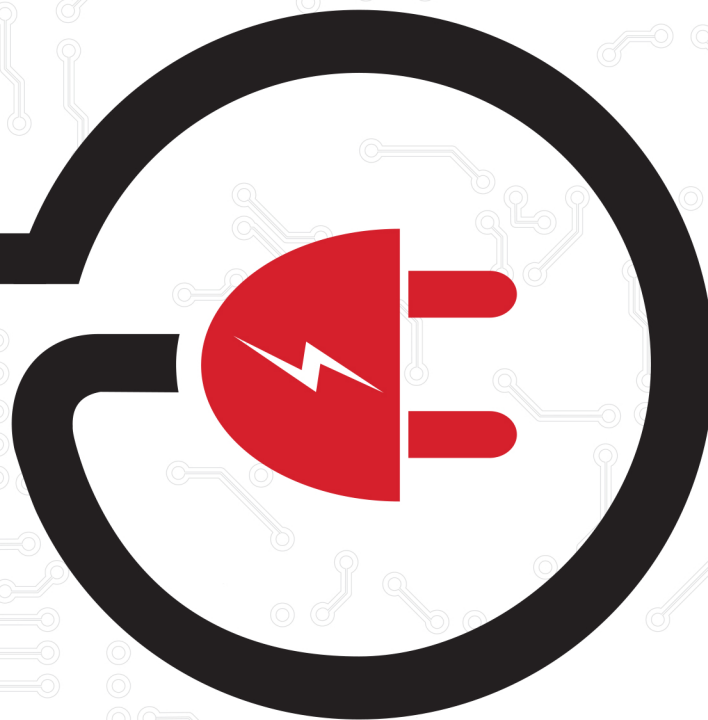


RIB® **Functional**
Devices, Inc.™

ELECTRICAL COUNTER CATALOG



RELAYS | CURRENT SWITCHES | POWER SUPPLIES & CONTROL
TRANSFORMERS | ENCLOSURES | WIRELESS DEVICES
UL924 BYPASS/SHUNT RELAYS



FORTY-SEVEN YEARS AGO, WE LAUNCHED FUNCTIONAL DEVICES WITH A VISION TO CREATE QUALITY USA MADE ELECTRONIC DEVICES.

Functional Devices pioneered the building automation and HVAC industries with cutting edge products designed to generate reliable and economical solutions that exceed the needs of our customers. This vision has powered our incredible growth and made us a global industry leader in building automation. We are proud that RIB® has become a trusted name.

QUALITY

We continue to create the best quality American made products for our customers. We constantly improve our production systems to create better quality products at extremely competitive prices.

SERVICE

Service has always been our number one focus at Functional Devices. With an exceptionally trained inside and outside sales team, we are able to speak directly with our customers to meet their needs and desires. Our experienced in-house team of engineers are available daily for any customer concerns and tech support needs. Being able to work directly with our customers has given us the ability to create custom products to meet your control needs.

INNOVATION

Through the design and innovation of various products, we have expanded our product offerings from RIB® relays to include current sensors, power supplies, transformers, power control, enclosures, wireless devices, and lighting control products. We have become a one stop shop for all of our customers' building automation needs.

FOR A COMPLETE LISTING OF OUR PRODUCTS, SEE OUR 2016 RIB® CATALOG AVAILABLE FOR DOWNLOAD ON OUR WEBSITE: WWW.FUNCTIONALDEVICES.COM



ELECTRICAL COUNTER CATALOG

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**FOR A COMPLETE LISTING OF OUR PRODUCTS, SEE OUR
2016 RIB® CATALOG AVAILABLE FOR DOWNLOAD ON
OUR WEBSITE: WWW.FUNCTIONALDEVICES.COM**



RELAYS

Conveniently prepackaged to save installation time & money

- Multi-voltage coil inputs
- 10, 20, or 30 Amp contact ratings
- Nipple or screw mount in NEMA 1 enclosure
- Snap track or DIN rail models available
- Pre-wired
- LED indicators
- Wi-Fi compatibility available
- UL Listed
- Made in the U.S.A.

10 - 15 AMP RELAYS

Model #	UL	Coil Voltage		Relays	Contacts	Resistive	Override Switch	Spec Page
		AC/DC	AC					
RIB2421C	•	24	120-277	1	SPDT	10 A		5
RIB2401D	•	24	120	1	DPDT	10 A		5
RIB2402D	•	24	208-277	1	DPDT	10 A		6
RIBAN24C	• 1	24		1	SPDT	10 A		7

20 - 30 AMP RELAYS

Model #	UL	Coil Voltage		Relays	Contacts	Resistive	Override Switch	Spec Page
		AC/DC	AC					
RIB2421B	•	24	120/208-277	1	SPDT	20 A		6
RIB01P30	•		120	1	DPST	30 A		8
RIB02P30	•		208-277	1	DPST	30 A		8
RIB013P	•		120	1	3PST	20 A		9
RIB023P	•		208-277	1	3PST	20 A		9
RIB043P	•		480	1	3PST	20 A		10
RIB347P	•		347	1	DPDT	20 A		10
RIBTD2401B [^]	•	24	120	1	SPDT	20 A		11

LATCHING RELAYS

Model #	UL	Coil Voltage		Relays	Contacts	Resistive	Override Switch	Spec Page
		AC/DC						
RIBL24B	• 2	24		1	DPDT	20 A		12
RIBL24SB	• 2	24		1	DPDT	20 A	•	12

DRY CONTACT RELAYS

Model #	UL	Power Input	Relays	Contacts	Resistive	Coil Control	Spec Page
RIB02BDC	•	208-277 Vac	1	SPDT	20 A	Dry contact closure	13

WI-FI DEVICE

Model #	UL	Relay Output	Dry Contact Binary Input	Device Power		Contacts	Resistive	Override Switch	Spec Page
				AC/DC	AC				
RIBTW24B-WI-N4	•	1	1	24		SPDT	20 A	#	14

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

1 = UL Listed : UL508 only ; USA & Canada

= Coil Side Relay Override (requires unit to be powered)

2 = UL Listed : UL60947 only ; USA & Canada

[^] = Time Delay

CONTROL RELAY

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

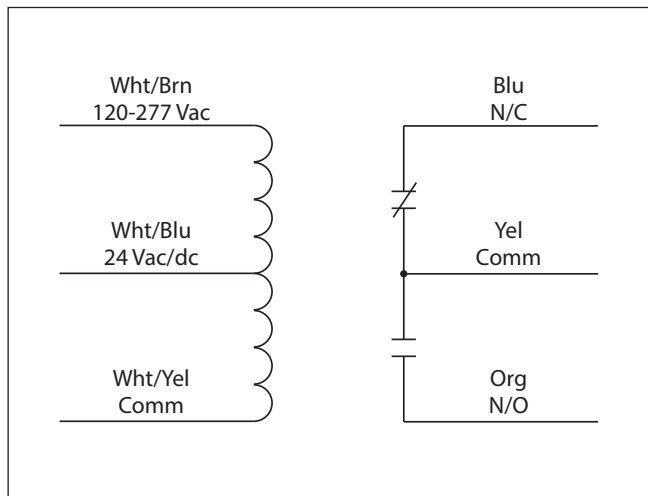


RIB2421C

10 Amp Contact Rating



GREAT SERVICE TRUCK RELAY
One relay covers most applications



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

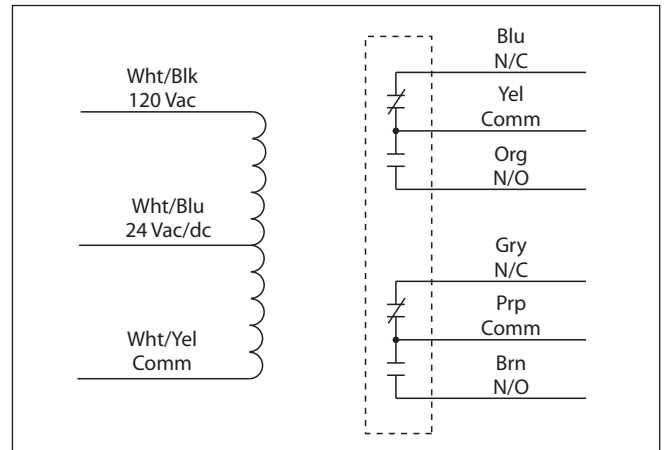
CONTROL RELAY

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



RIB2401D

10 Amp Contact Rating



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

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 Voltage Input:

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

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

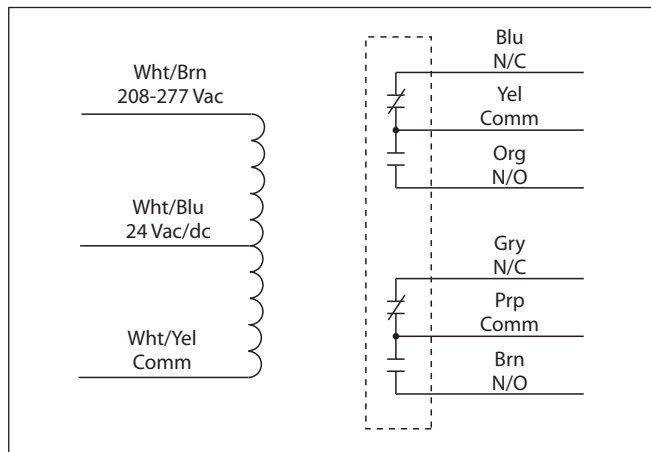
CONTROL RELAY

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



RIB2402D

10 Amp Contact Rating



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

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
- 36 mA @ 208-277 Vac
- 20 mA @ 20 Vdc
- 24 mA @ 24 Vdc
- 36 mA @ 30 Vdc

Coil Voltage Input:

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

CONTROL RELAY

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



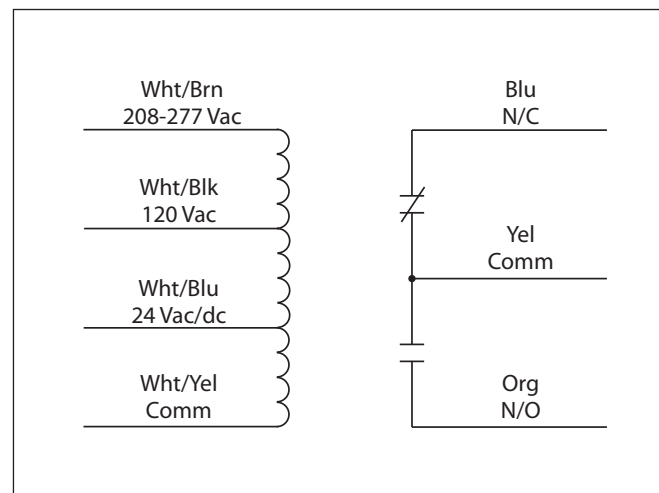
RIB2421B

20 Amp Contact Rating



GREAT SERVICE TRUCK RELAY

One relay covers most applications



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 Elect. 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:

