBDC)

#### Notes:

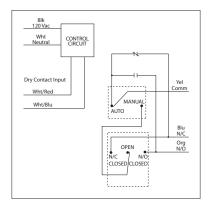
Dry Contact Input Operation:
 Close White/Red wire to White/Rlue

- Close White/Red wire to White/Blue wire to activate relay. If more than one dry contact RIB® shares a single dry contact input, White/Blue must be common.
- Order Normally Closed by adding "-NC" to end of model number

#### **DRY CONTACT INPUT RELAYS**

### **RIB01SBCDC**

Enclosed Relay 20 Amp SPDT + Override, Class 2 Dry Contact Input, **120 Vac Power Input** 



#### Enclosed Relay 20 Amp SPDT + Override, Class 2 Dry Contact Input, <mark>208-277 Vac Power Input</mark>

RIB02SBCDC

Bik Petral or Other Phase Dry Contact Input Wht/Blu Wht/Blu Wht/Blu Blu NC OPEN NO CLOSED CLOSED CLOSED CLOSED



### **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 1.8 Seconds Relay Status: LED On = Activated Dimensions: 2.30° x 3.20° x 1.80° with .50° NPT Nipple Wires: 16°, 600V Rated Approvals: UL Listed, UL916, C-UL, CE, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: Yes (2)

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac Not rated for Electronic Ballast 10 Amp Tungsten @ 120 Vac 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

#### Power Input:

42 mA @ 120 Vac (RIB01SBCDC) 62 mA @ 208-277 Vac (RIB02SBCDC)

#### Notes:

 Dry Contact Input Operation: Close White/Red wire to White/Blue wire to activate relay. If more than one dry contact RIB<sup>®</sup> shares a single dry contact input, White/Blue must be common. Org N/O

Yel

Comm

Blu

N/C

### **RIBD01BDC**

Enclosed Delay on Make Relay 20 Amp SPDT, Class 2 Dry Contact Input, 120 Vac **Power Input** 

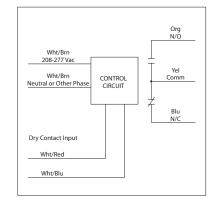
CONTROL

CIRCUIT

Override Switch: No



Enclosed Delay on Make Relay 20 Amp SPDT, Class 2 Dry Contact Input, 208-277 Vac Power Input





### **SPECIFICATIONS**

# Relays & Contact Type:	One (1) SPDT Continuous Duty Coil
	10 million cycles minimum mechanical
Operating Temperature:	
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms after time delay
Relay Status:	Red LED On = Activated
Time Delay Status:	Pink LED FLASHING = Timing / Relay Deactivated
Timing Mode:	Delay On Make
Timing Range:	6 seconds - 20 minutes
Timing Adjustment:	4 position DIP switch for range selection and
	single turn potentiometer for timing adjustment
	within range
Timing Tolerance:	Switches $1\& 2 = \pm 10\%$
	Switches 3 & 4 = $\pm 5\%$
Timing Repeatability:	
Temperature Timing Variance:	
Voltage Timing Variance:	
	750ms Maximum
	4.00" x 4.00" x 1.80" with .50" NPT nipple
	16", 600V Rated
	UL Listed, UL916, C-UL, CE, RoHS
5 5	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No

#### **Contact Ratings:** 20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

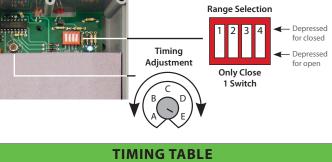
#### Power Input:

42 mA @ 120 Vac (RIBD01BDC) 62 mA @ 208-277 Vac (RIBD02BDC)

#### Notes:

 Dry Contact Input Operation: Close White/Red wire to White/Blue wire to start timing. Relay will activate after timing sequence has ended.

• If more than one dry contact RIB® shares a single dry contact input, White/Blue must be common.



TIMING TABLE						
Switch	Close		Ро	tentiometer	Setting	
Ranges	Dip Switch	A 🗲	→ B ←	→ C ←	→ D ←	→ E
6s-20s	1	бs	9s	13s	16s	20s
22s-1min15s	2	22s	36s	50s	1min4s	1min15s
1min30s-5min	3	1min30s	2min10s	3min20s	4min16s	5min
6min-20min	4	6min	9min	13min20s	17min20s	20min

#### Wiring for Load on N/O Contact 120 Vac or Closed 208-277 Vac Dry Contact Input Open Org Switched Power to Load Neutral or On Other Phase Yel - Interrupted Time Delay -Time Delay Continuous Power Load on N/O Contact Off Load on N/C Contact On - Interrupted Time Delay -Time Delay Off Wiring for Load on N/C Contact Flashing Blu Switched Power 120 Vac or Pink LED Off 208-277 Vac to Load On Neutral or Red LED Other Phase Yel Off - Continuous Power

Wht/Blk 120 Vac

Wht/Blk

Neutra

Dry Contact Input

Wht/Red

Wht/Blu

### **Delay on Make**

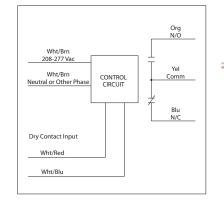
### **RIBD01BDC-DOB**

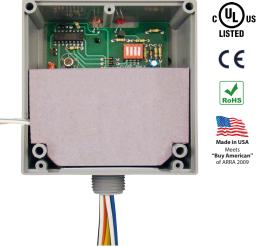
Enclosed Delay on Break Relay 20 Amp SPDT, Class 2 Dry Contact Input, 120 Vac Power Input

### Org N/O Wht/Bl 120 Va Yel Wht/Blk CONTROL CIRCUIT Comm Neutra Blu N/C Dry Contact Input Wht/Red Wht/Blu

**RIBD02BDC-DOB** 

Enclosed Delay on Break Relay 20 Amp SPDT, Class 2 Dry Contact Input, 208-277 Vac Power Input





### **SPECIFICATIONS**

# Deleve & Content True of	One (1) CDDT Continuous Duty Coil
	One (1) SPDT Continuous Duty Coil
, ,	10 million cycles minimum mechanical
Operating Temperature:	-30 to 140° F
Humidity Range:	5 to 95% (noncondensing)
Operate Time:	18ms after time delay
Relay Status:	Red LED On = Activated
	Pink LED FLASHING = Timing / Relay Deactivated
	Delay On Break
5	6 seconds - 20 minutes
Timing Adjustment:	4 position DIP switch for range selection and
	single turn potentiometer for timing adjustment
	within range
Timing Tolerance:	Switches $1\& 2 = \pm 10\%$
_	Switches 3 & 4 = $\pm 5\%$
Timing Repeatability:	±1%
Temperature Timing Variance:	±1%
Voltage Timing Variance:	±1%
Recycle Time:	750ms Maximum
Dimensions:	4.00″ x 4.00″ x 1.80″ with .50″ NPT nipple
	16″, 600V Rated
Approvals:	UL Listed, UL916, C-UL, CE, RoHS
	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No
Override Switch:	No

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 770 VA Pilot Duty @ 120 Vac 1,110 VA Pilot Duty @ 277 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

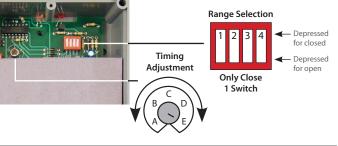
#### Power Input:

42 mA @ 120 Vac (RIBD01BDC-DOB) 62 mA @ 208-277 Vac (RIBD02BDC-DOB)

#### Notes:

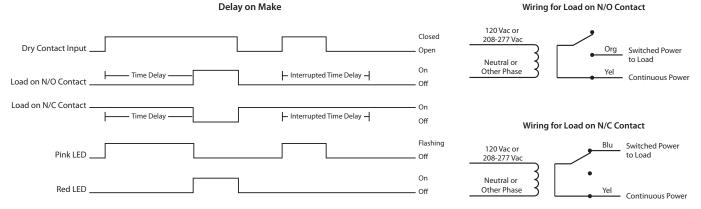
 Dry Contact Input Operation: Open White/Red wire and White/Blue wire to start timing. Relay will activate after timing sequence has ended. • If more than one dry contact RIB<sup>®</sup> shares

a single dry contact input, White/Blue must be common.



TIMING TABLE							
Switch Close Potentiometer Setting							
Ranges	Dip Switch	A 🗲	→ B ←	→ C ←	→ D ←	→ E	
6s-20s	1	бs	9s	13s	16s	20s	
22s-1min15s	2	22s	36s	50s	1min4s	1min15s	
1min30s-5min	3	1min30s	2min10s	3min20s	4min16s	5min	
6min-20min	4	6min	9min	13min20s	17min20s	20min	

#### Delay on Make



RELAYS

### RIBM01ZNDC

4.00" Track Mount Relay 30 Amp DPDT, Class 2 Dry Contact Input, 120 Vac Power Input

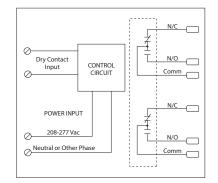
#### N/C $\oslash$ Dry Contact N/0 CONTROL CIRCUIT Input Comm \_ $\oslash$ N/C POWER INPUT 120 Va 0 N/O Neutra 0 Comm

### SPECIFICATIONS

RELAYS

## **RIBM02ZNDC**

4.00" Track Mount Relay 30 Amp DPDT, Class 2 Dry Contact Input, 208-277 Vac Power Input





### Power Input:

95 mA @ 120 Vac (RIBM01ZNDC) 95 mA @ 208-277 Vac (RIBM02ZNDC)

#### Notes:

 Dry Contact Input Operation: Close dry contact to activate relay.

#### # Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Relay Status: Red LED On = Activated Power Status: Green LED On = Activated Dimensions: 2.875" x 4.000" x 1.750" Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Component Recognized, UL916 C-UL, CE, RoHS Gold Flash: Yes Override Switch: No

**Contact Ratings:** 

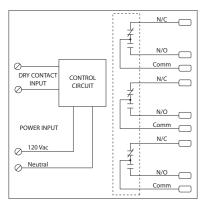
30 Amp Resistive @ 300 Vac 25 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 3 HP @ 480-600 Vac 2 HP @ 240/277 Vac 1 HP @ 120 Vac 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast

770 VA @ 120 Vac 1158 VA @ 240 Vac 1109 VA @ 277 Vac 1640 VA @ 480 Vac NEMA B600 Pilot Duty

#### DRY CONTACT INPUT TRACK MOUNT RELAYS

### **RIBM013PNDC**

4.00" Track Mount Relay 30 Amp 3PDT, Class 2 Dry Contact Input, 120 Vac Power Input



### **SPECIFICATIONS**

# Relays & Contact Type: One (1) 3PDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Power Status: Green LED On = Activated Track Mount: 4.000", See MT4 Series on page 152 MT4 Mounting Track Sold Separately Approvals: UL Component Recognized, UL916 C-UL, CE, RoHS

#### **Contact Ratings:**

30 Amp Resistive @ 300 Vac 30 Amp Resistive @ 28 Vdc 15 Amp Resistive @ 600 Vac 7.5 HP @ 480 Vac, 3 Phase 5 HP @ 240 Vac, 3 Phase 3 HP @ 480-600 Vac, 1 Phase 2 HP @ 240/277 Vac, 1 Phase 1 HP @ 120 Vac, 1Phase 20 Amp Ballast @ 277-480 Vac Not rated for Electronic Ballast

Heavy Pilot Duty 770 VA @ 120 Vac, 1 Phase 1158 VA @ 240 Vac, 1 Phase 1109 VA @ 277 Vac, 1 Phase 1640 VA @ 480 Vac, 1 Phase 1466 VA @ 240 Vac, 3 Phase 2122 VA @ 480 Vac, 3 Phase

#### Power Input: 95 mA @ 120 Vac

RIBMO'

CONTACT INPUTS ©

Notes: Dry Contact Input Operation: Close dry contact to activate relay.