- 83 mA @ 24 Vac
- 47 mA @ 120 Vac
- 69 mA @ 208-277 Vac
- 47 mA @ 30 Vdc

Coil Voltage Input:

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

CONTROL RELAY

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

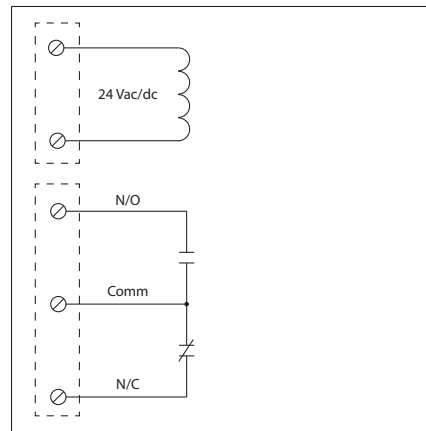


RIBAN24C

10 Amp Contact Rating



REMOVABLE TERMINALS



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: 6ms
- 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 (MT212 Series)
 - B: 35mm x 7.5mm symmetrical DIN rail EN50022
 - C: Screw Mount, See DS80625 Self-Tapping Drill screws sold separately.
 - D: Current Sensor Mount, See RIBXG21 Series on page 16. Current sensors sold separately.
- Approvals: UL Listed, UL60947, C-UL, CE, RoHS
- 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:

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

Note:

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

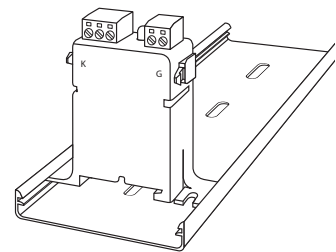
Coil Voltage Input:

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

RELAY MOUNTING OPTIONS A & B

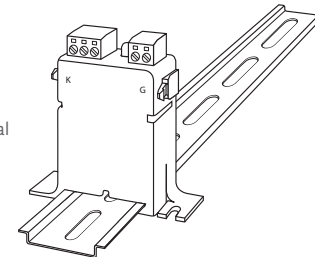
Mounting Option A:

2.75" Track Mount
MT212 Series

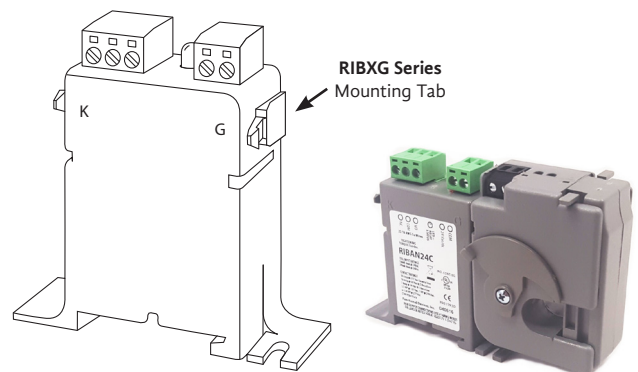


Mounting Option B:

35mm x 7.5mm symmetrical
DIN rail EN50022



CURRENT SENSOR MOUNTING OPTION D



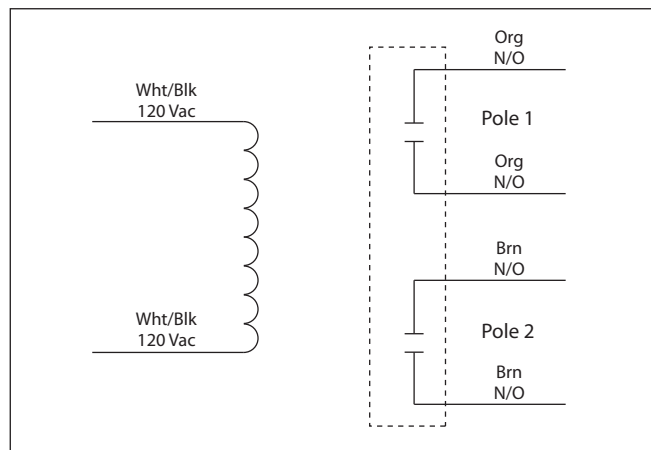
1. Slide current sensor onto corresponding mounting tab.
2. Snap into place.
3. Depress tab to remove current sensor.

CONTROL RELAY

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



RIB01P30
30 Amp Contact Rating



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
- 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

Coil Voltage Input:

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

Notes:

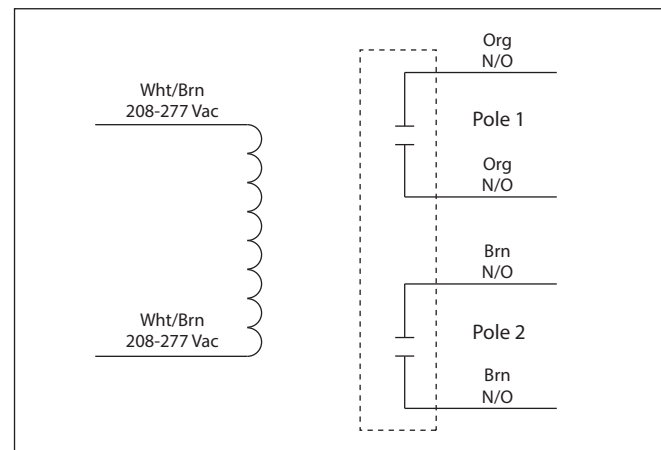
- Order Both Poles Normally Closed by adding "-NC" to end of model number
- Order Pole 1 Normally Open and Pole 2 Normally Closed by adding "-NONC" to end of model number

CONTROL RELAY

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



RIB02P30
30 Amp Contact Rating



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
- 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 @ 208-277 Vac

Coil Voltage Input:

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

Notes:

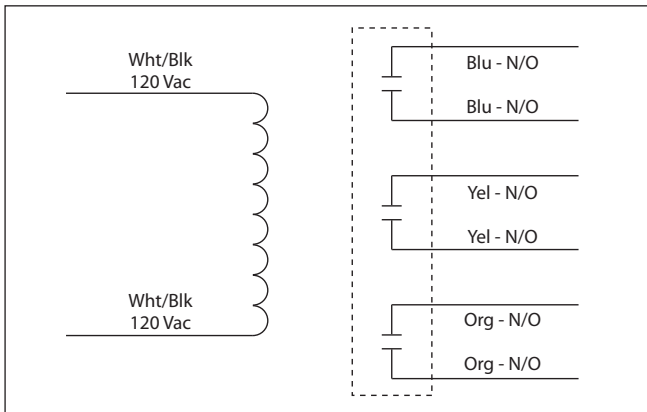
- Order Both Poles Normally Closed by adding "-NC" to end of model number
- Order Pole 1 Normally Open and Pole 2 Normally Closed by adding "-NONC" to end of model number

CONTROL RELAY

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



RIB013P
20 Amp Contact Rating

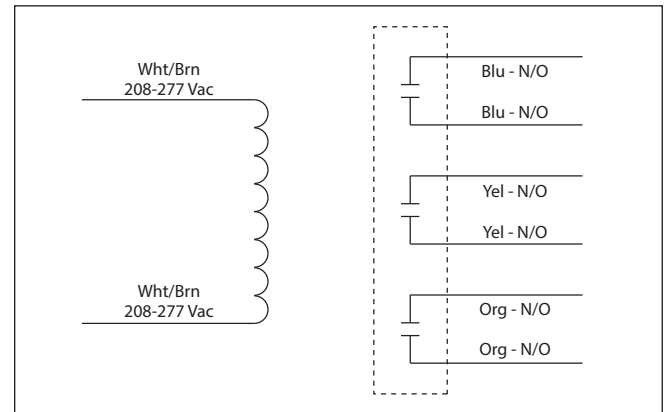


CONTROL RELAY

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



RIB023P
20 Amp Contact Rating



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

Coil Current:

154 mA @ 120 Vac

Coil Voltage Input:

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

Note:

- 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

Coil Current:

187 mA @ 208-277 Vac

Coil Voltage Input:

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

Note:

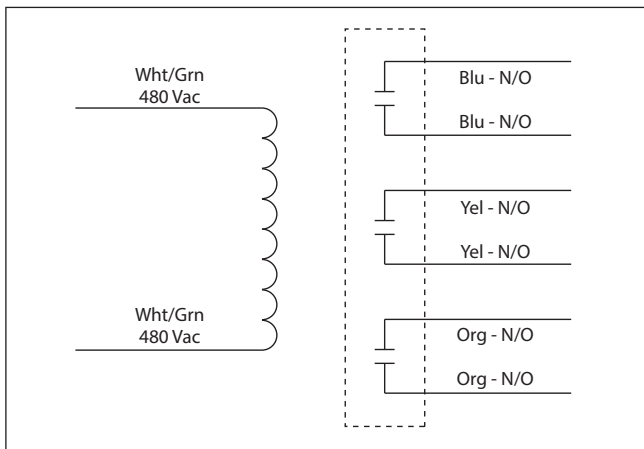
- Order Normally Closed by adding "-NC" to end of model number

CONTROL RELAY

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



RIB043P
20 Amp Contact Rating



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

- Coil Current:**
132 mA @ 480 Vac
- Coil Voltage Input:**
480 Vac ; 50-60 Hz
Drop Out = 140 Vac
Pull In = 340 Vac

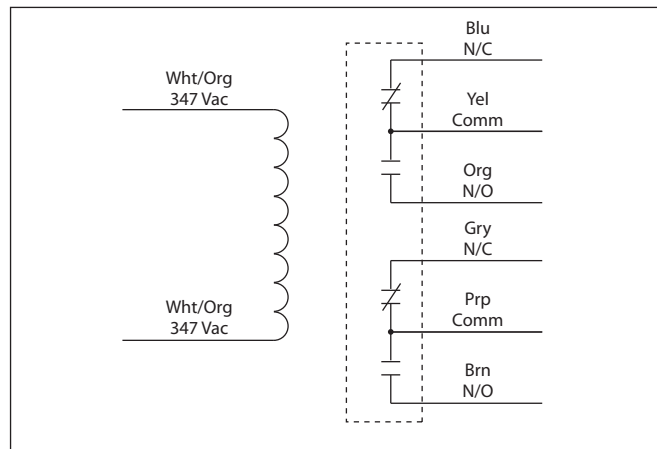
- Note:**
- Order Normally Closed by adding "-NC" to end of model number