Operate Time: 20ms Relay Status: Red LED On = Activated Dimensions: 2.875" x 4.000" x 1.750" Gold Flash: No Override Switch: No

# **NETWORK COMPATIBLE RELAYS**

LonMark<sup>®</sup> | BACnet<sup>®</sup> | Wi-Fi | Modbus<sup>®</sup>



Enclosed versions

• NEMA 4X available

### Use These Devices When a More Expensive Multi-Output Controller is Too Much for the Job

- UL Listed
- LonWorks<sup>®</sup>, BACnet<sup>®</sup>, Wi-Fi, and Modbus® protocol
- Analog input
- Analog output

- Binary output
- Binary input
- Thermistor inputs available
- On-board current sensors available
- Panel mount
- LONMARK® DEVICES

							DEVICE	POWER			
MODEL #		RELAY OUTPUT	DRY CONTACT BINARY INPUT	ANALOG INPUT	INTERNAL CURRENT SENSOR FEEDBACK	PRECON® THERMISTOR INPUT	AC/DC	AC	CONTACTS	OVERRIDE SWITCH	NOTES SPEC PAGE
RIBTW2401B-LN	•	1	1				24	120	SPDT		66
RIBTW2402B-LN	•	1	1				24	208-277	SPDT		66
RIBTW2401SB-LN	•	1	1				24	120	SPST	1	67
RIBTW2402SB-LN	•	1	1				24	208-277	SPST	1	67
RIBMNWX2401SB-LN	•	1			•		24	120	SPST	1	68
RIBTWX2401SB-LN	•	1			•		24	120	SPST	1	68
RIBMNWX2402SB-LN	•	1			•		24	208-277	SPST	1	69
RIBTWX2402SB-LN	•	1			•		24	208-277	SPST	1	69
RIBMW24SB-LNAI	•	1	1	1			24		SPST	1	70
RIBTW24SB-LNAI	•	1	1	1			24		SPST	1	70
RIBMW24SB-LNT2	•	1	1			10kΩ Type 2	24		SPST	1	71
RIBTW24SB-LNT2	•	1	1			10kΩ Type 2	24		SPST	1	71
RIBMW24SB-LNT3	•	1	1			10kΩ Type 3	24		SPST	1	71
RIBTW24SB-LNT3	•	1	1			10kΩ Type 3	24		SPST	1	71

## **BACNET® DEVICES**

			DRY				INTERNAL		DEVICE	POWER				
MODEL #	•	RELAY OUTPUT	CONTACT BINARY INPUT	ANALOG INPUT	ANALOG OUTPUT	ACCUMULATOR INPUT	CURRENT SENSOR FEEDBACK	PRECON® THERMISTOR INPUT	AC/DC	AC	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBTW2401B-BC	•	1	1						24	120	SPDT	#		72
RIBTW2402B-BC	•	1	1						24	208-277	SPDT	#		72
RIBMNWX2401B-BC	•	1	1				•		24	120	SPDT	#		73
RIBTWX2401B-BC	•	1	1				•		24	120	SPDT	#		73
RIBMNWX2402B-BC	•	1	1				•		24	208-277	SPDT	#		74
RIBTWX2402B-BC	•	1	1				•		24	208-277	SPDT	#		74
RIBMNW24B-BCAI	•	1	2	1				$10k\Omega$ Type 2 or 3	24		SPDT	#		75
RIBTW24B-BCAI	•	1	2	1				$10k\Omega$ Type 2 or 3	24		SPDT	#		75
RIBTW24B-BCAO	•	1	2	1	1			$10k\Omega$ Type 2 or 3	24		SPDT	#	NEW	76
RIBMNWD12-BCDI			12						24					77
RIBMNWD12-BC			12			2			24					78
RIBMW24B-44-BC	•	4	4						24		SPDT	#		79

## **WI-FI DEVICES**

					DEVICE F	POWER				
MODEL #	(4)	RELAY OUTPUT	DRY CONTACT BINARY INPUT	UNIVERSAL INPUT	AC/DC	AC	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBTW24B-WI-N4	•	1	1		24		SPDT	#	NEW	80
RIBTW2401B-WIUI-N4	•	1	1	2	24	120	SPDT	#	NEW	81

## **MODBUS® DEVICES**

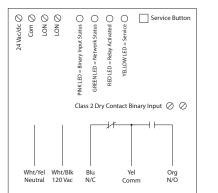
							DEVICE P	OWER					
MODEL #	\$	RELAY OUTPUT	DRY CONTACT BINARY INPUT	ANALOG INPUT	INTERNAL CURRENT SENSOR FEEDBACK	PRECON® THERMISTOR INPUT	AC/DC	AC	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE	
RIBMNW24B-MBAI	•	1	2	1		10kΩType 2	24		SPDT	#		82	
RIBTW24B-MBAI	•	1	2	1		10kΩ Type 2	24		SPDT	#		82	

🕒 = UL Listed : UL916 Energy Management, USA & Canada # = Coil Side Relay Override (requires unit to be powered) Precon<sup>\*</sup> is a registered trademark of Kele and Associates.

RELAYS

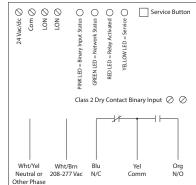
### RIBTW2401B-LN

LonWorks® Twisted-Pair FT-10 Network Enclosed Dual I/O Device: One Binary Output (20 Amp Relay SPDT), One Binary Input (Dry Contact Class 2); 24 Vac/dc or 120 Vac Power Input



### RIBTW2402B-LN

LonWorks<sup>®</sup> Twisted-Pair FT-10 Network Enclosed Dual I/O Device: One Binary Output (20 Amp Relay SPDT), One Binary Input (Dry Contact Class 2); 24 Vac/dc or 208-277 Vac Power Input





# SPECIFICATIONS

RELAYS

#### # Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Green LED: Network Status Red LED: Relay Status Yellow LED: Service Status Pink LED: Binary Input Status Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT Nipple Wires: 16", 600V Rated Approvals: FCC, LonMark®, CE, RoHS UL Listed, UL916, C-UL Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Override Switch: No Channel: TP/FT-10

 Transceiver Type:
 FT5000 Smart Transceiver

 Transceiver Compatibility:
 FT3120 / FT3150, FTT-10 / FTT-10A, and LPT-10 / LPT-11 Tranceivers

 Functional Block:
 0000 Node Object

 0004 Closed Loop Actuator Object
 0001 Open Loop Sensor Object

 Downloadable Files:
 PDF, XIF, APB, VSS and NXE available on website.



Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s). Contact Ratings:

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 120/277 Vac (N/O) 20 Amp Ballast @ 277 Vac (N/C) 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

#### Power Input Ratings:

111 mA @ 24 Vac 96 mA @ 120 Vac (RIBTW2401B-LN) 105 mA @ 208-277 Vac (RIBTW2402B-LN) 81 mA @ 24 Vdc

#### Power Input:

24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTW2401B-LN) 24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTW2402B-LN)

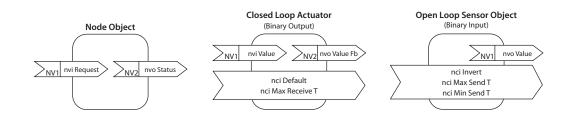
#### Notes:

Order with P1 option by adding "-P1" to end of model number. The P1 option is pre-programmed to allow dry contact binary input to command the relay. Contact closure on the Bl will activate relay.
When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur.
Option 1: Use separate transformers for each device.
Option 2: Add diode between devices, see Option 2 note below. ^^

DESCRIPTION	SNVT NAME	SNVT TYPE
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Binary Input	nvo Value	SNVT_switch
Invert status of Binary Input	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm

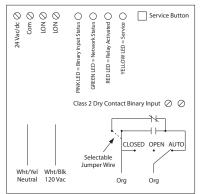
The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)



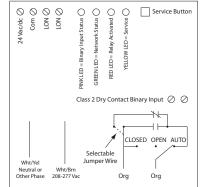
### RIBTW2401SB-LN

LonWorks® Twisted-Pair FT-10 Network Enclosed Dual I/O Device: One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); 24 Vac/dc or 120 Vac **Power Input** 



### RIBTW2402SB-LN

LonWorks® Twisted-Pair FT-10 Network Enclosed Dual I/O Device: One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); 24 Vac/dc or 208-277 Vac Power Input





### **SPECIFICATIONS**

- 24 Vac/dc

-KI-

AA Option 2: Add diode on 24 Vac power (Com) interconnection

between devices. Band on diode faces towards RIB(s).

O Com

24 Vac

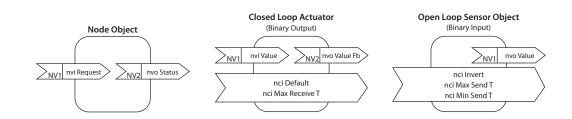
#### # Relays & Contact Type: One (1) SPST Continuous Duty Coil **Contact Ratings:** Power Input: Expected Relay Life: 10 million cycles minimum mechanical 20 Amp Resistive @ 277 Vac 24 Vac/dc; 120 Vac; 50-60 Hz (RIBTW2401SB-LN) Operating Temperature: -30 to 140° F 20 Amp Ballast @ 120/277 Vac (N/O) 24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTW2402SB-LN) Humidity Range: 5 to 95% (noncondensing) 10 Amp Ballast @ 120/277 Vac Vac (N/C) Operate Time: 18ms Not rated for Electronic Ballast Notes: Green LED: Network Status 10 Amp Tungsten @ 120 Vac (N/O) Order with P1 option by adding "-P1" to end of Red LED: Relay Status 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac model number. The P1 option is pre-programmed to Yellow LED: Service Status allow dry contact binary input to command the relay. Pink LED: Binary Input Status 2 HP @ 277 Vac **Dimensions:** 4.00" x 4.00" x 1.80" with .50" NPT Nipple Contact closure on the BI will activate relay. 1 HP @ 120 Vac • When connecting 24 Vac to both the RIB(s) and a Wires: 16", 600V Rated Approvals: FCC, LonMark®, CE, RoHS half-wave device, damage to device can occur. UL Listed, UL916, C-UL Power Input Ratings: Option 1: Use separate transformers for each device. 111 mA @ 24 Vac Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Option 2: Add diode between devices, see Option 2 96 mA @ 120 Vac (RIBTW2401SB-LN) Gold Flash: No note below. ^^ 105 mA @ 208-277 Vac (RIBTW2402SB-LN) Override Switch: Yes 81 mA @ 24 Vdc Channel: TP/FT-10 Transceiver Type: FT5000 Smart Transceiver Transceiver Compatibility: FT3120 / FT3150, FTT-10 / FTT-10A, and LPT-10 / LPT-11 Tranceivers DESCRIPTION **SNVT NAME** Functional Blocks: 0000 Node Object Command to open/close relay nvi Value 0004 Closed Loop Actuator Object Command status of relay nvo Value Fb 0001 Open Loop Sensor Object Downloadable Files: PDF, XIF, APB, VSS and NXE Default state of relay on/off nci Default available on website. Communication timer nci Max Receive T Status of Binary Input nvo Value Invert status of Binary Input nci Invert Max time between updates nci Max Send T Min time between updates nci Min Send T RIBTW2401SB-LN or RIBTW2402SB-LN Half-Wave Device

-() 24 Vac

- Com

The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)



**SNVT TYPE** 

SNVT switch

SNVT\_switch

SNVT\_switch

SNVT elapsed tm

SNVT\_switch

SNVT\_lev\_disc

SNVT\_elapsed\_tm

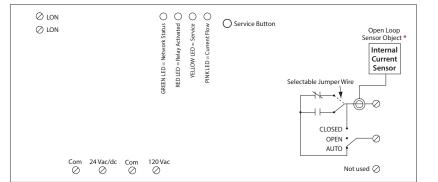
SNVT\_elapsed\_tm

### **RIBMNWX2401SB-LN**

2.75" Track Mount LonWorks® Twisted-Pair FT-10 Network Dual I/O Device; One Binary Output (20 Amp Relay SPST + Override); One Binary Input (Current Sensor 0.25 - 20 Amp, Relay Load Sensing), 24 Vac/dc or 120 Vac Power Input

### **RIBTWX2401SB-LN**

Enclosed LonWorks® Twisted-Pair FT-10 Network Dual I/O Device; One Binary Output (20 Amp Relay SPST + Override); One Binary Input (Current Sensor 0.25 - 20 Amp, Relay Load Sensing), 24 Vac/dc or 120 Vac Power Input





### SPECIFICATIONS

RELAYS

#### # Relays & Contact Type: One (1) SPST Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Green LED: Network Status Red LED: Relay Status Yellow LED: Service Status Dimensions: 6.00" x 2.75" x 1.75" (RIBMNWX2401SB-LN) 7.00" x 4.28" x 2.00" with .75" NPT Nipple (RIBTWX2401SB-LN) Track Mount: MT212-6 Mounting Track Provided Approvals: FCC, LonMark®, CE, RoHS UL Listed, UL916, C-UL Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X Gold Flash: No Override Switch: Yes Channel: TP/FT-10 Transceiver Type: FT5000 Smart Transceiver

Transceiver Type: FT5000 Smart Transceiver Functional Blocks: 0000 Node Object 0004 Closed Loop Actuator Object 0001 Open Loop Sensor Object Downloadable Files: PDF, XIF, APB, VSS and NXE available on website.



↑ Option 2: Add diode on 24 Vac power (Com) interconnection

between devices. Band on diode faces towards RIB(s).

Contact Ratings:

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 120/277 Vac (N/O) 10 Amp Ballast @ 120/277 Vac (N/C) *Not rated for Electronic Ballast* 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

#### Power Input Ratings:

105 mA @ 24 Vac 78 mA @ 24 Vdc 105 mA @ 120 Vac

#### Current Sensor Range: 0.25 - 20 Amps

Threshold fixed at .25 Amps.