CONTROL RELAY

Enclosed Relay 20 Amp DPDT with 347 Vac Coil



RIB347P
20 Amp Contact Rating



LIGHTING RETROFITS
347 Vac for use in Canada

SPECIFICATIONS

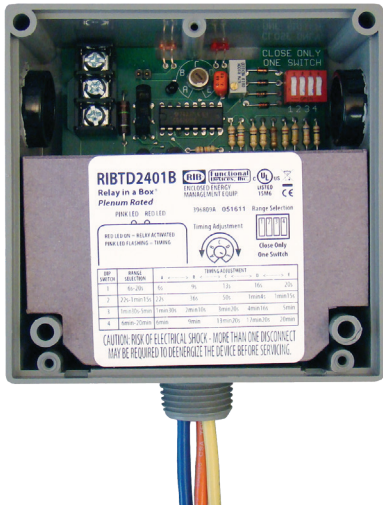
- # Relays & Contact Type:** One (1) DPDT Continuous Duty Coil
- Expected Relay Life:** 10 million cycles minimum mechanical
- Operating Temperature:** -30 to 140° F
- Humidity Range:** 5 to 95% (noncondensing)
- Operate Time:** 18ms
- Relay Status:** LED On = Activated
- Dimensions:** 4.00" x 4.00" x 1.80" with .50" NPT Nipple
- Wires:** 16", 600V Rated
- Approvals:** UL Listed, UL916, 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

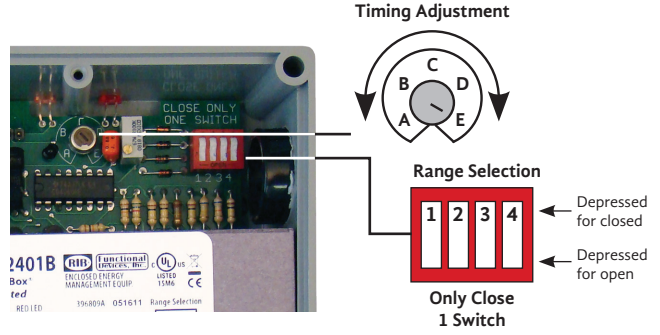
- Coil Current:**
105 mA @ 347 Vac
- Coil Voltage Input:**
347 Vac ; 50-60 Hz
Drop Out = 70 Vac
Pull In = 295 Vac

TIME DELAY RELAY

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



RIBTD2401B
20 Amp Contact Rating



Timing Adjustment

Range Selection

Only Close 1 Switch

Depressed for closed
Depressed for open

TIMING TABLE						
Switch Ranges	Close Dip Switch	Potentiometer Setting				
		A	B	C	D	E
6s-20s	1	6s	9s	13s	16s	20s
22s-1m15s	2	22s	36s	50s	1m4s	1m15s
1m30s-5m	3	1m30s	2m10s	3m20s	4m16s	5m
6m-20m	4	6m	9m	13m20s	17m20s	20m

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 = +10%
Switches 3 & 4 = +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
- Approvals:** UL Listed, UL916, C-UL, CE, RoHS
- Housing Rating:** UL Accepted for Use in Plenum, NEMA 1
- Gold Flash:** No
- Override Switch:** No

Contact Ratings:

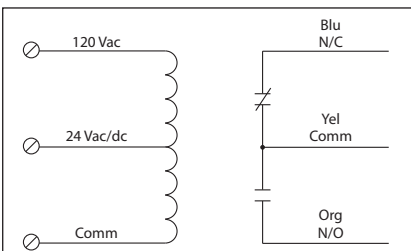
- 20 Amp Resistive @ 277 Vac
- 20 Amp Ballast @ 277 Vac
- 16 Amp Elect. Ball. @ 277 Vac (N/O)
- 10 Amp Tungsten @ 120 Vac (N/O)
- 770 VA Pilot Duty @ 120 Vac
- 1,110 VA Pilot Duty @ 277 Vac
- 2 HP @ 277 Vac
- 1 HP @ 120 Vac

Input Current:

- 133 mA @ 24 Vac
- 45 mA @ 24 Vdc
- 51 mA @ 120 Vac

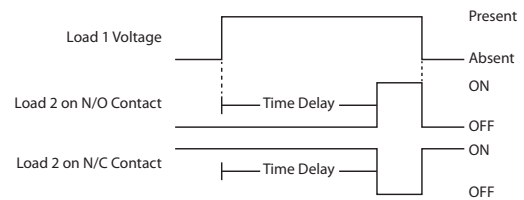
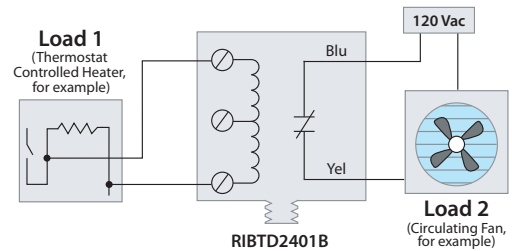
Coil Voltage Input:

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



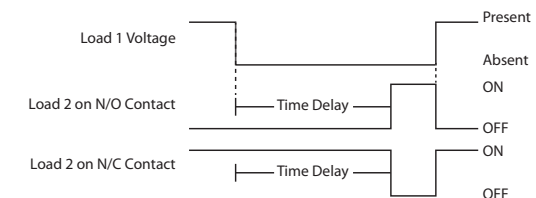
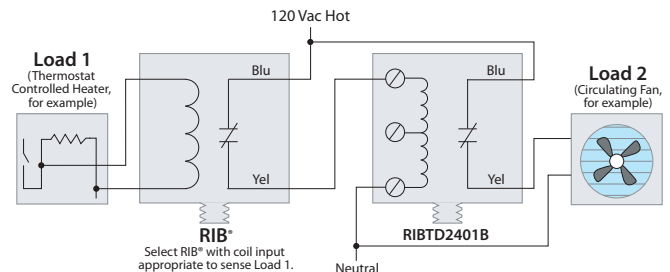
TIME DELAY APPLICATION EXAMPLE #1

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)

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)

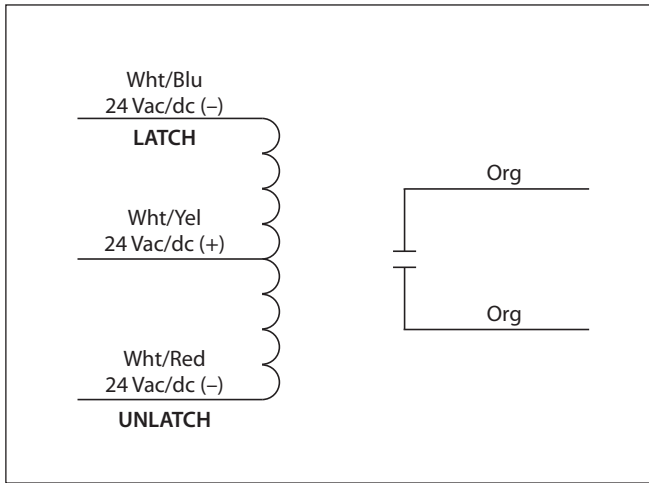


LATCHING RELAY

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



RIBL24B
20 Amp Contact Rating



SPECIFICATIONS

- # Relays & Contact Type:** One (1) SPST Latching Relay Dual Momentary Coils
- 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
- Dimensions:** 1.70" x 2.80" x 1.50" with .50" NPT Nipple
- 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:** No

Contact Ratings:

- 20 Amp Resistive @ 120-277 Vac
- 20 Amp Ballast @ 120-277 Vac
- 16 Amp Elect. 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

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:

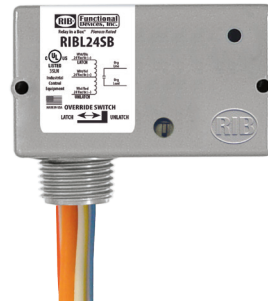
3 Amp @ 30 Vac/dc max.

Notes:

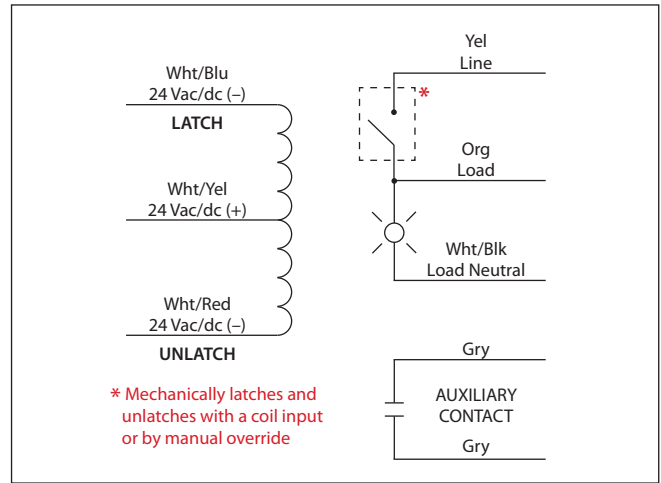
- Application of voltage pulse on latch coil (Wht/Blu & Wht/Yel) will close the contact.
- Application of voltage pulse on unlatch coil (Wht/Red & Wht/Yel) will open the contact.

LATCHING RELAY

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



RIBL24SB
20 Amp Contact Rating



SPECIFICATIONS

- # Relays & Contact Type:** One (1) SPST Latching Relay Dual Momentary Coils
- 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
- Dimensions:** 1.70" x 2.80" x 1.50" with .50" NPT Nipple
- 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 Elect. 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

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.

Notes:

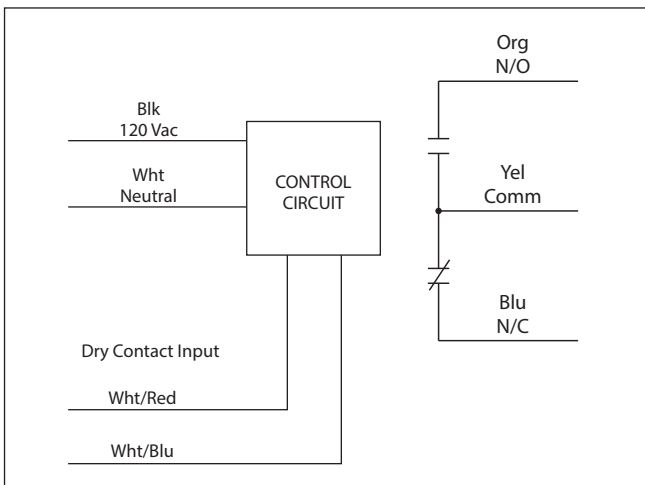
- Application of voltage pulse on latch coil (Wht/Blu & Wht/Yel) will close the contact.
- Application of voltage pulse on unlatch coil (Wht/Red & Wht/Yel) will open the contact.