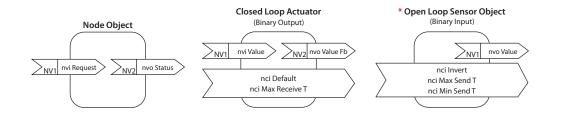
#### Notes:

- Normally Open or Normally Closed selected by yellow jumper wire.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTWX2401SB-LN-N4)
- Order with grey lid by adding "-GY" to end of model number. (RIBTWX2401SB-LN-GY)
- Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTWX2401SB-LN-N4-GY)
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur.
   Option 1: Use separate transformers for each device.
   Option 2: Add diode between devices, see Option 2 note below. ^^

DESCRIPTION	SNVT NAME	<b>SNVT TYPE</b>
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Binary Input	nvo Value	SNVT_switch
Invert status of Binary Input	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm

The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)

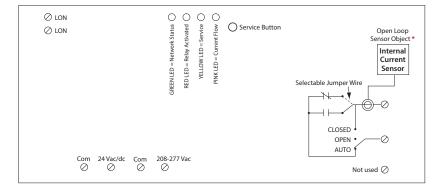


#### **RIBMNWX2402SB-LN**

2.75" Track Mount LonWorks® Twisted-Pair FT-10 Network Dual I/O Device; One Binary Output (20 Amp Relay SPST + Override); One Binary Input (Current Sensor 0.25 - 20 Amp, Relay Load Sensing), 24 Vac/dc or 208-277 Vac Power Input

### RIBTWX2402SB-LN

Enclosed LonWorks<sup>®</sup> Twisted-Pair FT-10 Network Dual I/O Device; One Binary Output (20 Amp Relay SPST + Override); One Binary Input (Current Sensor 0.25 - 20 Amp, Relay Load Sensing), 24 Vac/dc or 208-277 Vac Power Input





CE



#### **SPECIFICATIONS**

Expected Relay Life: Operating Temperature: Humidity Range: Operate Time: Green LED: Red LED: Yellow LED: Dimensions: Track Mount: Approvals: Housing Rating:	5 to 95% (noncondensing) 18ms Network Status Relay Status Service Status 6.00° x 2.75° x 1.75° (RIBMNWX2402SB-LN) 7.00° x 4.28° x 2.00° with .75° NPT Nipple (RIBTWX2402SB-LN) MT212-6 Mounting Track Provided FCC, LonMark®, CE, RoHS UL Listed, UL916, C-UL UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X	Contact Ratings: 20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 120/277 Vac (N/O) 10 Amp Ballast @ 120/277 Vac (N/C) <i>Not rated for Electronic Ballast</i> 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac <b>Power Input Ratings:</b> 105 mA @ 24 Vac 78 mA @ 24 Vac 120 mA @ 208-277 Vac	Current Sensor Range: 0.25 - 20 Amps Threshold fixed at .25 Amps. Notes: • Normally Open or Normally O jumper wire. • Order NEMA 4 housing by ad number. (RIBTWX2402SB-LN- • Order with grey lid by adding number. (RIBTWX2402SB-LN- • Order NEMA 4 housing with of to end of model number. (RIB • When connecting 24 Vac to b half-wave device, damage to Option 1: Use separate transfe Option 2: Add diode betweer	lding "-N4" to end of model -N4) g "-GY" to end of model -GY) grey lid by adding "-N4-GY" BTWX2402SB-LN-N4-GY) sorth the RIB(s) and a device can occur. formers for each device.
Gold Flash: Override Switch:			note below. AA	
Functional Blocks:	FT5000 Smart Transceiver	DESCRIPTION Command to open/close relay Command status of relay Default state of relay on/off Communication timer	SNVT NAME nvi Value nvo Value Fb nci Default nci Max Receive T	SNVT TYPE SNVT_switch SNVT_switch SNVT_switch SNVT_elapsed_tm
		Status of Binary Input	nvo Value	SNVT_switch

Invert status of Binary Input

Max time between updates

Min time between updates



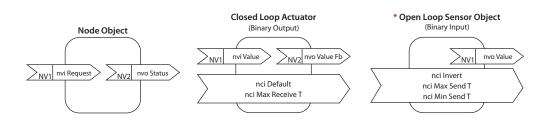
Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s). The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

nci Invert

nci Max Send T

nci Min Send T

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)



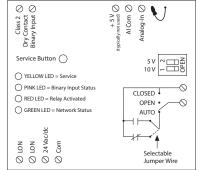
SNVT\_lev\_disc

SNVT\_elapsed\_tm

SNVT\_elapsed\_tm

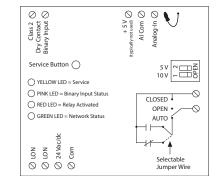
### **RIBMW24SB-LNAI**

4.00" Track Mount LonWorks® Twisted-Pair FT-10 Network Three I/O Device; One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); One Analog Input (0-5Vdc / 0-10 Vdc); 24 Vac/dc Power Input



### RIBTW24SB-LNAI

Enclosed LonWorks® Twisted-Pair FT-10 Network Enclosed Three I/O Device; One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); One Analog Input (0-5Vdc / 0-10 Vdc); 24 Vac/dc Power Input.





## ct Ratings:

**Power Input:** 24 Vac/dc ; 50-60 Hz \*

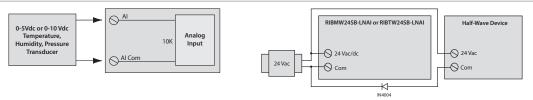
#### Notes:

- Order with P1 option by adding "-P1" to end of model number. The P1 option is pre-programmed to allow dry
- contact binary input to command the relay. Contact closure on the BI will activate relay.
- Normally Open or Normally Closed selected by yellow jumper wire.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTW24SB-LNAI-N4)
- Close DIP switch 1 for 0-5 Vdc Analog Input.
- Close DIP switch 2 for 0-10 Vdc Analog Input. • When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^
- See page 71 for -LNT2 or -LNT3 models if using a thermistor. If using a thermistor on the Analog Input, set DIP switches to the 0-5 Vdc setting. A look-up table must also be made.

DESCRIPTION	SNVT NAME	<b>SNVT TYPE</b>
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Binary Input	nvo Value	SNVT_switch
Invert status of Binary Input	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm
Value of Analog-In	nvo Analog	SNVT_lev_percent
Max time between Analog updates	nci Max Send T1	SNVT_elapsed_tm
Min time between Analog updates	nci Min Send T1	SNVT_elapsed_tm
Min change in Analog before updates	nci Min Delta	SNVT_lev_percent

The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)



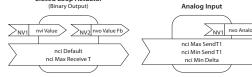
Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

Tra

RELAYS

### **SPECIFICATIONS**

Expected Relay Life: Operating Temperature: Humidity Range: Operate Time: Green LED: Red LED: Yellow LED: Pink LED:	5 to 95% (noncondensing)	Contact Ratings: 20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 120/277 Vac (N/O) 10 Amp Ballast @ 120/277 Vac (N/C) <i>Not rated for Electronic Ballast</i> 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 120 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac
Track Mount:	MT4-4 Mounting Track Provided	Power Input Ratings:
	FCC, LonMark <sup>®</sup> , CE, RoHS	111 mA @ 24 Vac
Approvais.	UL Listed, UL916, C-UL	81 mA @ 24 Vdc
Housing Rating:	UL Listed, NEMA 1, C-UL, CE Approved,	
	UL Accepted for Use in Plenum,	
	Also available NEMA 4 / 4X	
Gold Flash:	No	
Override Switch:	Yes	
Channel:	TP/FT-10	
Transceiver Type:	FT5000 Smart Transceiver	
Transceiver Compatibility:	FT3120 / FT3150, FTT-10 / FTT-10A, and	
	LPT-10 / LPT-11 Tranceivers	DESCRIPTION
Functional Blocks:		Command to open/close relay
	0004 Closed Loop Actuator Object	Command status of relay
	0001 Open Loop Sensor Object	Default state of relay on/off
	0520 Analog Input	Communication timer
Downloadable Files:	PDF, XIF, APB, VSS and NXE	Status of Binary Input
	available on website.	Invert status of Binary Input
	Open Loop Sensor Object (Binary Input)	Max time between updates
Node Object		Min time between updates
	Nut nyo Value	Value of Analog-In
NV1 nvi Request		Max time between Analog updates
<u>NV1</u> NV1 NV1 NV1 NV2 NV2	nci Invert	Min time between Analog updates
	nci Min Send T	5 1
		Min change in Analog before updates
Closed Loop Actuator		The relay will go to the default state w



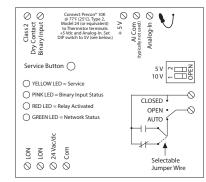
### **RIBMW24SB-LNT2**

4.00<sup>"</sup> Track Mount LonWorks<sup>®</sup> Twisted-Pair FT-10 Network Three I/O Device; One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); Precon® Type 2 Thermistor Input; 24 Vac/dc Power Input

#### + 5 V () Al Com (aally not used) () Analog-In () 00 © 77°F (25°C), Type 2, 10del 24 (or equivalent Class 2 ( Dry Contact Binary Input ( + 5 V Service Button () YELLOW LED = Service O PINK LED = Binary Input Status 0 CLOSED . O RED LED = Relay Activated OPEN GREEN LED = Network Status AUTO 24 Vac/dc Com LON Selectable 0000 Jumper Wir

### **RIBTW24SB-LNT2**

Enclosed LonWorks® Twisted-Pair FT-10 Network Three I/O Device; One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); Precon® Type 2 Thermistor Input; 24 Vac/dc Power Input







CE

 $\checkmark$ RoHS

Made in USA

"Buy American" of ARRA 2009

INPUT

### SPECIFICATIONS

	One (1) SPST Continuous Duty Coil	Cor
	10 million cycles minimum mechanical	207
Operating Temperature:		207
Humidity Range:	5 to 95% (noncondensing)	10/
Operate Time:	18ms	Not
Green LED:	Network Status	10/
Red LED:	Relay Status	111
Yellow LED:	Service Status	770
Pink LED:	Binary Input Status	2 H
Dimensions:	4.00" x 4.00" x 1.50" (RIBMW24SB-LNT2)	1 H
	4.28″ x 7.00″ x 2.00″ with .75″ NPT Nipple	
	(RIBTW24SB-LNT2)	Pov
Track Mount:	MT4-4 Mounting Track Provided	111
Approvals:	FCC, LonMark <sup>®</sup> , CE, RoHS	81 ı
	UL Listed, UL916, C-UL	
Housing Rating:	UL Listed, NEMA 1, C-UL, CE Approved,	
	UL Accepted for Use in Plenum,	Pov
	Also available NEMA 4 / 4X	24 \
Gold Flash:	No	
Override Switch:	Yes	
Channel:	TP/FT-10	-
Transceiver Type:	FT5000 Smart Transceiver	D
Transceiver Compatibility:	FT3120 / FT3150, FTT-10 / FTT-10A, and	C
	LPT-10 / LPT-11 Tranceivers	C
Functional Blocks:	0000 Node Object	
	0004 Closed Loop Actuator Object	D
	0001 Open Loop Sensor Object	C
	1040 Temperature Sensor	St
Downloadable Files:	PDF, XIF, APB, VSS and NXE	In
	available on website.	
		M
		N./



Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

ntact Ratings: Amp Resistive @ 277 Vac Amp Ballast @ 120/277 Vac (N/O) Amp Ballast @ 120/277 Vac (N/C) ot rated for Electronic Ballast Amp Tungsten @ 120 Vac (N/O) 10 VA Pilot Duty @ 277 Vac 0 VA Pilot Duty @ 120 Vac IP @ 277 Vac HP @ 120 Vac

#### wer Input Ratings:

1 mA @ 24 Vac mA @ 24 Vdc

#### wer Input:

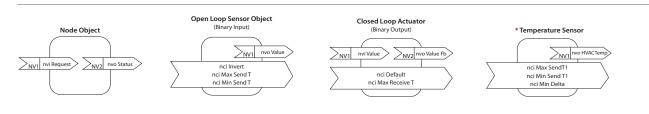
Vac/dc ; 50/60 Hz ^

- Notes: Order with P1 option by adding "-P1" to end of model number. The P1 option is pre-programmed to allow dry contact binary input to command the relay. Contact closure on the BI will activate relay. · Normally Open or Normally Closed selected by yellow jumper wire. Order NEMA 4 housing by adding "-N4" to end of model
- number. (RIBTW24SB-LNT2-N4) -35 to 100°C range in one degree steps. -36°C indicates
- below range, 101°C indicates above range. • When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^
- Can be used with Precon® Type 3 Thermistor Input. Use suffix "-LNT3" instead of "LNT2" when ordering. Thermistor not included.

DESCRIPTION	SNVT NAME	SNVT TYPE
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Digital-In	nvo Value	SNVT_switch
Invert status of Digital-In	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm
T2 Thermistor input *	nvo HVACTemp	SNVT_temp_p
Max time between Temperature updates	nci Max Send T1	SNVT_elapsed_tm
Min time between Temperature updates	nci Min Send T1	SNVT_elapsed_tm
Min change in Temperature before updates	nci Min Delta	SNVT_temp_p

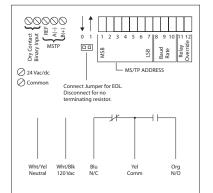
The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)



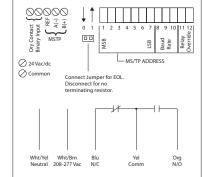
### RIBTW2401B-BC

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); One Binary Input (Dry Contact, Class 2); 24 Vac/dc or 120 Vac Power Input, Optional End of Line Resistor (EOL) Included.



### RIBTW2402B-BC

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); One Binary Input (Dry Contact, Class 2); 24 Vac/dc or 208-277 Vac Power Input, Optional End of Line Resistor (EOL) Included.





### **SPECIFICATIONS**

RELAYS

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Green LED: Network Communication Red LED: Relay Status Dimensions: 4.00" x 4.00" x 1.80" with .50" NPT Nipple Wires: 16", 600V Rated Approvals: CE, UL Listed, UL916, C-UL, RoHS Housing Rating: UL Accepted for Use in Plenum, NEMA 1 Gold Flash: No Relay Override Switch: DIP Switch Control

Network Media:	Twisted Pair 22-24AWG, shielded
	recommended
Terminations:	Functional Devices product installed at
	both ends of the MS/TP network – Use
	120 $\Omega$ end of line resistors. All other
	cases – Follow instructions from the
	device installed at the end of the
	MS/TP network.
Polarity:	Network is polarity sensitive
Baud Rate:	9600, 19200, 38400, 57600, 76800,

115200 (DIP Switch Selectable)

#### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

#### **Power Input Ratings:**

81 mA @ 24 Vdc 111 mA @ 24 Vac 96 mA @ 120 Vac (RIBTW2401B-BC) 121 mA @ 208-277 Vac (RIBTW2402B-BC)

**RELAY STATE\*** 

#### Power Input:

24 Vac/dc ; 120 Vac ; 50/60 Hz (RIBTW2401B-BC) 24 Vac/dc; 208-277 Vac; 50/60 Hz (RIBTW2402B-BC)

#### Notes:

• When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

DIP SWITCHES*		BAUD RATE	DIP SWITCHES*		RELAY STATE			
	8	9	10			11	12	
	0	0	0	9600		1	0	Auto
	0	0	1	19200		Х	1	Override on
	0	1	0	38400		0	0	Override off
	0	1	1	57600		* 0 = Open ;	1 = Closed	
	1	0	0	76800				ered for override
	1	0	1	115200				

All other combinations=9600 baud

• Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to report back to the network.

#### **BACnet®** Details:

 MS/TP Address & Baud Rate must be set prior to power up via DIP switches.

 Device ID will default to 277XXX where XXX is the MS/TP Address.

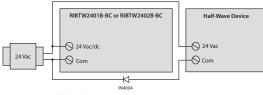
Examples:
MS/TP Address - 004
Device ID - 277004
MS/TP Address - 121
Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- This model utilizes: BO 1 (Relay output), BI 1 (Dry contact binary input), BI 2 (Internal current sensor input)
- Device Instance changed via Object Identifier Property of Device Object
- PIC Statement available on website. http://www.functionaldevices.com/pdf/

pics/RIBTW240xB-BC\_PICS.pdf

Or scan QR code with your smart phone.





AA Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

### **RIBMNWX2401B-BC**

2.75" Track Mount BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (One Current Sensor 0.25 - 20 Amp, Relay Load Sensing & One Dry Contact Binary Input), 24 Vac/dc or 120 Vac Power Input, Optional End of Line Resistor (EOL) Included.

#### **RIBTWX2401B-BC**

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (One Current Sensor 0.25 - 20 Amp, Relay Load Sensing & One Dry Contact Binary Input), 24 Vac/dc or 120 Vac Power Input, Optional End of Line Resistor (EOL) Included.

**Contact Ratings:** 

2 HP @ 277 Vac 1 HP @ 120 Vac

Power Input:

20 Amp Resistive @ 277 Vac

770 VA Pilot Duty @ 120 Vac

24 Vac/dc ; 120 Vac ; 50/60 Hz

**Power Input Ratings:** 

105 mA @ 24 Vac

78 mA @ 24 Vdc

105 mA @ 120 Vac

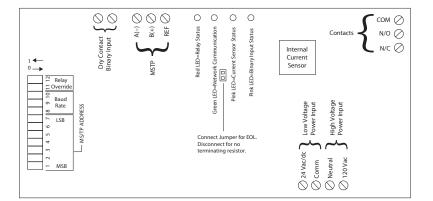
Current Sensor Range: 0.25 - 20 Amps

Threshold fixed at .25 Amps.

16 Amp Electronic Ballast @ 277 Vac (N/O)

10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac

20 Amp Ballast @ 277 Vac



#### **SPECIFICATIONS**

Expected Relay Life: Operating Temperature:	5 to 95% (noncondensing)
Network Communication:	
	Red LED On = Activated
,	Pink LED $On = Activated$
	Pink LED On = Activated
<i>,</i> ,	6.00″ x 2.75″ x 1.75″ (RIBMNWX2401B-BC)
Track Mount: Approvals:	4.28" x 7.00" x 2.00" with .75" NPT Nipple (RIBTWX2401B-BC) MT212-6 Mounting Track Provided CE, UL Listed, UL916, C-UL, ROHS UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X No
	Twisted Pair 22-24AWG, shielded recommended Functional Devices product installed at both ends of the MS/TP network – Use 120 $\Omega$ end of line

resistors. All other cases - Follow instructions from the device installed at the end of the MS/TP network. Polarity: Network is polarity sensitive

Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

DI	BAUD RATE		
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200



#### **DIP SWITCHES RELAY STATE\*** 11 12 0 Auto 1 Override on Х 1 Override off 0 0 \* 0 = Open ; 1 = Closed

\*\* Device must be powered for override

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🛇 Com

 Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor. to report back to the network.

Half-Wave Device

-🚫 24 Vac

🛇 Com



- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- This model utilizes: BO 1 (Relay output), current sensor input)
- Device Instance changed via Object Identifier Property of Device Object
- http://www.functionaldevices.com/pdf/pics/ RIBxWX240xB-BC\_PICS.pdf



E

ASHRAE BACnet

#### Notes:

#### • Device can be powered by either 24 Vac/dc or 120 Vac. but not both

 Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTWX2401B-BC-N4) • Order with grey lid by adding "-GY" to end of model number. (RIBTWX2401B-BC-GY) Order NEMA 4 housing with grey lid by adding

"-N4-GY" to end of model number. (RIBTWX2401B-BC-N4-GY)

• When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

#### **BACnet® Details:**

 MS/TP Address & Baud Rate must be set prior to power up via DIP switches.

 Device ID will default to 277XXX where XXX is the MS/TP Address.

MS/TP Address - 004 Device ID - 277004 MS/TP Address - 121 Device ID - 277121

- BI 1 (Dry contact binary input), BI 2 (Internal
- · PIC Statement available on website.
- Or scan QR code with your smart phone.



-14-Option 2: Add diode on 24 Vac power (Com) interconnection

between devices. Band on diode faces towards RIB(s).

RIBMNWX2401B-BC or RIBTWX2401B-BC

### **RIBMNWX2402B-BC**

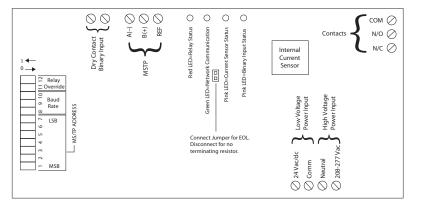
2.75" Track Mount BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (One Current Sensor 0.25 - 20 Amp, Relay Load Sensing & One Dry Contact Binary Input), 24 Vac/dc or 208-277 Vac Power Input, Optional End of Line

### Resistor (EOL) Included.

### RIBTWX2402B-BC

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (One Current Sensor 0.25 - 20 Amp, Relay Load Sensing & One Dry Contact Binary Input), 24 Vac/dc or 208-277 Vac Power Input, Optional End of Line

Resistor (EOL) Included.



### SPECIFICATIONS

RELAYS

	One (1) SPDT Continuous Duty Coil 10 million cycles minimum mechanical	Contact Ratings: 20 Amp Resistive @ 277 Vac
Operating Temperature: Humidity Range: Operate Time: Network Communication: Relay Status: Current Sensor Status: Binary Input Status:	-30 to 140° F 5 to 95% (noncondensing) 18ms	20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac
Track Mount: Approvals:	4.28" x 7.00" x 2.00" with .75" NPT Nipple (RIBTWX2402B-BC) MT212-6 Mounting Track Provided CE, UL Listed, UL916, C-UL, RoHS UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X	Power Input: 24 Vac/dc ; 208-277 Vac ; 50/60 Hz Power Input Ratings: 105 mA @ 24 Vac
Gold Flash: Relay Override Switch:		78 mA @ 24 Vdc 120 mA @ 208-277 Vac
	Twisted Pair 22-24AWG, shielded recommended Functional Devices product installed at both ends of the MS/TP network – Use 120 $\Omega$ end of line resistors. All other cases – Follow instructions	Current Sensor Range: 0.25 - 20 Amps

resistors. All other cases - Follow instructions from the device installed at the end of the MS/TP network. Polarity: Network is polarity sensitive

Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

DI	BAUD RATE		
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200

DIP SWITCHES*		RELAY STATE**
11	12	
1	0	Auto
Х	1	Override on
0	0	Override off
* 0 = Open ; ** Device m		ered for override

 Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor. to report back to the network.

All other combinations=9600 baud

# 









### Notes:

### • Device can be powered by either 24 Vac/dc or 208-277 Vac, but not both.

- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTWX2402B-BC-N4) • Order with grey lid by adding "-GY" to end of
- model number. (RIBTWX2402B-BC-GY) Order NEMA 4 housing with grey lid by adding
- "-N4-GY" to end of model number. (RIBTWX2402B-BC-N4-GY)

• When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

### **BACnet®** Details:

- MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
- Device ID will default to 277XXX where XXX is the MS/TP Address. nla

zampies.
MS/TP Address - 004
Device ID - 277004
MS/TP Address - 121 Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- This model utilizes: BO 1 (Relay output), BI 1 (Dry contact binary input), BI 2 (Internal current sensor input)
- Device Instance changed via Object Identifier Property of Device Object
- PIC Statement available on website. http://www.functionaldevices.com/pdf/pics/ RIBxWX240xB-BC\_PICS.pdf
- Or scan QR code with your smart phone.



Threshold fixed at .25 Amps.

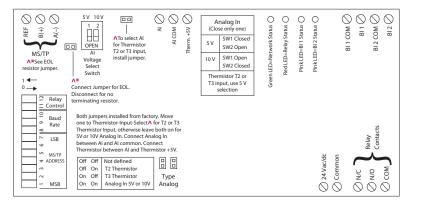
Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

### **RIBMNW24B-BCAI**

2.75" Track Mount BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2/T3 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.

### **RIBTW24B-BCAI**

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2/T3 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.



### SPECIFICATIONS

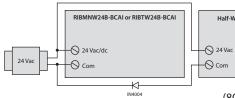
	One (1) SPDT Continuous Duty Coil 10 million cycles minimum mechanical	Contact Ratings: 20 Amp Resistive @ 277 Vac
Operating Temperature:		20 Amp Ballast @ 277 Vac
	5 to 95% (noncondensing)	16 Amp Electronic Ballast @ 277 Vac (N/O)
Operate Time:		10 Amp Tungsten @ 120 Vac (N/O)
Network Communication:		1110 VA Pilot Duty @ 277 Vac
iteriterite communication	Red LED On = Activated	770 VA Pilot Duty @ 120 Vac
	Pink LED On = Activated	2 HP @ 277 Vac
	Pink LED On = Activated	1 HP @ 120 Vac
	6.25" x 2.75" x 1.75" (RIBMNW24B-BCAI)	
Dimensions.	4.28″ x 7.00″ x 2.00″	
	with .75 <sup>°</sup> NPT Nipple (RIBTW24B-BCAI)	Power Input Ratings:
Track Mount	MT212-6 Mounting Track Provided	81 mA @ 24 Vdc
	5	111 mA @ 24 Vac
	CE, UL Listed, UL916, C-UL, RoHS	
Housing Rating:	UL Listed, NEMA 1, C-UL, CE Approved,	
	UL Accepted for Use in Plenum,	<ul> <li>PIC Statement available</li> </ul>
	Also available NEMA 4 / 4X	on website.
Gold Flash:		http://www.functionaldevices.com/pdf/
Relay Override Switch:	DIP Switch Control	pics/BACnet-BCAI_PICS.pdf
		Or scan QR code with your
Network Media:	Twisted Pair 22-24AWG, shielded	smart phone.
	recommended	
Terminations:	Functional Devices product installed at	[비명경망지]비
	both ends of the MS/TP network – Use	
	120 $\Omega$ end of line resistors. All other	
	cases – Follow instructions from the	1966 AND 1966
	device installed at the end of the	54516 <u>5</u> 4
	device installed at the end of the	

MS/TP network. Polarity: Network is polarity sensitive Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

DI	BAUD RATE		
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200

All other combinations=9600 baud

• Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to report back to the network.





**DIP SWITCHES**\*

\* 0 = Open ; 1 = Closed

12

0

1

0

\*\* Device must be powered for override

11

1

Х

0

**RELAY STATE\*\*** 

Auto

Override on

Override off



CE

вT

Buy American

### Notes:

UUus 🕸 BACne

- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTW24B-BCAI-N4)
- Order with grey lid by adding "-GY" to end of model number. (RIBTW24B-BCAI-GY)
- Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTW24B-BCAI-N4-GY)
- · For all versions, raw analog default settings are 0 and 1023 (real), respectively. Units default to 95 (no units).
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below.^^

### **BACnet® Details:**

- MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
- Device ID will default to 277XXX where XXX is the MS/TP Address. Examples:

MS/TP Address - 004 Device ID - 277004

### MS/TP Address - 121 Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- This model utilizes: BO 1 (Relay output), BI 1 (Dry contact binary input), BI 2 (Dry contact binary input), Al 1 (Analog input)
- Device Instance changed via Object Identifier Property of Device Object

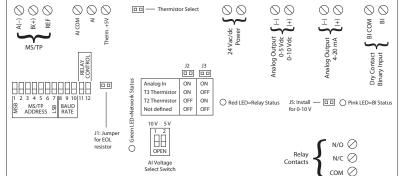
### **Thermistor Specifications:**

 Thermistor Type 2 (T2) Precon 10 K @ 77°F (25°C) PN ST-R24, Model 24, (or equivalent.) Thermistor Type 3 (T3) Precon 10 K @ 77°F (25°C) Model 3, (or equivalent.) Thermistor not included.