DRY CONTACT INPUT RELAY

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



RIB01BDC
20 Amp Contact Rating

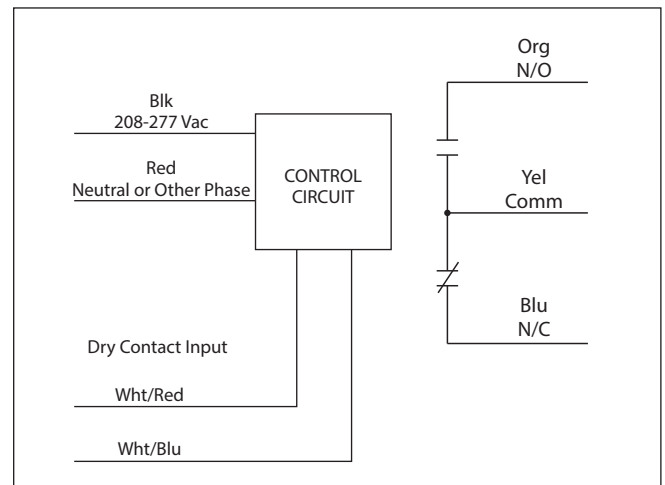


DRY CONTACT INPUT RELAY

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



RIB02BDC
20 Amp Contact Rating



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 Elect. 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:

42 mA @ 120 Vac

Note:

- 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.

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 Elect. 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:

62 mA @ 208-277 Vac

Note:

- 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.

WI-FI COMPATIBLE RELAY

Enclosed Wifi IEEE 802.11 b/g/n Compatible (G) Network Enclosed I/O Device: One Discrete Output (20 Amp Relay SPDT + Override), One Discrete Input (Dry Contact, Class 2); 24 Vac/dc



Code Version 4.0.1



Shown with cover

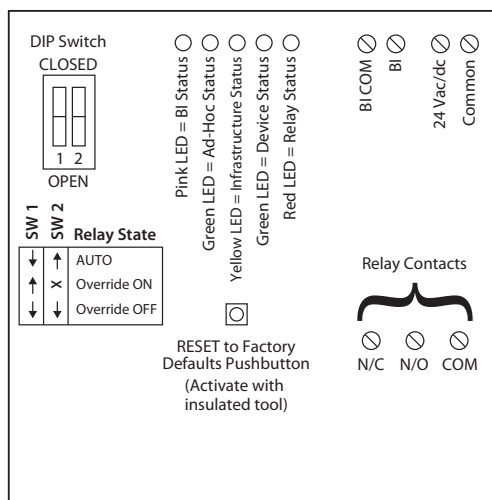
RIBTW24B-WI-N4

20 Amp Contact Rating



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
UL Accepted for Use in Plenum, NEMA 4
- 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.

www.functionaldevices.com/pdf/bulletins/B1802_393224.pdf
Or scan QR code with your smart phone.



AC CURRENT SWITCHES

Prepackaged to save the time and expense of buying separate components and assembling them on the job or at the shop

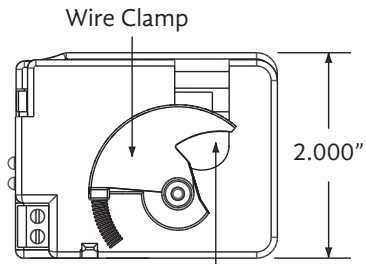
- Split core NEMA 1 enclosure
- Miniature size allows for installation in small spaces
- Adjustable or fixed threshold
- Solid state contacts
- Sensing range of up to 150 Amps
- Switching voltage: 120-277 Vac
- Terminal outputs
- Externally visible LED indicator(s) to indicate whether current is above or below threshold
- Removable mounting tab aids in wire positioning

AC CURRENT SWITCHES

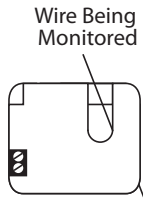
Enclosed Self-Powered Split Core 120-277 Vac Switching AC Current Sensors



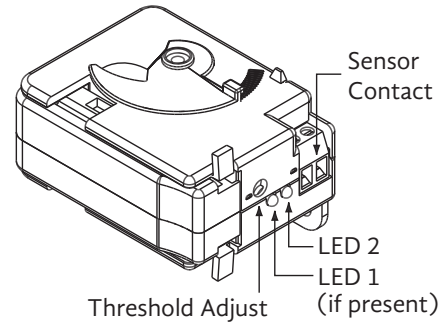
RIBXG21TA
Adjustable Threshold



Wire Clamp
2.000"
.52" x .52" Opening for Wire Being Monitored



RIBXG21TF
Fixed Threshold



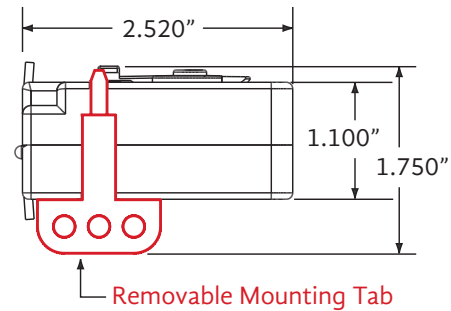
Sensor Contact
LED 2
LED 1 (if present)
Threshold Adjust

SPECIFICATIONS

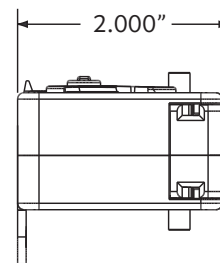
- Operating Temperature:** -30 to 140° F
- Humidity Range:** 5 to 95% (noncondensing)
- * Temperature Derating:** 1 Amp up to 50° C, 0.5 Amp up to 60° C
- Max Sense Voltage:** 600 Vac
- Sensor Contact Status:** Monitored current below threshold: Open
Monitored current above threshold: Closed
- Approvals:** UL Listed, UL916, C-UL, CE, RoHS
- Mounting/Installation:** Unit can be secured using the supplied Mounting Tab, the adjustable Wire Clamp, or both.

Notes:

- Use Sensor Contact to switch 120-277 Vac loads only.
- For testing purposes, Sensor Contact will measure approximately 250 Ω when closed and > 10 MΩ when open.
- The sensor contact is a solid state contact.

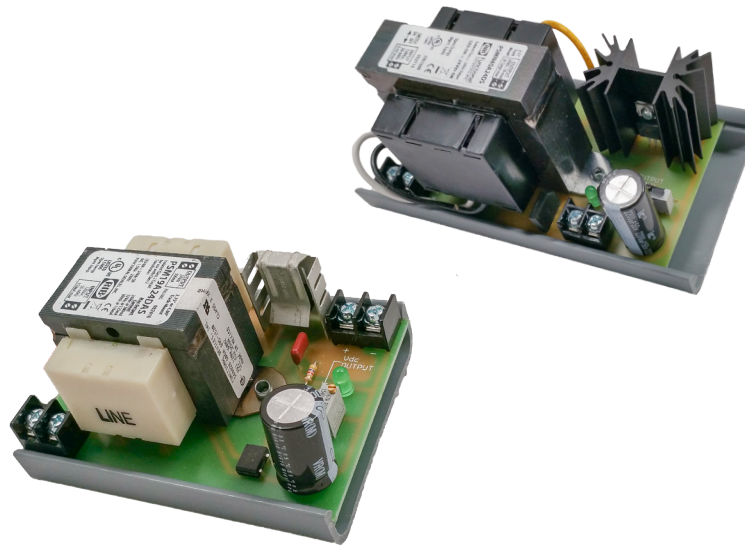


Removable Mounting Tab



RIBXG21 SERIES SELECTION GUIDE

Model#	Sensing Range	Type	Threshold	Sensor Contact Type	Switching Voltage Range	Maximum Switching Current	Sensor Contact Termination	LED 1	LED 2
RIBXG21TF	.50-150 Amps AC	Split Core	Fixed, .50 Amp AC	Solid State Switch SPST	120-277 Vac	1 Amp AC *	Terminal Strip, Accepts #14-22 AWG Wire		
RIBXG21TA	.75-150 Amps AC	Split Core	Adjustable	Solid State Switch SPST	120-277 Vac	1 Amp AC *	Terminal Strip, Accepts #14-22 AWG Wire	Over Threshold	Under Threshold



DC POWER SUPPLIES

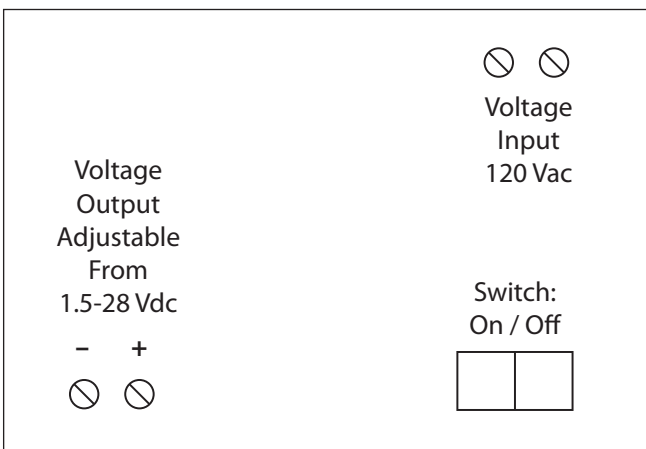
- 300 mA to 1 Amp output
- Fixed 24 Vdc or adjustable 1.5 - 28 Vdc output
- 120 Vac or 24 Vac input
- ON / OFF control
- Isolated
- Mounting track provided for easy installation inside or outside of panels
- LED to indicate power status
- UL Listed, Class 2
- Made in the U.S.A.