- For both T2 and T3, MIN\_PRES\_VAL must be set to -36 (real value) and MAX\_PRES\_VAL must be set to 66.3 (real value) for Celcius. For Fahrenheit, MIN\_PRES\_VAL must be set to -32.8 (real value) and MAX\_PRES\_VAL must be set to 151.34 (real value).
- -35 to 10°C range in 1° steps / -31 to 50°F range in 1.8° steps 10 to 32°C range in 0.1° steps / 50 to 90°F range in 0.18° steps 32 to 100°C range in 1° steps / 90 to 212°F range in 1.8° steps

### **RIBTW24B-BCAO**

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); One Binary Input (Dry Contact, Class 2); One Analog Output (0-5 Vdc, 0-10 Vdc, or 4-20 mA), One Analog Input (T2/T3 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.





### **SPECIFICATIONS**

RELAYS

Ν

Expected Relay Life: Operating Temperature: Humidity Range: Operate Time: Network Communication: Relay Status: Binary Input Status:	5 to 95% (noncondensing) 18ms	<b>Contact</b> 20 Amp 20 Amp 16 Amp 110 Amp 1110 VA 770 VA P 2 HP @ 1 HP @
Approvals: Housing Rating: Gold Flash:	CE, UL Listed, UL916, C-UL, RoHS UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum,	<b>Power In</b> 176 mA 150 mA
Terminations:	Twisted Pair 22-24AWG, shielded recommended Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.	Notes: • Use a se an isola power-u • Comple Bulletin www.fur B1756_3
	Network is polarity sensitive 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)	• When co and a ha

Ratings:

Resistive @ 277 Vac Magnetic Ballast @ 277 Vac Electronic Ballast @ 277 Vac (N/O) Tungsten @ 120 Vac (N/O) Pilot Duty @ 277 Vac Pilot Duty @ 120 Vac 277 Vac 120 Vac

### nput Ratings:

@ 24 Vac @ 24 Vdc

eparate 24 Vac transformer, or ated 24 Vdc power supply to up this product. ete Installation Instructions: n B1756 available on website. nctionaldevices.com/pdf/bulletins/

393218.pdf connecting 24 Vac to both the RIB(s) alf-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below ^^





### Thermistor Specifications:

- Thermistor Type 2 (T2) Precon 10 K @ 77°F (25°C) PN ST-R24, Model 24, (or equivalent.) Thermistor Type 3 (T3) Precon 10 K @ 77°F (25°C) Model 3, (or equivalent.) Thermistor not included.
- -35 to 10°C range in 1° steps / -31 to 50°F range in 1.8° steps 10 to 32°C range in 0.1° steps / 50 to 90°F range in 0.18° steps 32 to 100°C range in 1° steps / 90 to 212°F range in 1.8° steps

### **BACnet®** Details:

smart phone.

- This model utilizes: BO 1 (Relay output),
- Bl 1 (Dry contact binary input),
- Al 1 (Analog input), AO 1 (Analog output)
- PIC Statement available on website.

http://www.functionaldevices.com/pdf/

pics/RIBTW24B-BCAO\_PICS.pdf Or scan QR code with your



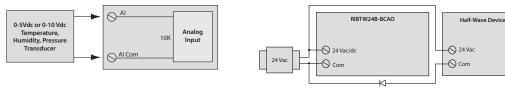
 Addressing Specifications: Bulletin B2028 available on website.

www.functionaldevices.com/pdf/bulletins/B2028\_393243.pdf

	ANALOG OUTPUT ACCURACY AS A FUNCTION OF OUTPUT SPAN (USING STANDARD CONDITIONS *)							
	Span 20% - 100%	Span 10% - 100%	Span 0% - 100%					
Analog Output Voltage (0-5 Vdc; 0-10 Vdc)	+/- 2% error	+/- 5% error	+/- 11% error					
Analog Output Current (4-20 mA)	+/- 2% error	+/- 3% error	+/- 12% error					

### \* Standard Conditions:

Power Supply Input: 22 Vac/dc to 28 Vac/dc ; Loop Resistance (Analog Output 4-20 mA Loop): 530 Ohms max. Load Resistance [Analog Output Voltage (0-5 Vdc, 0-10 Vdc)]: 10 K Ohms min. ; Ambient Temperature: -30 to 140° F



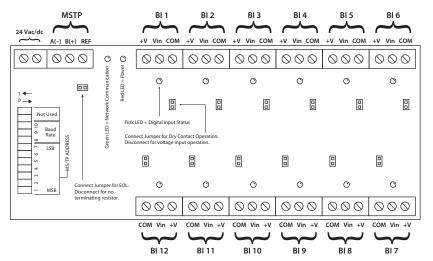
Ana

Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

76

### **RIBMNWD12-BCDI**

2.75" Track Mount BACnet<sup>\*</sup> MS/TP Network 12 Binary Input Device; Optional End of Line Resistor (EOL) Included.





CE

# RELAYS

### SPECIFICATIONS

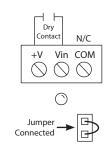
Green LED: Red LED:	5 to 95% (noncondensing) Network Communication ON = Power Present	<b>Power Input Ratings:</b> 41 mA @ 24 Vdc 53 mA @ 24 Vac	· ·	<b>tings:</b> nA @ 30 Vdc max. 2 mA @ 25 Vac/dc max.		
	5.85" x 2.75" x 1.75" MT212-6 Mounting Track Provided CE, RoHS	<ul> <li>BACnet* Details:</li> <li>MS/TP Address &amp; Baud Rate must be spower up via DIP switches.</li> <li>Device ID will default to 277XXX when</li> </ul>		BI 1 (Binary input) BI 7 (Binary i is the BI 2 (Binary input) BI 8 (Binary i		
	Twisted Pair 22-24AWG, shielded recommended Functional Devices product installed at both ends of the MS/TP network – Use 120 $\Omega$ end of line resistors. All other cases – Follow instructions from the device installed at the end of the	MS/TP Address. Examples: MS/TP Address - 004 Device ID - 277004 • Device ID can be changed via networ Once changed, it will no longer defau (MS/TP Address & Device ID must be	ress - 121 277121 command. t to 277XXX. nique.)	BI 4 (Binary input) BI 10 ( BI 5 (Binary input) BI 11 ( BI 6 (Binary input) BI 12 ( PIC Statement available on we http://www.functionaldevices.com	ices.com/pdf/pics/	
	MS/TP network. Network is polarity sensitive 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)	Device Instance changed via Object to Property of Device Object     Full wave rectified	dentifier	RIBMNWD12-BCDL_PICS.pdf Or scan QR code with your smart phone.		

UD RATE
9600
19200
38400
57600
76800
115200

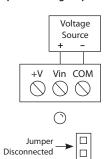
\* 0 = Open ; 1 = Closed

All other combinations=9600 baud

### Example of Dry Contact Input Operation

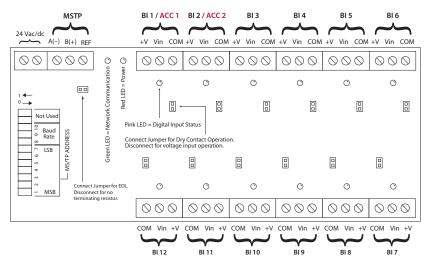


### Example of Voltage Input Operation



### **RIBMNWD12-BC**

2.75" Track Mount BACnet® MS/TP Network 12 Binary Input Device (With Accumulators); Optional End of Line Resistor (EOL) Included.





CE

Made in USA

**BACne** 

### **TWO (ACCUMULATOR) INPUTS CAN BE USED FOR POWER MONITORING OR OTHER PULSE** COUNTING APPLICATION.

### **SPECIFICATIONS**

RELAYS

Green LED: Red LED: Dimensions:	5 to 95% (noncondensing) Network Communication ON = Power Present 5.85" x 2.75" x 1.75" MT212-6 Mounting Track Provided
Network Media:	Twisted Pair 22-24AWG, shielded recommended
Terminations:	Functional Devices product installed at both ends of the MS/TP network – Use 120 $\Omega$ end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity:	Network is polarity sensitive
Baud Rate:	9600, 19200, 38400, 57600, 76800,

115200 (DIP Switch Selectable)

### **Power Input Ratings:** 41 mA @ 24 Vdc

53 mA @ 24 Vac

### Max. Accumulator Frequency: 50 Hz

### BACnet® Details:

 MS/TP Address & Baud Rate must be set prior to power up via DIP switches. • Device ID will default to 277XXX where

XXX is the MS/TP Address. Examples:

MS/TP Address - 004 Device ID - 277004

MS/TP Address - 121 Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- Device Instance changed via Object Identifier Property of Device Object

**Example of Dry Contact Input Operation** 

()( )

 $\bigcirc$ 

N/C

сом

( )

Dry

Contact

+V Vin

### **Binary Input Ratings:**

Dry Contact: 3 mA @ 30 Vdc max. Voltage Input: 12 mA @ 25 Vac/dc max.

> Objects included in device are: Bl 1 (Binary input) Use Same ACC 1 (Accumulator) Physical Input ſ BI 2 (Binary input) Use Same ACC 2 (Accumulator) } Physical Input BI 3 (Binary input) BI 4 (Binary input) BI 5 (Binary input) BI 6 (Binary input) BI 7 (Binary input) BI 8 (Binary input) BI 9 (Binary input) BI 10 (Binary input) BI 11 (Binary input) BI 12 (Binary input)

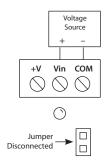
• PIC Statement available on website.

http://www.functionaldevices.com/pdf/pics/ . RIBMNWD12-BC\_PICS.pdf

Or scan QR code with your smart phone.



### **Example of Voltage Input Operation**



**BAUD RATE DIP SWITCHES\*** 8 9 10 9600 0 0 0 19200 0 0 1 0 0 38400 57600 1 1 0 0 76800 1 1 0 1 115200

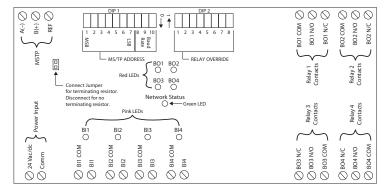
\* 0 = Open ; 1 = Closed

All other combinations=9600 baud

Jumper Connected

### RIBMW24B-44-BC

4.00" Track Mount BACnet® MS/TP Network Relay Device; Four Binary Outputs (20 Amp Relay SPDT + Override); Four Binary Inputs (Dry Contact Binary Inputs), 24 Vac/dc Power Input, Optional End of Line Resistor (EOL) Included.









### SPECIFICATIONS

# Relays & Contact Type: Four (4) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 18ms Network Communication: Green LED Relay Status: Red LED On = Activated Binary Input Status: Pink LED On = Activated Dimensions: 6.00" L x 4.27" W x 1.34" H Track Mount: MT4-6 Mounting Track Provided Approvals: CE, UL Listed, UL916, C-UL, RoHS Gold Flash: No Relay Override Switch: DIP Switch Control

Network Media: Twisted Pair 22-24AWG, shielded recommended Terminations: Functional Devices product installed at both ends of the MS/TP network - Use 120  $\Omega$  end of line resistors. All other cases - Follow instructions from the device installed at the end of the MS/TP network Polarity: Network is polarity sensitive

Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (Dip Switch Selectable)

### **NEED AN ENCLOSURE?** ORDER MODEL MH1210 (PAGE 142)

**NEED A POWER SUPPLY AND AN ENCLOSURE?** ORDER MODEL CTRL-PS (PAGE 113) & AT4-8 (PAGE 152)

### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 120/277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac

### **Power Input Ratings:**

24 Vac : 400 mA 24 Vdc : 190 mA

### **BACnet®** Details:

- MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
- Device ID will default to 277XXX where XXX is the MS/TP Address. Examples:

MS/TP Address - 004 Device ID - 277004 MS/TP Address - 121 Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique)
- This model utilizes: BO1, BO2, BO3, BO4, (Relay outputs), BI1, BI2, BI3, BI4 (Dry contact inputs)
- Device Instance changed via Object Identifier Property of Device Object Each unit is 1/8 unit load

• PIC Statement available on website. http://www.functionaldevices.com/pdf/ pics/RIBMW24B-44-BC PICS.pdf

Or scan QR code with your smart phone.



	DIP 1					DIP 2								
DIP Switches Baud Rate		Relay		DIP Switches*										
1-7	8	9	10		Relay	State**	1	2	3	4	5	6	7	:
See Bulletin B1082 for full MS/TP Addressing	0	0	0	9600		Auto	1	Х	Х	Х	0	Х	Х	
	0	0	1	19200	BO1 BO2	ON	Х	Х	Х	Х	1	Х	Х	
	0	1	0	38400		OFF	0	Х	Х	Х	0	Х	Х	
	0	1	1	57600		Auto	Х	1	Х	Х	X	0	Х	
	0	1	I			ON	Х	Х	Х	Х	X	1	Х	
	1	0	0	76800		OFF	Х	0	Х	Х	X	0	Х	
	1	0	1	115200		Auto	Х	Х	1	Х	Х	Х	0	
All other combinations=9600 baud • Dry contact digital input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching dwice such as a current sensor to report		BO3	ON	Х	Х	Х	Х	X	Х	1				
			OFF	Х	Х	0	Х	X	Х	0				
			Auto	Х	Х	Х	1	Х	Х	Х				
		BO4	ON	X	Х	Х	Х	X	Х	Х				

contact switching device, such as a current sensor, to report back to the network.

\* 0 = Open ; 1 = Closed

χ \*\* Device must be powered for override

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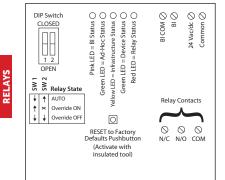
OFF

0

8 Х Х Х Х Х Х Х Х Х 0 1

### RIBTW24B-WI-N4

Enclosed Wifi IEEE 802.11 b/g Network Enclosed I/O Device: One Discrete Output (20 Amp Relay SPDT + Override), One Discrete Input (Dry Contact, Class 2); 24 Vac/dc



### **SPECIFICATIONS**

# Relays & Contact Type: One (1) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Operate Time: 18ms Pink LED: Digital Input Status Green LED: Wifi Ad-Hoc Status Yellow LED: Wifi Infrastructure Status Green LED: Device Status Red LED: Relay Status Dimensions: 4.28" x 7.00" x 2.00" with .75" NPT Nipple Approvals: UL Listed, UL916, C-UL FCC, CE, RoHS, Wifi Certified ASD Device Housing Rating: UL Accepted for Use in Plenum, NEMA 4 Gold Flash: No Relay Override Switch: DIP Switch Control Wifi: IEEE 802.11 b/g/n Compatible, (G) 54 Mbps Data Rate -95 dBm Min. Sensitivity +16 dBm Max Output Power Currently Unsecured Connection in Ad-Hoc (WPA-PSK or WPA-2-PSK Available) Supports PING and ARP DSSS Modulation

### **Contact Ratings:**

20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 2 HP @ 277 Vac 1 HP @ 120 Vac

### **Power Input Ratings:**

200 mA Max @ 24 Vac 200 mA Max @ 24 Vdc

### Available TCP/IP Settings:

- IP Address (Static)
- Port Number
- Subnet Mask
- Gateway Address
- Ad-Hoc mode
- Infrastructure mode
- Scan for wireless networks









### **Device Settings:**

 Local Override Reset to Network Defaults Pushbutton

### **Power Input:**

24 Vac = Terminal Strip (20 Vac min. ; 28 Vac max.) 24 Vdc = Terminal Strip (24 Vdc min.; 28 Vdc max.)

### **Device Settings by Network:**

- Power up default relay state
- Host name and location labels
- Relay bound to digital input

### Setup instructions available on website.

http://www.functionaldevices.com/pdf/ bulletins/B1802\_393224.pdf

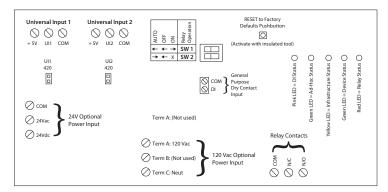


Or scan QR code with your smart phone.



### RIBTW2401B-WIUI-N4

Wifi IEEE 802.11 b/g Network Enclosed I/O Device: One Discrete Output (20 Amp Relay SPDT + Override), One Discrete Input (Dry Contact, Class 2); Two Universal Inputs; 24 Vac/dc, 120 Vac Power



### SPECIFICATIONS

	One (1) SPDT Continuous Duty Coil 10 million cycles minimum mechanical	<b>Contact Ratings:</b> 20 Amp Resistive @ 277 Vac
Operating Temperature: Operate Time:	-30 to 140° F	5 Amp Resistive @ 480 Vac
Pink LED: Green LED:	Digital Input Status Wifi Ad-Hoc Status	20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O)
Green LED: Red LED:	Wifi Infrastructure Status Device Status Relay Status	1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 1 HP @ 120 Vac
	4.28" x 7.00" x 2.00" with .75" NPT Nipple UL Listed, UL916, C-UL FCC, CE, RoHS, Wifi Certified ASD Device	2 HP @ 277 Vac Power Input Ratings:
Gold Flash: Relay Override Switch:	DIP Switch Control	158 mA Max @ 24 Vac 110 mA Max @ 24 Vdc 55 mA Max @ 120 Vac
	IEEE 802.11 b/g/n Compatible, (G) 54 Mbps Data Rate –95 dBm Sensitivity +16 dBm Output Power (WPA-PSK or WPA-2-PSK Available) Supports PING and ARP DSSS Modulation Customer can choose to have Webpage and Controller Commands authentication-secured with Username and Password.	Available TCP/IP Settings: • IP Address (Static) • Port Number • Subnet Mask • Gateway Address • Ad-Hoc mode (Default) • Infrastructure mode • Scan for wireless networks



### **Device Settings:**

- Local Override
- Reset to Network Defaults Pushbutton

### Power Input (Use one):

24 Vac = Terminal Strip (20 Vac min. ; 28 Vac max.) 24 Vdc = Terminal Strip (24 Vdc min. ; 28 Vdc max.) 120 Vac = Terminal Strip

### Device Settings by Network:

- Power up default relay state
- Host name and location labels
- Relay bound to digital input
- Username and Password security: Note: There will be no security if password field is left blank. A password may be entered that will secure the webpage as well as Controller Commands. Eight alpha-numerical characters case-sensitive.

### • Setup instructions available on website.

http://www.functionaldevices.com/pdf/ bulletins/B1783\_393223.pdf



Or scan QR code with your smart phone.

### CAUTION: Remove all connections to UI 1 and UI 2 when setting input.

### Universal Input: Configurable by internal device web page, accessible in either Ad-Hoc or Infrastructure.

• Analog value returned, user configurable min. and max. scale, and label, 0-5 Vdc, 0-10 Vdc, or 4-20 mA\*, connect between UI and Com.

- Direct temperature reading from Type T2 Thermistor. Connect between +5 Vdc and UI input.
- Digital Input, connect between +5 Vdc and UI input.
- \* 4-20 mA, when used, requires jumper to be installed on UI set for 4-20 mA input. Jumper MUST be removed when UI input used as anything other than 4-20 mA.

### For application manual, please visit: www.functionaldevices.com

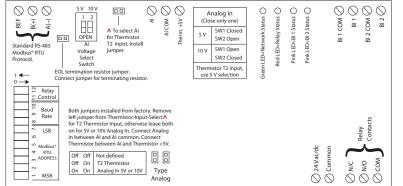
RELAYS

### RIBMNW24B-MBAI

2.75" Track Mount Modbus® RTU Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.

### **RIBTW24B-MBAI**

Enclosed Modbus® RTU Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.



### SPECIFICATIONS

Expected Relay Life: Operating Temperature: Humidity Range: Operate Time: Network Communication: Relay Status: Current Sensor Status: Binary Input Status: Dimensions: Track Mount: Approvals:	5 to 95% (noncondensing) 18ms Green LED Red LED On = Activated Pink LED On = Activated Pink LED On = Activated 6.25" x 2.75" x 1.75" (RIBMNW24B-MBAI) 4.28" x 7.00" x 2.00" with .75" NPT Nipple (RIBTW24B-MBAI) MT212-6 Mounting Track Provided CE, UL Listed, UL916, C-UL, ROHS UL Listed, NEMA 1, C-UL, ROHS UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X No	Contact Ratings: 20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 1110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 2 HP @ 277 Vac 1 HP @ 120 Vac <b>Power Input Ratings:</b> 81 mA @ 24 Vdc 111 mA @ 24 Vac
Network Media:	Twisted Pair 22-24AWG, shielded recommended, EIA/TIA-485 (standard RS485	5)
Terminations:	Functional Devices product installed at both	ends
	of the standard RS485 Modbus <sup><math>\circ</math></sup> RTU networ – Use 120 $\Omega$ end of line resistors. All other ca	

Follow instructions from the device installed at the

- end of the Modbus® network.
- Polarity: Network is polarity sensitive

Baud Rate: 9600, 19200, 38400, 57600 (DIP Switch Selectable)

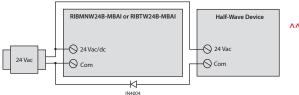
DIP SWITCHES*			BAUD RATE
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600

All other combinations=9600 baud

DIP SWI	TCHES*	RELAY STATE**			
11	12				
1	0	Auto			
Х	1	Override on			
0	0	Override off			
* 0 - Open : 1 - Classed					

0 = Open ; 1 = Closed \*\* Device must be powered for override

• Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to feed back to the network.



^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).







### Notes:

- Modbus®Address & Baud Rate must be set prior to power up via DIP switches.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTW24B-MBAI-N4)
- Order with grey lid by adding "-GY" to end of model number. (RIBTW24B-MBAI-GY)
- Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTW24B-MBAI-N4-GY)
- This model utilizes:
- Physical coil 1 (Relay output)
- Physical binary input 1 (Dry contact binary input) Physical binary input 2 (Dry contact binary input) Physical input register Al 1 (Analog input)
- Thermistor Type 2 (T2) Precon 10 K @ 77°F (25°C) PN ST-R24, Model 24, (or equivalent.) Thermistor not included. (Range -39 to 187°F)
- For all versions, raw analog default settings are 0 and 1023 (real), respectively.
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below.^^
- Address and Baud Rate Settings on Bulletin B1676 available on website.

http://functionaldevices.com/pdf/bulletins/B1676\_393208.pdf Or scan QR code with your smart phone.



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### **SPECIALTY PERIPHERAL CONTROLS**



RELAYS

### Fan Safety Alarm Circuits I/O Expanders Manual Analog Override Switch

If we do not already build a device with specifications or packaging configurations you require, we will be happy to quote and design one for you. Functional Devices, Inc. is actively involved in the development, manufacturing, and production of special peripheral devices. They are either variations of existing Functional Devices products or entirely unique devices. We will help provide you with a product to fit your specific needs. Please contact us so we may review your project and special requirements.

### FAN SAFETY ALARM CIRCUITS

MODEL #	(4)	POWER INPUT	ALARM CIRCUITS	CONTACTS	SWITCH	ENCLOSED	NOTES	SPEC PAGE
RIBMNLB	•	24 Vac	4					84
RIBLB	•	24 Vac	4			•		84
RIBMNLB-6	•	24 Vac	6					85
RIBMNLB-4	•	24 Vac	4					85
RIBMNLB-2	•	24 Vac	2					85
RIBMNLB-1	•	24 Vac	2				NEW	87
RIBLB-6	•	24 Vac	б			•		85
RIBLB-4	•	24 Vac	4			•		85
RIBLB-2	•	24 Vac	2			•		85
RIBMNLB-6NO	•	24 Vac	б				NEW	86
RIBMNLB-4NO	•	24 Vac	4				NEW	86
RIBMNLB-2NO	•	24 Vac	2				NEW	86

### **I/O EXPANDERS**

(Quick reference only. See individual spec page for more information.)

MODEL #	ալ	POWER INPUT	RELAYS	CONTACTS	SWITCH	ENCLOSED	NOTES	SPEC PAGE
RIBMN24Q2C	•	24 Vac/dc	2	2 SPDT				88
RIBMN24Q3C	•	24 Vac/dc	3	3 SPDT				88
RIBMN24Q4C	•	24 Vac/dc	4	4 SPDT				89
RIBMN24Q4C-PX	•	24 Vac/dc	4	4 SPDT				89

### MANUAL ANALOG OVERRIDE SWITCH

MODEL #	POWER INPUT	RELAYS	SWITCH	ENCLOSED	NOTES	SPEC PAGE
RIBMNA1D0	24 Vac/dc		Manual / Auto	•		90

🖲 = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

🕪<sup>1</sup>= UL Listed : UL916 Energy Management ; USA & Canada

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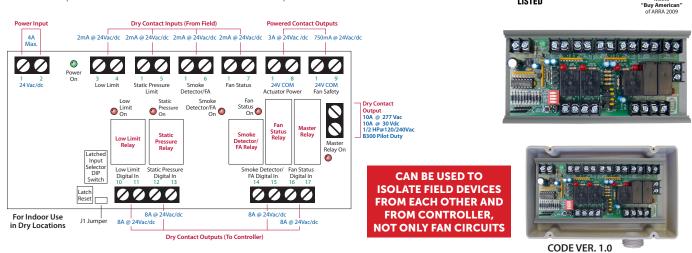
### FAN SAFETY ALARM CIRCUITS

### RIBMNLB

2.75" Track Mount AHU Fan Safety Alarm Circuit, 24 Vac Power Input

**RIBLB** 

Enclosed AHU Fan Safety Alarm Circuit, 24 Vac Power Input



### SPECIFICATIONS

Expected Relay Life: 10 million cycles minimum mechanical Panel Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 250ms Power Input: 4 Amp @ 24 Vac/dc; 50-60 Hz ∕∆ 4  $(\Box)$ -White Alarm Status: LED On = Activated 5Amp 4 Ф  $(\Pi)$ White Dimensions: 6.000" x 2.750" x 1.200" (RIBMNLB) Д 4.28" x 7.00" x 2.00" Groon with .75" NPT Nipple (RIBLB) Track Mount: MT212-6 Mounting Track Provided Approvals: UL Listed, UL864, C-UL, CE, RoHS Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved TX-1 24Vac 1 1 1 1 x 2 Gold Flash: No DC-1 Pow Override Switch: No 24Vac COM DC-1 Notes: ~  $\diamond$ DO-3 Q • RIBMNLB and RIBLB have four Alarm Inputs and one Master Alarm Q Digital inputs to controller (1) R4 FS-S 24Vac A master relay will open if any one of the normally-closed 2 24Vac R4 FS-S 16→↓→→→ Status DI (N/C) inputs open. LED status of all outputs and the master relay is provided. The RIBMNLB is provided with mounting R1 LL-A R2 SP-A R3 SMK/FA Fan Statu DI -1 track for mounting in user-provided electrical enclosures. The ⊶⊮ RIBLB is enclosed in a NEMA 1, 4" x 7" enclosure with a clear lid R1 LL-A PB-1 ∽

to allow viewing of the status LEDs. The master relay has two general-purpose outputs: one 24 V output terminal and one dry contact output rated up to 10 Amp @ 277 Vac. Fan status contact controls actuator power. The most common application is an Air Handling Unit (AHU) fan-safety-shutdown where the master relay is used to shutdown the fan. Contact closure outputs are provided so that a DDC controller can determine the cause of a shutdown.