DC POWER SUPPLY

4.00" & 2.75" Track Mount Isolated Linear DC Power Supply, 120 Vac to 1.5-28 Vdc, 300 mA Adjustable Output



PSM19A24DAS
120 Vac to 1.5 - 28 Vdc



SPECIFICATIONS

- Voltage Input:** 120 Vac
- Voltage Output:** 1.5 - 28 Vdc Isolated
- Frequency:** 50/60 Hz
- Overload Protection:** Electrical and Thermal, Auto-Reset
- Operating Temperature:** -30 to 140° F
- Humidity Range:** 5 to 95% (noncondensing)
- Power Status:** LED On = Activated
- Dimensions:** 1.625" x 2.750" x 4.000"
- Track Mount:** 4.000" and 2.750"
MT212-4 Mounting Track Supplied
- Weight:** 1.10 lbs.
- ON/OFF Switch:** 2 Position
- Approvals:** Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS

Output Current Ratings:
116 mA @ 10 Vdc
125 mA @ 12 Vdc
300 mA @ 24 Vdc

Input Current Rating:
150 mA Maximum

Percent Ripple:
0.0016%, 24 Vdc @ 300 mA

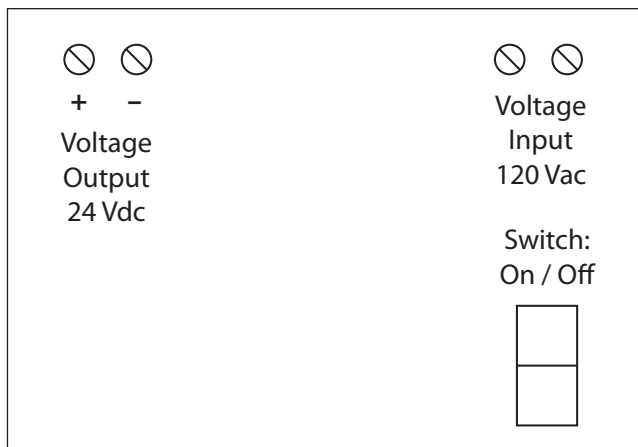
Regulation:
Load: 0.04% No Load to Full Load
Line: 0.6250 mV/V

DC POWER SUPPLY

2.75" Track Mount Isolated Linear DC Power Supply, 120 Vac to 24 Vdc, 1 Amp



PSMN40A24DS
120 Vac to 24 Vdc



SPECIFICATIONS

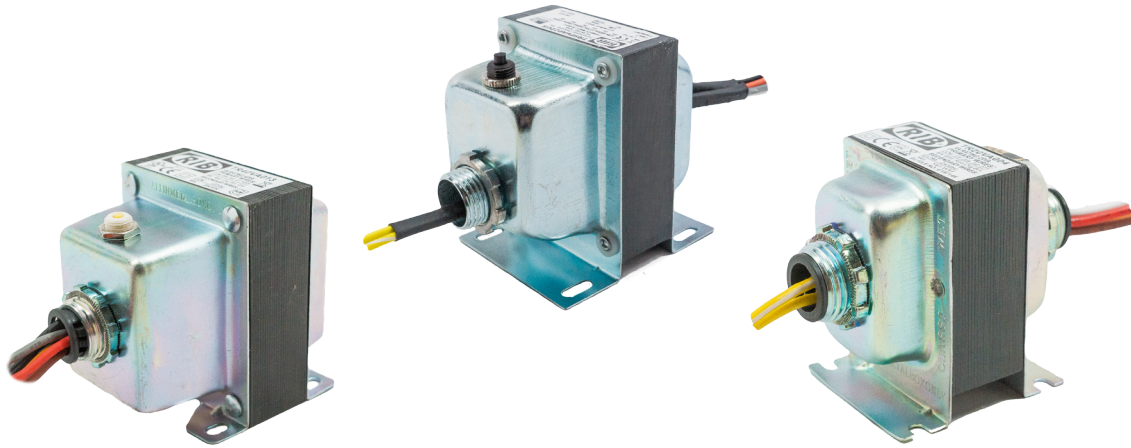
- Voltage Input:** 120 Vac
- Voltage Output:** 24 Vdc Isolated
- Frequency:** 50/60 Hz
- Overload Protection:** Electrical and Thermal, Auto-Reset
- Operating Temperature:** -30 to 140° F
- Humidity Range:** 5 to 95% (noncondensing)
- Power Status:** LED On = Activated
- Dimensions:** 2.000" x 2.750" x 5.000"
- Track Mount:** 2.750"
MT212-6 Mounting Track Supplied
- Weight:** 1.50 lbs.
- ON/OFF Switch:** 2 Position
- Approvals:** Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS

Output Current Ratings:
1 A @ 24 Vdc

Input Current Rating:
400 mA Maximum

Percent Ripple:
0.0016%, 24 Vdc @ 1 A

Regulation:
Load: 0.50% No Load to Full Load
Line: 25.0000 mV/V



TRANSFORMERS

- 20 VA through 300 VA
- Multi-tap primary
- Single and dual threaded hubs
- Foot or hub mountable
- Circuit breaker models
- Standard 8" wire leads typical
- Split-bobbin construction
- UL Listed models available
- Made in the U.S.A. models

TRANSFORMERS

Model #	UL Rating	VA	Style	Over Current Protection	Class 2	Primary Voltage (Vac)	Sec. Voltage (Vac)	Foot Mount	Hubs	L	W	H	A	B	C	D	Weight
TR20VA004	•	20VA	2	Inherent	•	277/240/208/120	24	•	2 Threaded	2.310"	1.890"	2.625"	1.540"	1.625"	1.000"	2.100"	1.40 lbs.
TR40VA004	•	40VA	2	Inherent	•	277/240/208/120	24	•	2 Threaded	2.631"	2.177"	2.882"	1.998"	1.774"	1.189"	2.553"	2.20 lbs.
TR40VA013	•	40VA	1	Circuit Brkr.		480/277/240/208	120	•	1 Threaded	3.267"	2.505"	3.000"	1.699"	1.986"	1.114"	2.325"	2.65 lbs.
TR40VA040 [^]	•	40VA	4	Int. Thermal	•	240/208/120	24	•	1 Threaded	2.728"	2.171"	2.890"	1.995"	1.792"	1.215"	2.550"	2.20 lbs.
TR50VA008	•	50VA	3	Circuit Brkr.		480/277/240/208	120	•	2 Threaded	3.440"	2.510"	3.012"	1.932"	1.945"	1.346"	2.523"	3.04 lbs.
TR50VA015	•	50VA	1	Circuit Brkr.	•	480/277/240/208/120	24	•	1 Threaded	3.405"	2.517"	3.013"	1.875"	1.985"	1.316"	2.484"	2.80 lbs.
TR50VA022US	•	50VA	3	Circuit Brkr.	•	480/277/240/208/120	24	•	2 Threaded	3.260"	2.525"	3.290"	2.190"	2.000"	1.120"		2.65 lbs.
TR75VA007	•	75VA	3	Circuit Brkr.	•	480/240/208/120	24	•	2 Threaded	3.883"	2.504"	3.034"	2.287"	1.981"	1.708"	2.887"	3.97 lbs.
TR100VA008	•	100VA	3	Circuit Brkr.		480/277/240/208	120	•	2 Threaded	4.220"	2.525"	3.022"	2.690"	1.970"	2.082"	3.272"	4.40 lbs.
TR100VA009	•	100VA	3	Circuit Brkr.	•	480/277/240/208/120	24	•	2 Threaded	4.270"	2.500"	3.060"	2.750"	1.975"	2.000"	2.252"	4.40 lbs.
TR100VA009US	•	96VA	3	Circuit Brkr.	•	480/277/240/208/120	24	•	2 Threaded	3.500"	2.500"	3.250"	2.720"	2.000"	1.630"		3.60 lbs.
TR150VA008	•	150VA	6	Circuit Brkr.		480/277/240/208	120	•	2 Threaded	4.283"	3.786"	3.161"	3.211"	3.260"	2.116"	4.177"	7.20 lbs.
TR300VA002		300VA	5	Circuit Brkr.		480/240/208/120	24	•	2 End-Bell Openings	5.499"	3.750"	4.500"	3.859"	3.187"	2.526"	4.526"	11.60 lbs.

= UL Listed : UL5085-2 or UL5085-3 ; USA & Canada

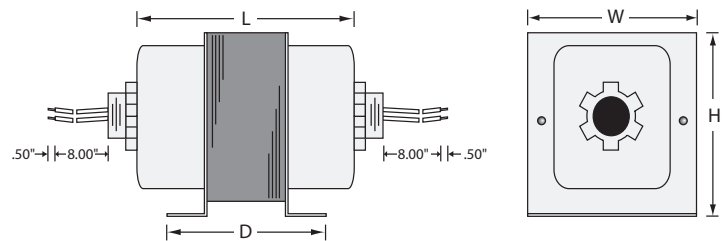
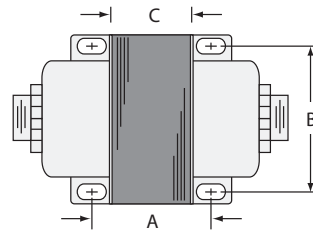
[^] = Dual Terminal Secondary

= UL Component Recognized : UL5085-2 or UL5085-3 ; USA & Canada

SPECIFICATIONS

- Frequency: 50/60 Hz
- Hub Style: .5" NPT Hub
- Wire Length: 8" Typical with .5" Strip
- Operating Temperature: -30 to 140° F
- Humidity Range: 5 to 95% (noncondensing)
- MTBF: 100,000 Hours @ 77° F
- Construction: Split-Bobbin
- Approvals: CE approved, RoHS, See chart for UL approvals.

DIMENSIONS: SEE CHART



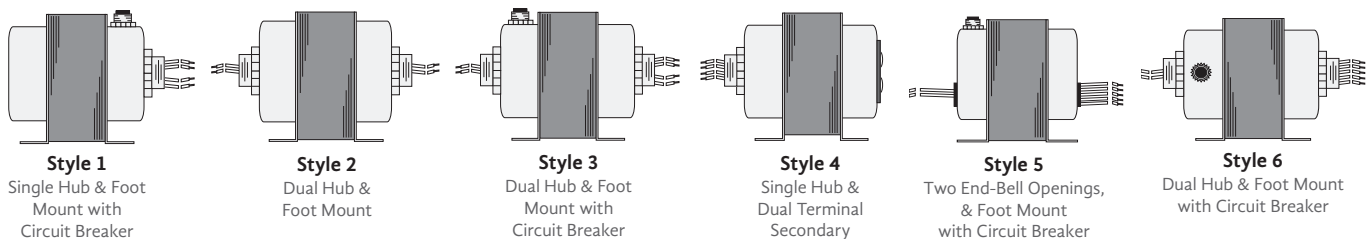
Instructions inside product box include wire colors/voltages.



Additional information on voltage and wire colors is available in individual data sheets on website.

<http://www.functionaldevices.com/building-automation/transformers.php>

Or scan QR code with your smart phone.



POWER CONTROL

Prepackaged Switches

- 5 Amp or 20 Amp
- Standard configurations to provide simple switching schemes
- Labels can be ordered with custom content to fit your project

Enclosed Power Control Centers

- Two 120 Vac grounded convenience outlets
- 4 or 10 Amp switch / circuit breaker
- Outlets can be continuously powered or controlled by the switch / circuit breaker
- True override switch on load side of relay
- Auxiliary outputs are provided for convenient control panel installations

UPS Interface

- Functional Devices provides a 550 VA commercial UPS along with an enclosure and an interface board, which allows the installer to hardwire line voltage to the provided UPS while giving the ability to hardwire the UPS to the final load.