Model RIBMNLB combines all the relay logic to facilitate fan status, fan safety control, and damper actuator control. It is intended for use in a circuit that will control fan start/stop and fan safety shut-down circuit monitors three critical inputs:

· Low-limit freeze protection (to stop fan and remove power from damper actuator)

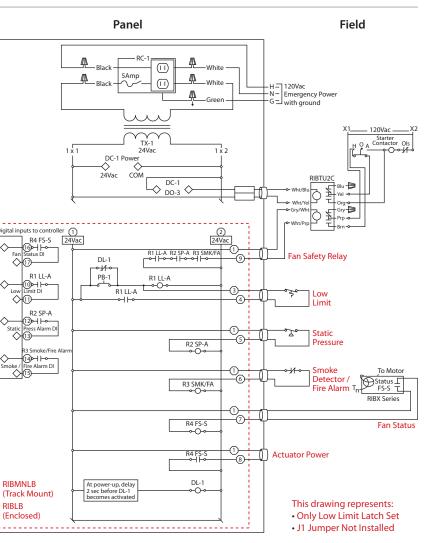
Static pressure (to monitor for hi/low pressure condition)

Smoke detector / fire alarm

### Master relay opens to shut down AHU when any Normally Closed input opens.

Integral DIP switch allows any input to be latched. Input can be reset with push button or by cycling unit power.

Installing J1 jumper allows Fan Status input to control Master Relay, like the other 3 inputs.



Made in USA

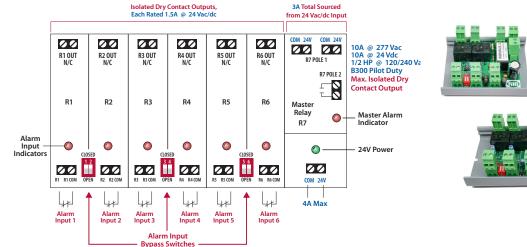
### **RIBMNLB-6/-4/-2**

2.75<sup>°′</sup> Track Mount AHU Fan Safety Alarm and General Purpose Logic Circuit, 24 Vac/dc Power Input, 2/4/6 Outputs

### **RIBLB-6/-4/-2**

Enclosed AHU Fan Safety Alarm and General Purpose Logic Circuit, 24 Vac/dc Power Input, 2/4/6 Outputs









### **SPECIFICATIONS**

Operating Temperature:	5 to 95% (noncondensing)
	4 Amp max. @ 24 Vac/dc ; 50-60 Hz
	LED On = Activated
Dimensions:	6.200″ x 2.750″ x 1.750″ (RIBMNLB-6)
	4.600" x 2.750" x 1.750" (RIBMNLB-4)
	3.000" x 2.750" x 1.750" (RIBMNLB-2)
	4.28" x 7.00" x 2.00" with .75" NPT Nipple
	(RIBLB-6/-4/-2)
Track Mount:	MT212-6 Mounting Track Provided (RIBMNLB-6)
	MT212-4 Mounting Track Provided
	(RIBMNLB-4, RIBMNLB-2)
Approvals:	UL Listed, UL916, UL864, C-UL, CE, RoHS
Housing Rating:	UL Listed, NEMA 1, C-UL, CE Approved,
	UL Accepted for Use in Plenum
Gold Flash:	No

#### Gold Flash: No Override Switch: No

### Notes:

- Track mount models shown above.
- RIBMNLB-6 and RIBLB-6 have six Alarm Inputs and one Master Alarm. RIBMNLB-4 and RIBLB-4 have four Alarm Inputs and one Master Alarm. RIBMNLB-2 and RIBLB-2 have two Alarm Inputs and one Master Alarm.

Models RIBMNLB-6, RIBMNLB-4, and RIBMNLB-2; and RIBLB-6, RIBLB-4, and RIBLB-2 are simply devices that combine a common relay-logic function into a small, easy-to-install, and less expensive form.

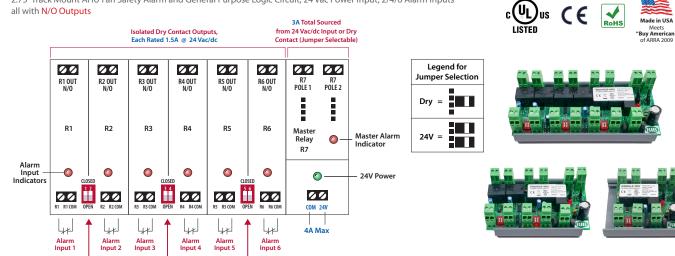
A master relay will open if any one of the normally-closed (N/C) inputs open. There are six, four, or two inputs depending on the model chosen. LED status of all inputs, the master relay, and power input is provided. Bypass of un-used inputs is also provided. The RIBMNLB series is provided with mounting track for mounting in user-provided electrical enclosures. The RIBLB series is enclosed in a NEMA-1, 4" x 7" enclosure with a clear lid to allow viewing of the status LEDs. The master relay has three general-purpose outputs: two 24 V output terminals and one dry-contact output rated up to 10 Amp @ 277 Vac (terminals on RIBMNLB series, wires on RIBLB series.) The most common application is an Air Handling Unit (AHU) fan-safety-shutdown where the master relay is used to shutdown the fan. Contact closure outputs are provided so that a DDC controller can determine the cause of a shutdown.

SELECTION GUIDE							
Model# Inputs							
RIBMNLB-6	6	MT212 Mounting Track					
RIBMNLB-4	4	MT212 Mounting Track					
RIBMNLB-2	2	MT212 Mounting Track					
RIBLB-6	б	PE6020 Enclosure					
RIBLB-4	4	PE6020 Enclosure					
RIBLB-2	2	PE6020 Enclosure					

			24 Vac Power Input
10A @ 277 Vac (Typically used to shut down fan)		R1-1 R2-1 R3-1 R4-1 R5-1 R6-1 R7	Tunical alarm insute
24 Vac (Typically used to shut down other relays)	R7-1	Close bypass switch if input not in use.	Typical alarm inputs shown below. Any alarm inputs may be used and in any order. (Alarm inputs must be N/C.)
Low Temp Alarm to DDC Controller	R1-2	R1-3 Input 1 Alarm Indicator	Input 1 Low Temp Alarm 으
High Temp Alarm	R2-2 • # •	R2-3 Input 2 Alarm Indicator	Input 2 High Temp Alarm
Low Press Alarm	R3-2 • ₩ •	R3-3 Input 3 Alarm Indicator	Input 3 Low Press Alarm
High Press Alarm to DDC Controller	R4-2 • ₩ •	R4-3 Input 4 Alarm Indicator	Input 4 High Press Alarm
Smoke Alarm #1 to DDC Controller	R5-2 ◆ ∦ ◆	R5-3 Input 5 Bypass R5 R5-3 Input 5 Alarm Indicator	Input 5 Smoke Alarm #1
Smoke Alarm #2 to DDC Controller	R6-2 ● # •	R6-3 Input 6 Alarm Indicator	Input 6 Smoke Alarm #2 • # •
		RIBMNLB-6 (Track Mount) RIBLB-6 (Enclosed)	

### **RIBMNLB-6NO/-4NO/-2NO**

2.75" Track Mount AHU Fan Safety Alarm and General Purpose Logic Circuit, 24 Vac Power Input, 2/4/6 Alarm Inputs all with N/O Outputs



### **SPECIFICATIONS**

Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Operate Time: 8ms Power Input: 4 Amp max. @ 24 Vac/dc: 50-60 Hz Alarm Status: LED On = Activated Dimensions: 6.200" x 2.750" x 1.750" (RIBMNLB-6NO) 4.600" x 2.750" x 1.750" (RIBMNLB-4NO) 3.000" x 2.750" x 1.750" (RIBMNLB-2NO) Track Mount: MT212-6 Mounting Track Provided (RIBMNLB-6NO) MT212-4 Mounting Track Provided (RIBMNLB-4NO, RIBMNLB-2NO) Approvals: UL Listed, UL916, UL864, C-UL, CE, RoHS Gold Flash: No Override Switch: No

Alarm Input Bypass Switche

Models RIBMNLB-6NO, RIBMNLB-4NO, and RIBMNLB-2NO are simply devices that combine a common relay-logic function into a small, easy-to-install, and less expensive form.

A master relay will open if any one of the normally-closed (N/C) inputs open. There are six, four, or two inputs depending on the model chosen. LED status of all inputs, the master relay, and power input is provided. Bypass of un-used inputs is also provided. The RIBMNLB series is provided with mounting track for mounting in user-provided electrical enclosures.

The master relay has two general-purpose outputs: both can be jumper selected at 24 V (sourced from input) or dry contact. The most common application is an Air Handling Unit (AHU) fan-safety-shutdown where the master relay is used to shutdown the fan. Contact closure outputs are provided so that a DDC controller can determine the cause of a shutdown.

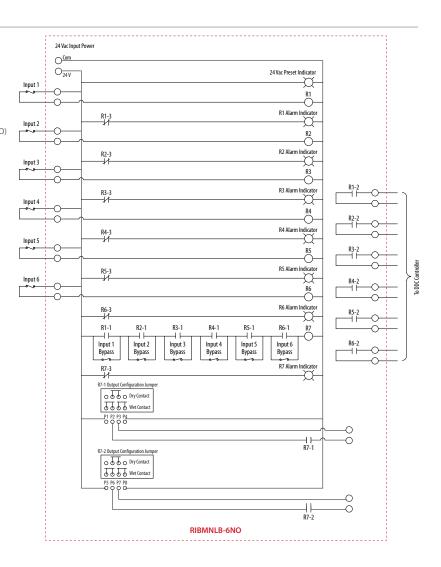
### Notes:

• RIBMNLB-6NO has six Alarm Inputs and one Master Alarm. • RIBMNLB-4NO has four Alarm Inputs and one Master Alarm.

• RIBMNLB-2NO has two Alarm Inputs and one Master Alarm.

• This is a half wave device. When connecting 24 Vac to both this device and a full-wave device, damage to device can occur.

SELECTION GUIDE					
Model#	Inputs				
RIBMNLB-6NO	6	MT212 Mounting Track			
RIBMNLB-4NO	4	MT212 Mounting Track			
RIBMNLB-2NO	2	MT212 Mounting Track			



### FAN SAFETY ALARM CIRCUIT

### **RIBMNLB-1**

2.75" Track Mount General Purpose Latching Logic Circuit; One Latching/Fault Input (Dry Contact, Class 2); 24 Vac/dc Power Input

#### 0 0 Ø Ø Comm ' 24 Vac/dc Latch/Fault Input RESET Pushbutton Ο Latch/Fault Status Power Status ⊘ Com ⊘ Com O N/O ⊘ N/C o/v⊘ Ø NC $\odot$ $\odot$

• MANUAL RESET • ONE ALARM OUTPUT • ONE RELAY OUTPUT





## RELAYS

### **SPECIFICATIONS**

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F

### Humidity Range: 5 to 95% (noncondensing)

Operate Time: 8ms

- Green LED: Power Status (ON: Power present)
  - Red LED: Foult Status (ON: Latched/Fault State)
- Dimensions: 4.00" x 2.75" x 1.25"
- Track Mount: MT212-4 Mounting Track Provided Approvals: CE, UL Listed, UL864, C-UL, RoHS
- Gold Flash: No
- Relay Override Switch: No
- Fault Reset Switch: Yes

**Contact Ratings:** 

10 Amp Resistive @ 30Vdc 10 Amp General Use @ 277Vac 1/2 HP @ 120/240Vac (N/O) 1/3 HP @ 120/240Vac (N/C)

### Power Input Ratings: 53 mA @ 24Vac 25 mA @ 24Vdc

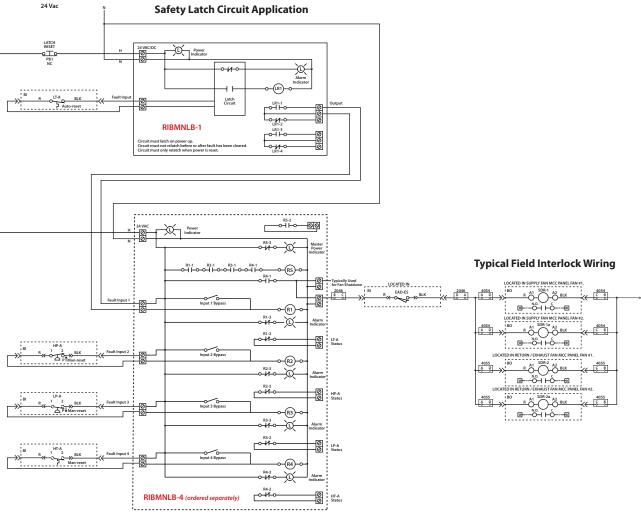
50/60 Hz

### Alarm Fault Application:

When the Latch/Fault Input is Closed (Normal state), the Relay is activated, and Red LED is Off. When Latch/Fault Input Opens (Alarm state), the Relay deactivates, and Red LED turns On. Until the Latch/Fault Input is Closed AND either power is cycled or the RESET button is pressed, relay will remain in the Alarm state.