PREPACKAGED SWITCHES

Model #	UL	Enclosed	Track Mount	Convenience Outlets	Switch	Circuit Breaker	Spec Page
SIB02S	•	•			20 A, Maintained 3 Position		22
SIB04S	•	•			20 A, Maintained 2 Position (On / On)		22
SIB05S	•	•			20 A, Maintained 2 Position (On / Off)		22
SIBLS	•	•			5 A, Maintained 3 Position		22

ENCLOSED POWER CONTROL CENTERS

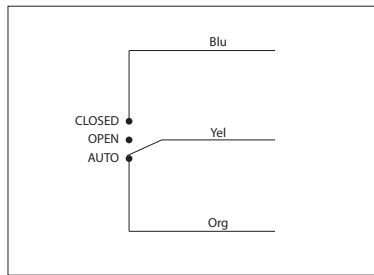
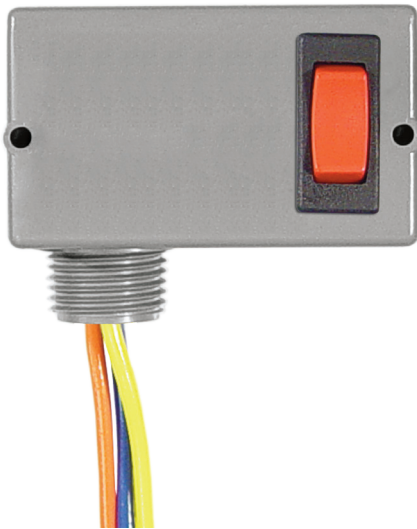
Model #	UL	Convenience Outlets	Switch	Circuit Breaker	Wires	Terminals	Spec Page
PSP2RB4	•	2, 120 Vac	On / Off	4 Amp		•	23
PSPW2RB4	•	2, 120 Vac	On / Off	4 Amp	•		23
PSPT2RB10	•	2, 120 Vac	On / Off	10 Amp		•	23
PSPW2RB10	•	2, 120 Vac	On / Off	10 Amp	•		23

UPS INTERFACE

Model #	Enclosure	Relay Output (Status)	UPS	Circuit Breaker	120 Outlet	Notes	Spec Page
PSH550-UPS (Kit)	•		•	•	•		24

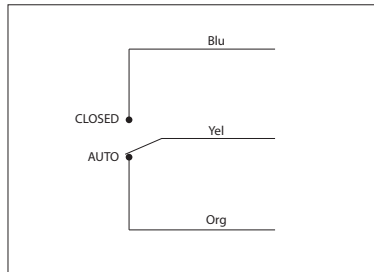
UL = UL Listed : UL916 Energy Management; UL Listed Canada

PREPACKAGED SWITCHES



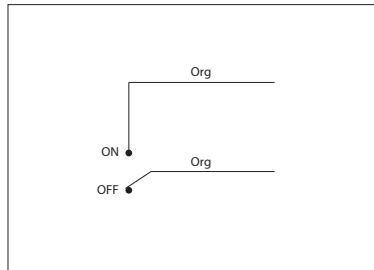
SIB02S

Enclosed Switch 20 Amp,
3 Position Maintained,
On/Off/On



SIB04S

Enclosed Switch 20 Amp,
2 Position Maintained,
On/On, 3 Wires



SIB05S

Enclosed Switch 20 Amp,
2 Position Maintained,
On/Off, 2 Wires

SPECIFICATIONS

- Operating Temperature:** -30 to 140° F
- Humidity Range:** 5 to 95% (noncondensing)
- Dimensions:** 1.700" x 2.800" x 1.500"
(w/ .500" NPT Nipple)
- Wires:** 16", 600V Rated
- Approvals:** UL Listed, UL916, C-UL, CE, RoHS
- Housing Rating:** UL Accepted for Use in Plenum, NEMA 1

SIB02S, SIB04S, SIB05S Switch Ratings:

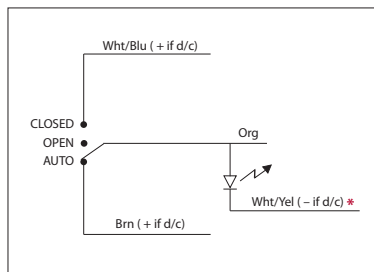
- 20 Amp Resistive @ 277 Vac
- 1110 VA Pilot Duty @ 277 Vac
- 770 VA Pilot Duty @ 120 Vac
- 20 Amp Ballast @ 277 Vac
- 10 Amp Tungsten @ 120 Vac
- 2 HP @ 277 Vac
- 1 HP @ 120 Vac

SIBLS Switch Ratings:

- 5 Amp @ 30 Vac/dc

Notes:

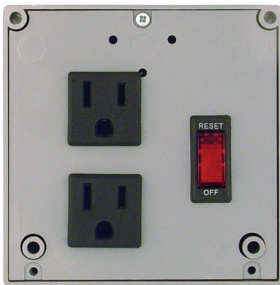
- Switch position label can be custom printed according to your needs, simply consult factory
- Connection to Wht/Yel may be omitted if LED is not needed (SIBLS) *



SIBLS

Enclosed Switch 5 Amp,
30 Vac/dc, 3 Position
Maintained, On/Off/On
with LED Indicator

SWITCH / CIRCUIT BREAKER COMBOS

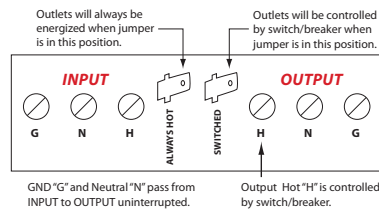


SPECIFICATIONS

- Operating Temperature:** -30 to 140° F
- Humidity Range:** 5 to 95% (noncondensing)
- Circuit Breaker:** 4 Amp Max. or 10 Amp Max.
- Dimensions:** 4.000" x 4.000" x 1.800"
(w/ .500" NPT Nipple - PSPW2RB4 & PSPW2RB10)
- Wires:** 16", 600V Rated (PSPW2RB4 & PSPW2RB10)
- Approvals:** UL Listed, UL916, C-UL, CE, RoHS
- Housing Rating:** UL Accepted for Use in Plenum, NEMA 1
- Terminals:** Ground "G" and Neutral "N" pass from INPUT to OUTPUT uninterrupted. OUTPUT Hot (H or blue wire) is controlled by the switch/breaker.

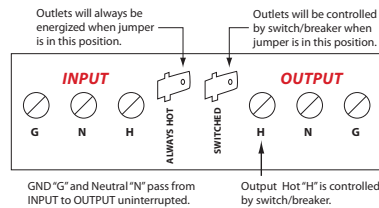
Note:

- Indicator light will illuminate when switch/breaker is ON (RESET position) indicating power has been transferred from INPUT to OUTPUT by the switch/breaker. If it is desired for the indicator light to be illuminated continuously to indicate the presence of input (Line) power, INPUT and OUTPUT may be reversed — connect input power from line to OUTPUT and connect output load to INPUT (operation of the jumpers above also reverses).



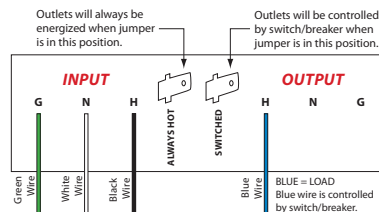
PSPT2RB4

Enclosed Power Control Center, 4 Amp Switch / Circuit Breaker, 120 Vac, 2 Outlets, Terminals



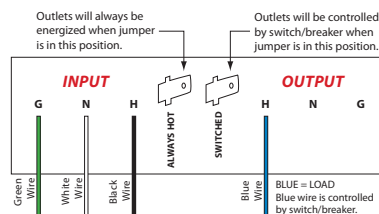
PSPT2RB10

Enclosed Power Control Center, 10 Amp Switch / Circuit Breaker, 120 Vac, 2 Outlets, Terminals



PSPW2RB4

Enclosed Power Control Center, 4 Amp Switch / Circuit Breaker, 120 Vac, 2 Outlets, Wires



PSPW2RB10

Enclosed Power Control Center, 10 Amp Switch / Circuit Breaker, 120 Vac, 2 Outlets, Wires

PSP SERIES SELECTION GUIDE

Model #	Circuit Breaker	Terminals	Wires
PSPT2RB4	4 Amps	•	
PSPT2RB10	10 Amps	•	
PSPW2RB4	4 Amps		•
PSPW2RB10	10 Amps		•

UNINTERRUPTIBLE POWER SUPPLY KIT

Kit Consisting of Enclosed Power Control Center Model PSH2RB10 (10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input) with a 550 VA UPS. (No Status Contacts)



Shown without cover



Shown with cover



PSH550-UPS

Kit Consisting of Enclosed Power Control Center Model PSH2RB10 with a 550 VA UPS

SPECIFICATIONS

UPS

- UPS:** 550VA
- Backup Time:** 3 Min. @ Full 550 VA Load
15 Min. @ 1/2 Load
- Input:** 120 Vac, 12 Amp
- Output:** 120 Vac, 4.6 Amp
- Max Load:** 330 Watt
- Frequency:** 50/60 Hz
- Temperature Rating of UPS:** 32 to 104° F
- UPS Transfer Time:** 6ms
- Approvals:** UL Listed, UL1778

PSH2RB10

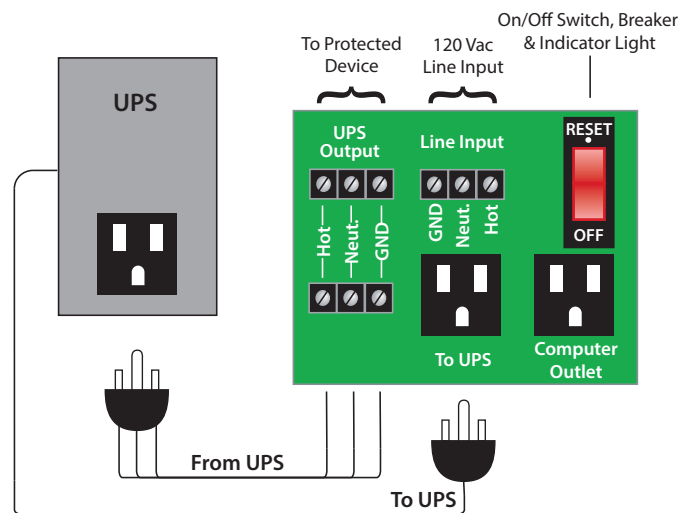
- Operating Temperature:** -30 to 140° F
- Humidity Range:** 5 to 95% (noncondensing)
- Main Breaker ON/OFF:** Switch / Breaker (10 Amp)
- Approvals:** UL Listed, UL916, C-UL, CE, RoHS
- Dimensions:** 12.000" x 14.000" x 6.000"
Metal Housing with Screw Cover

Shipping Weight:
28 lbs.

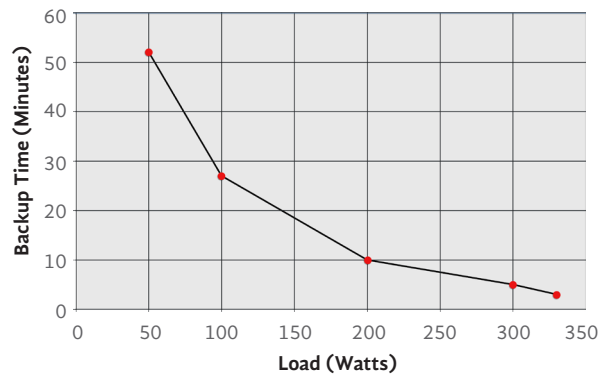
Product Weight:
22.5 lbs.