### Notes:

- Fault conditions must last for at least 500 ms in order for the unit to go into Alarm state.
- Reset signal, whether via pushbutton or power cycling, must last for at least 30 ms in order to reset the device to go from Alarm state to Normal state.



### **I/O EXPANDER**

### RIBMN24Q2C

2.75" Track Mount 2 Output I/O Expander with 24 Vac/dc Power Input and 0-10 Vdc / 0-5 Vdc Control Input

## Comm Vac/dc Comm Relay 1 N/C

RELAYS

0-10 VDC CONTROL VOLTAGE	0-5 VDC * CONTROL VOLTAGE	RELAY 1 STATUS	RELAY 2 STATUS
0-2.117Vdc	0-1.058Vdc	OFF	OFF
2.745-4.627Vdc	1.373-2.313Vdc	ON	OFF
5.255-7.137Vdc	2.628-3.568Vdc	OFF	ON
7.765-10.000Vdc	3.883-5.000Vdc	ON	ON





### GREAT FOR STAGING LOADS SUCH AS CHILLERS, PUMPS, ACTUATORS, OR MULTI-STAGE HEATING

### SPECIFICATIONS

 # Relays & Contact Type: Two (2) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical
 Operating Temperature: -30 to 140° F
 Humidity Range: 5 to 95% (noncondensing)
 Power Status: Green LED On = Power On
 Relay Status: Red LED On = Relay Activated
 Dimensions: 3.100° x 2.750° x 1.750°
 Track Mount: MT212-4 Mounting Track Provided
 Approvals: UL Listed, UL916, C-UL, CE, RoHS
 Gold Flash: No
 Override Switch: No

### Contact Ratings:

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac 470 VA Pilot Duty @ 125 Vac 770 VA Pilot Duty @ 250 Vac

RELAY

1

**STATUS** 

OFF

ON

OFF

ON

OFF

ON

OFF

ON

RELAY

2

**STATUS** 

OFF

OFF

ON

ON

OFF

OFF

ON

ON

RELAY

3

**STATUS** 

OFF

OFF

OFF

OFF

ON

ON

ON

ON

### Power Input:

24 Vac/dc ; 50-60 Hz 100mA max.

### Notes:

Must clip resistor in white box for 0-5Vdc.\*
Custom Programming Available for Large Orders.

### **I/O EXPANDER**

### RIBMN24Q3C

2.75" Track Mount 3 Output I/O Expander with 24 Vac/dc Power Input and 0-10 Vdc / 0-5 Vdc Control Input

0-10 VDC

CONTROL

VOLTAGE

0-0.988Vdc

1.366-2.242Vdc

2.620-3.496Vdc

3.876-4.752Vdc

5.130-6.006Vdc

6.386-7.262Vdc

7.640-8.516Vdc

8.896-10.000Vdc 4.448-5.000Vdc

0-5 VDC \*

CONTROL

VOLTAGE

0-0.494Vdc

0.683-1.121Vdc

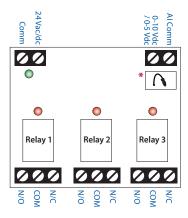
1.310-1.748Vdc

1.938-2.376Vdc

2.565-3.003Vdc

3 193-3 631Vdc

3.820-4.258Vdo



### SPECIFICATIONS

 # Relays & Contact Type: Three (3) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical
 Operating Temperature: -30 to 140° F
 Humidity Range: 5 to 95% (noncondensing)
 Power Status: Green LED On = Power On Relay Status: Red LED On = Relay Activated
 Dimensions: 4.000" x 2.750" x 1.750"
 Track Mount: MT212-4 Mounting Track Provided
 Approvals: UL Listed, UL916, C-UL, CE, RoHS Gold Flash: No

### Contact Ratings:

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1HP @ 250 Vac 1/4 HP @ 277 Vac 470 VA Pilot Duty @ 125 Vac 770 VA Pilot Duty @ 250 Vac







GREAT FOR STAGING LOADS SUCH AS CHILLERS, PUMPS, ACTUATORS, OR MULTI-STAGE HEATING

### Power Input:

24 Vac/dc ; 50-60 Hz 150mA max.

### Notes:

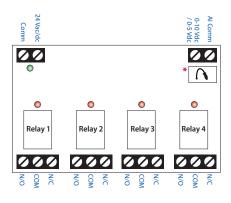
• Must clip resistor in white box for 0-5Vdc.\*

• Custom Programming Available for Large Orders.

### **I/O EXPANDER**

### RIBMN2404C

2.75" Track Mount 4 Output I/O Expander with 24 Vac/dc Power Input and 0-10 Vdc / 0-5 Vdc Control Input



0-10 VDC CONTROL VOLTAGE	0-5 VDC * CONTROL VOLTAGE	RELAY 1 STATUS	RELAY 2 STATUS	RELAY 3 STATUS	RELAY 4 STATU
0-0.372Vdc	0-0.186Vdc	OFF	OFF	OFF	OFF
0.726-1.000Vdc	0.363-0.500Vdc	ON	OFF	OFF	OFF
1.354-1.626Vdc	0.677-0.813Vdc	OFF	ON	OFF	OFF
1.982-2.254Vdc	0.991-1.127Vdc	ON	ON	OFF	OFF
2.608-2.882Vdc	1.304-1.441Vdc	OFF	OFF	ON	OFF
3.236-3.508Vdc	1.618-1.754Vdc	ON	OFF	ON	OFF
3.864-4.136Vdc	1.932-2.068Vdc	OFF	ON	ON	OFF
4.492-4.764Vdc	2.246-2.382Vdc	ON	ON	ON	OFF
5.118-5.392Vdc	2.559-2.696Vdc	OFF	OFF	OFF	ON
5.746-6.018Vdc	2.873-3.009Vdc	ON	OFF	OFF	ON
6.374-6.646Vdc	3.187-3.323Vdc	OFF	ON	OFF	ON
7.000-7.274Vdc	3.500-3.637Vdc	ON	ON	OFF	ON
7.628-7.902Vdc	3.814-3.951Vdc	OFF	OFF	ON	ON
8.256-8.528Vdc	4.128-4.264Vdc	ON	OFF	ON	ON
8.884-9.156Vdc	4.442-4.578Vdc	OFF	ON	ON	ON
9.510-10.000Vdc	4.755-5.000Vdc	ON	ON	ON	ON





**GREAT FOR STAGING** LOADS SUCH AS CHILLERS, PUMPS, ACTUATORS, OR **MULTI-STAGE HEATING** 

RELAYS

### **SPECIFICATIONS**

# Relays & Contact Type: Four (4) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Power Status: Green LED On = Power On Dimensions: 4.950" x 2.750" x 1.750" Gold Flash: No

Relay Status: Red LED On = Relay Activated Track Mount: MT212-6 Mounting Track Provided Approvals: UL Listed, UL916, C-UL, CE, RoHS Override Switch: No

### **Contact Ratings:**

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac 470 VA Pilot Duty @ 125 Vac 770 VA Pilot Duty @ 250 Vac

Power Input: 24 Vac/dc; 50-60 Hz

200mA max.

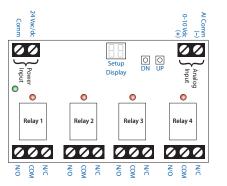
### Notes:

- Must clip resistor in white box for 0-5Vdc.\*
- Custom Programming
- Available for Large Orders.

### **I/O EXPANDER**

### RIBMN24Q4C-PX

2.75" Track Mount 4 Output Field Adjustable Staging Threshold Relay Module with 24 Vac/dc Power and 0-10 Vdc Control Input



### **SPECIFICATIONS**

# Relays & Contact Type: Four (4) SPDT Continuous Duty Coil Expected Relay Life: 10 million cycles minimum mechanical Operating Temperature: -30 to 140° F

Humidity Range: 5 to 95% (noncondensing) Power Status: Green LED On = Power On Relay Status: Red LED On = Relay Activated Heartbeat Status: Right-most decimal point Dimensions: 4.950" x 2.750" x 1.750" Track Mount: MT212-6 Mounting Track Provided Approvals: UL Listed, UL916, C-UL, CE, RoHS Gold Flash: No.

Override Switch: No

- CONTROL FOUR RELAY **OUTPUTS WITH ONE** (0-10 VDC) ANALOG SIGNAL **FROM CONTROLLER OR** THERMOSTAT
- CAPABILITY TO SET DESIRED **ON AND OFF VOLTAGES FOR EACH RELAY**
- NO POTS TO ADJUST
- NO NEED FOR VOLT METER FOR SETUP
- ON BOARD "FIELD SELECTABLE" **DIGITAL DISPLAY**







### Contact Ratings:

15 Amp General Use @ 125 Vac 10 Amp General Use @ 277 Vac 10 Amp Resistive @ 30 Vdc (N/O) 7 Amp Resistive @ 30 Vdc (N/C) 1/2 HP @ 125 Vac 1 HP @ 250 Vac 1/4 HP @ 277 Vac 470 VA Pilot Duty @ 125 Vac 770 VA Pilot Duty @ 250 Vac

### Power Input:

24 Vac/dc ; 50-60 Hz 200mA max.

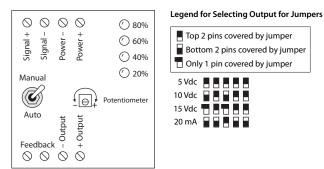
### Notes:

- · For AC applications, an isolation transformer, to be used solely for the power input, is recommended.
- Relay will activate when control signal voltage reaches or exceeds individual relay ON point. Relay will deactivate when control voltage reaches or drops below individual OFF point. Factory relay ON / OFF voltages: 
   Relay 1: 3V / 2.8V
- Relay 2: 5V / 4.8V Relay 3: 7V / 6.8V Relay 4: 9V / 8.8 V • Minimum ON point: 0.5V Maximum ON point: 9.9V
- Minimum OFF point: 0.3V
- Relay number will flash 3 times when voltage exceeds setpoint.
- Pressing UP or DN button in normal run mode will display the voltage present on Analog Input.
- ON/OFF points can be changed at any time, by the user, by entering "Program Mode"
- User defined ON/OFF points will be maintained upon power loss.



### **RIBMNA1D0**

2.75" Track Mount Manual Analog Override Switch + Monitor with 24 Vac/dc Power Input



### SPECIFICATIONS

Operating Temperature: -30 to 140° F Humidity Range: 5 to 95% (noncondensing) Dimensions: 2.450″ x 2.750″ x 1.270″ Track Mount: 2.750″, See MT212 Series on page 142 MT212 Mounting Track Sold Separately Input Voltage: 24 Vac/dc Input Current: 90mA Max. Range/Impedance Override: 0-5 Vdc, 200 Ω Min. 0-15 Vdc, 1 kΩ Min.

0-10 Vdc, 400 Ω Min. 0-15 Vdc, 1 kΩ Min. 0-20mA dc, 500 Ω Max. Feedback Contact: 2A Max.@ 24 Vac/dc

### Notes:





• Set the jumpers according to your input signal (Analog signal from the controller.) Example: When controlling a damper with 0-10 Vdc, the jumpers need to be in position for the 0-10 Vdc override range. If the LED range does not match your analog scale, ensure the jumpers are set for the proper range.

• Feedback contact closed when switch is in Manual position, open when switch is in Auto position.

- PROVIDES MANUAL OVERRIDE IF CONTROLLER DOES NOT SUPPORT OVERRIDE CAPABILITY
- ALLOWS YOU TO MANUALLY MAKE ADJUSTMENTS TO YOUR END
- DEVICE REMOTELY INSTEAD OF AT YOUR CONTROL PANEL
- SENDS OVERRIDE STATUS BACK TO CONTROLLER VIA FEEDBACK
- MULTI-RANGE ANALOG OUTPUT