Notes:

- To order without UPS, so that any other commercial UPS with appropriate ratings and within housing space limitations may be used, see model PSH2RB10.
- To order interface board for replacement or for separate use, order model PSM2RB10.
- Average battery life: 3-5 years depending on the number of discharge cycles and environmental temperature



ESTIMATED BACKUP TIME VS. LOAD



ENCLOSURES

NEMA 1 and NEMA 4 Metal & Plastic Enclosures

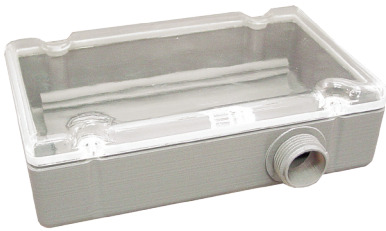
- Available in a variety of sizes
- Multiple knockouts
- Metal enclosures are stackable vertically and horizontally
- Screw cover or key-lock latch doors
- Full-hinge cover standard on most models
- UL Listed
- Made in the U.S.A.

ENCLOSURES								
Model #	UL	NEMA Rating	Cover / Door	Height	Width	Depth	Gauge	Spec Page
PE6000 Series	•	NEMA 1 / NEMA 4/4X	Screw Down Cover	4.28"	7.00"	2.00"		26
MH1000 Series	•	NEMA 1	Screw Down Cover	14.50"	7.70"	3.90"	18	26
MH1200 Series	•	NEMA 1	Screw Down Cover	8.30"	7.70"	3.90"	18	27
MH2204-N4	•	NEMA 4/4X	Hinge Key Latch Door	9.84"	7.87"	3.98"	16	27
MH3100-M1	•	NEMA 1	Screw Down Cover	12.00"	12.00"	6.00"	16	28
MH3204-N4	•	NEMA 4/4X	Hinge Key Latch Door	15.75"	11.81"	5.91"	16	28
MH3300 Series	•	NEMA 1	Vertical Lift Screw Down Cover	12.50"	12.50"	7.00"	18	29
MH3500 Series	•	NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	10.25"	3.90"	18	29
MH3800 Series	•	NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	12.50"	6.50"	18	30
MH4400 Series	•	NEMA 1	Full Hinge Key Latch Door	18.00"	18.00"	7.125"	16	30
MH5500 Series	•	NEMA 1	Full Hinge Key Latch Door	25.00"	25.00"	9.50"	14	31
MH5800 Series	•	NEMA 1	Full Hinge Key Latch Door	36.00"	25.00"	9.50"	14	31

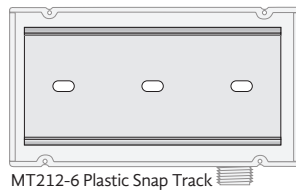
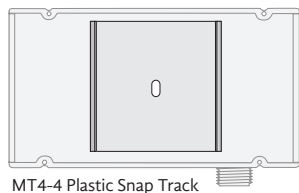
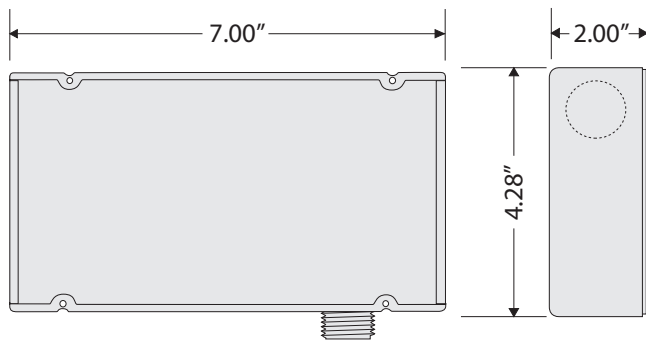
UL = UL Listed : UL916 Energy Management; UL Listed Canada

ENCLOSURE

Plastic Housing, .75" NPT Nipple, 4.28" H x 7.00" W x 2.00" D



PE6000 SERIES



SPECIFICATIONS

Cover Type: Screw Down Cover

Approvals: UL Listed, C-UL, CE Approved, RoHS

Housing Rating: UL Accepted for Use in Plenum, NEMA 1, Also available NEMA 4 / 4X

Note:

- Comes with translucent lid. To order with gray opaque lid, add "-GY" to end of model number.

PE6000 SERIES ASSEMBLIES

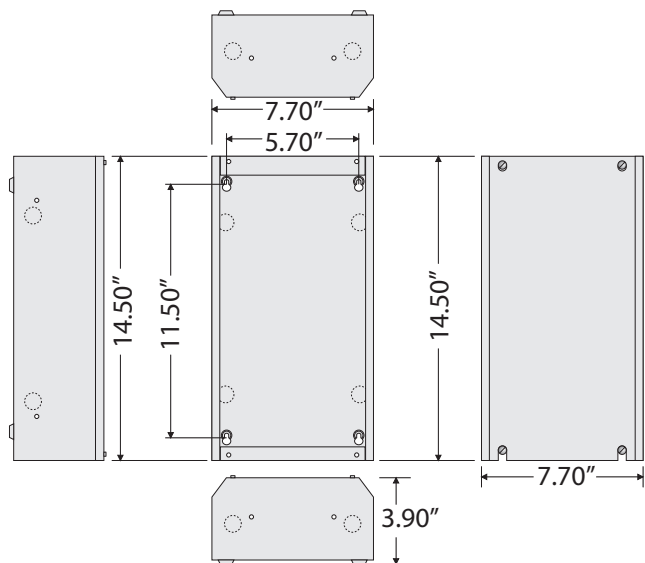
Model #	Enclosure	Plastic Snap Track	NEMA Type	Weight
PE6000	PE6000		NEMA 1	.656 lbs.
PE6010	PE6000	MT4-4 (4.00" W)	NEMA 1	.717 lbs.
PE6020	PE6000	MT212-6 (2.75" W)	NEMA 1	.769 lbs.
PE6000-N4	PE6000-N4		NEMA 4/4X	.656 lbs.
PE6010-N4	PE6000-N4	MT4-4 (4.00" W)	NEMA 4/4X	.717 lbs.
PE6020-N4	PE6000-N4	MT212-6 (2.75" W)	NEMA 4/4X	.769 lbs.

ENCLOSURE

Metal Housing, NEMA 1, 14.50" H x 7.70" W x 3.90" D



MH1000 SERIES



SPECIFICATIONS

Construction: 18 Gauge Steel

Cover Type: Screw Down Cover

Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:

- Consult factory for custom colors for large orders.

MH1000 SERIES ASSEMBLIES

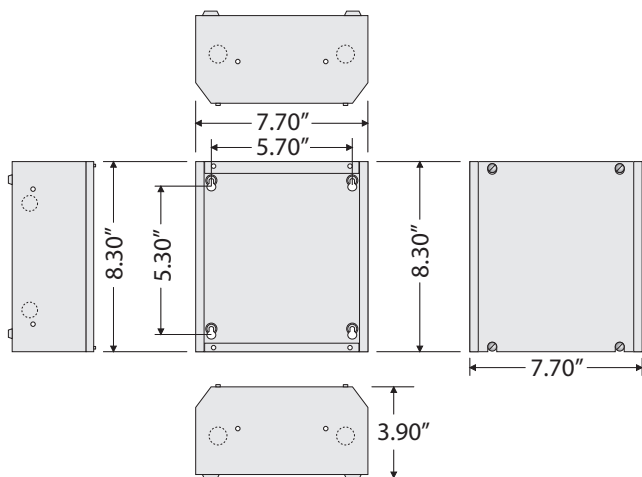
Model #	Enclosure	Plastic Snap Track	Weight
MH1000	MH1000		6.00 lbs.
MH1010	MH1000	MT4-12 (4.00" W)	6.30 lbs.
MH1020	MH1000	MT212-12 (2.75" W)	6.25 lbs.

ENCLOSURE

Metal Housing, NEMA 1, 8.30" H x 7.70" W x 3.90" D



MH1200 SERIES



SPECIFICATIONS

Construction: 18 Gauge Steel
Cover Type: Screw Down Cover
Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:

- Consult factory for custom colors for large orders.

MH1200 SERIES ASSEMBLIES

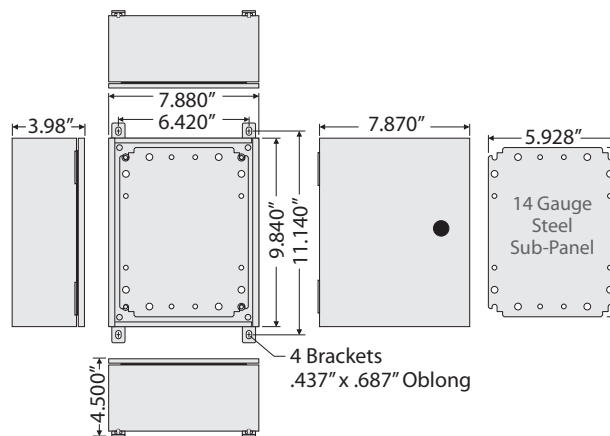
Model #	Enclosure	Plastic Snap Track	Weight
MH1200	MH1200		3.86 lbs.
MH1210	MH1200	MT4-8 (4.00" W)	4.06 lbs.
MH1220	MH1200	MT212-8 (2.75" W)	4.00 lbs.

ENCLOSURE

Metal Housing, NEMA 4/4X, 9.84" H x 7.87" W x 3.98" D



MH2204-N4



SPECIFICATIONS

Construction: 16 Gauge Steel
Weight: 7.70 lbs.
Cover Type: Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:

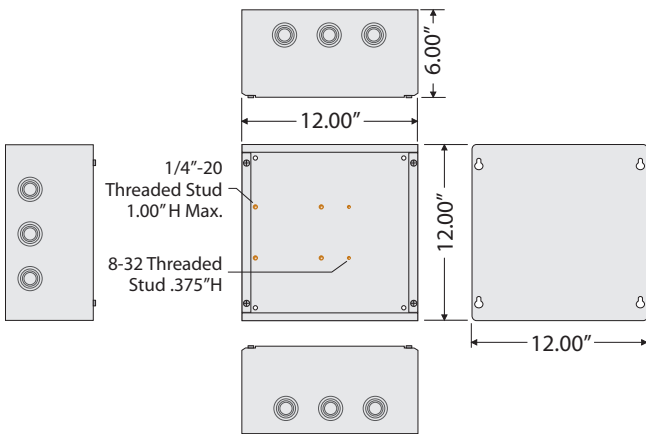
- Mounting hardware included

ENCLOSURE

Metal Housing, NEMA 1, 12.00" H x 12.00" W x 6.00" D, Mounting Option 1



MH3100-M1



SPECIFICATIONS

Construction: 16 Gauge Steel
Weight: 12 lbs.
Cover Type: Screw Down Cover
Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:
 • To convert panel-mounted power supply to enclosed, simply remove the sub-panel and mount to enclosure with provided screw pack. *

MH3100-M1 ASSEMBLY		
Model #	Enclosure	Plastic Snap Track
MH3100-M1 *	MH3100	6 Threaded Studs

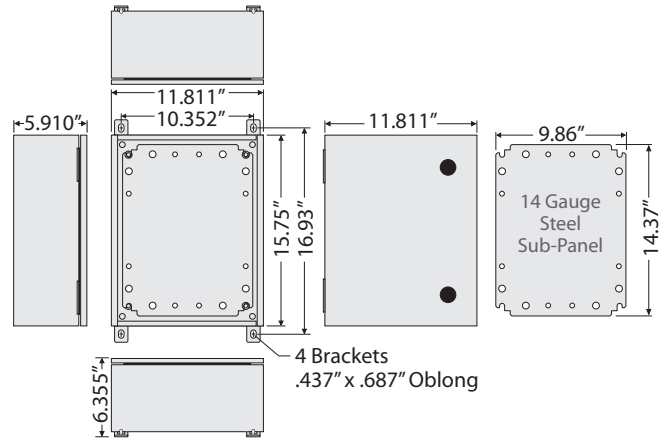
* MH3100-M1 + PSMN500A = PSH500A
 MH3100-M1 + PSMN300A = PSH300A

ENCLOSURE

Metal Housing, NEMA 4/4X, 15.75" H x 11.81" W x 5.91" D



MH3204-N4



SPECIFICATIONS

Construction: 16 Gauge Steel
Weight: 17 lbs.
Cover Type: Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

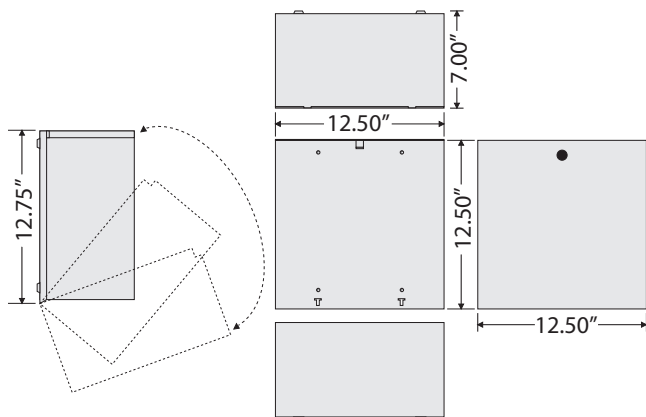
Note:
 • Mounting hardware included

ENCLOSURE

Metal Housing, NEMA 1, 12.50" H x 12.50" W x 7.00" D



MH3300 SERIES



SPECIFICATIONS

Construction: 18 Gauge Steel

Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:

- Consult factory for custom colors for large orders.

MH3300 SERIES ASSEMBLIES				
Model #	Enclosure	Cover Type	Sub-Panel	Weight
MH3300	MH3300	Vertical Lift Screw Down		10.5 lbs.
MH3300K	MH3300K	Vertical Lift Key Latch		10.7 lbs.
MH3303	MH3300	Vertical Lift Screw Down	SP3303 ¹	11.8 lbs.
MH3304	MH3300	Vertical Lift Screw Down	SP3304 ²	11.8 lbs.
MH3303K	MH3300K	Vertical Lift Key Latch	SP3303 ¹	12.5 lbs.
MH3304K	MH3300K	Vertical Lift Key Latch	SP3304 ²	12.5 lbs.

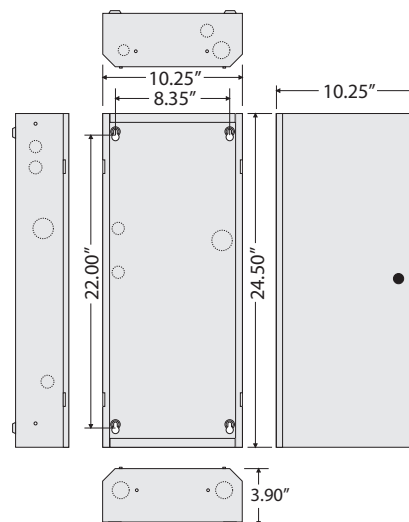
¹ = Polymetal: 11.33" H x 11.40" W ² = Perforated Steel: 11.33" H x 11.40" W

ENCLOSURE

Metal Housing, NEMA 1, 24.50" H x 10.25" W x 3.90" D



MH3500 SERIES



SPECIFICATIONS

Construction: 18 Gauge Steel

Cover Type: Reversible Hook Hinge Key Latch Door

Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:

- Consult factory for custom colors for large orders.
- Order with coin latch by adding "-L4" to end of model number.

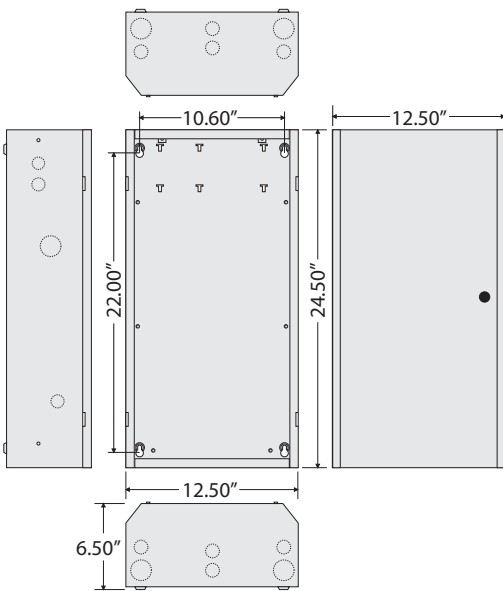
MH3500 SERIES ASSEMBLIES			
Model #	Enclosure	Plastic Snap Track	Weight
MH3500	MH3500		11.1 lbs.
MH3510	MH3500	MT4-24 (4.00" W)	11.7 lbs.
MH3520	MH3500	MT212-24 (2.75" W)	11.5 lbs.

ENCLOSURE

Metal Housing, NEMA 1, 24.50" H x 12.50" W x 6.50" D



MH3800 SERIES



SPECIFICATIONS

Construction: 18 Gauge Steel
Cover Type: Reversible Hook Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:
 • Consult factory for custom colors for large orders.
 • Order with coin latch by adding "-L4" to end of model number.

MH3800 SERIES ASSEMBLIES			
Model #	Enclosure	Plastic Snap Track / Sub-Panel	Weight
MH3800	MH3800		16.6 lbs.
MH3810	MH3800	MT4-18 (4.00" W)	16.9 lbs.
MH3820	MH3800	MT212-18 (2.75" W)	16.8 lbs.
MH3803S	MH3800	SP3803S ¹	18.1 lbs.
MH3803L	MH3800	SP3803L ¹	18.5 lbs.
MH3804S	MH3800	SP3804S ²	19.9 lbs.
MH3804L	MH3800	SP3804L ²	20.3 lbs.

1 = Polymetal
 Model S: 19.00" H x 11.75" W
 Model L: 23.00" H x 11.75" W

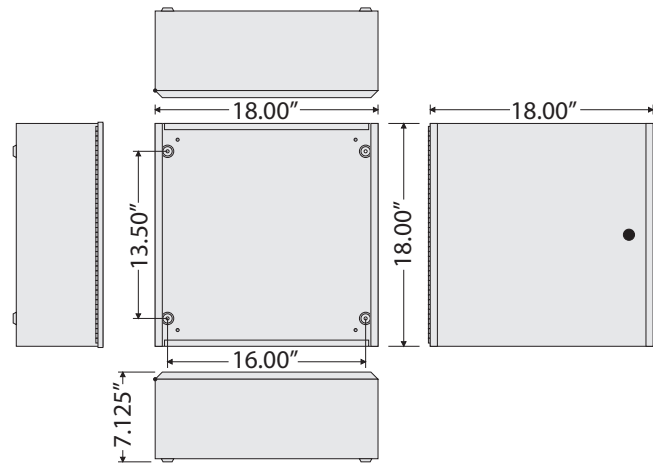
2 = Perforated Steel
 Model S: 19.00" H x 11.75" W
 Model L: 23.00" H x 11.75" W

ENCLOSURE

Metal Housing, NEMA 1, 18.00" H x 18.00" W x 7.00" D



MH4400 SERIES



SPECIFICATIONS

Construction: 16 Gauge Steel
Cover Type: Full Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:
 • Consult factory for custom colors for large orders.
 • Order with coin latch by adding "-L4" to end of model number.

MH4400 SERIES ASSEMBLIES			
Model #	Enclosure	Sub-Panel	Weight
MH4400	MH4400		22.5 lbs.
MH4403L	MH4400	SP4403L ¹	24.7 lbs.
MH4404L	MH4400	SP4404L ²	26.3 lbs.

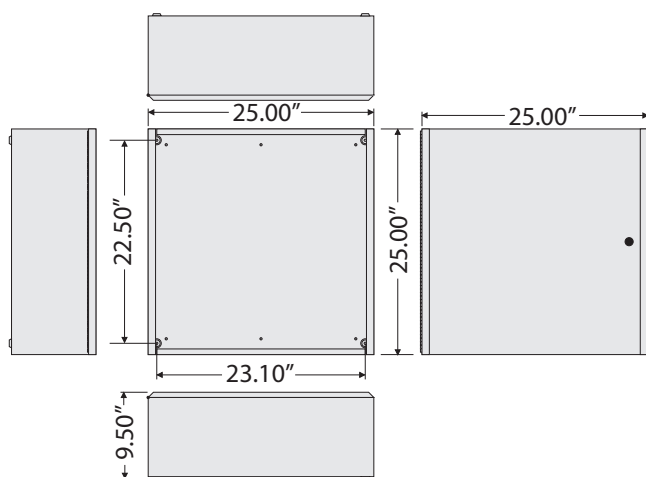
1 = Polymetal: 16.875" H x 15.75" W **2 = Perforated Steel:** 16.875" H x 15.75" W

ENCLOSURE

Metal Housing, NEMA 1, 25.00" H x 25.00" W x 9.50" D



MH5500 SERIES



SPECIFICATIONS

Construction: 14 Gauge Steel
Cover Type: Full Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:
 • Consult factory for custom colors for large orders.
 • Order with coin latch by adding "-L4" to end of model number.

MH5500 SERIES ASSEMBLIES			
Model #	Enclosure	Sub-Panel	Weight
MH5500	MH5500		50.7 lbs.
MH5503L	MH5500	SP5503L ¹	56.4 lbs.
MH5504L	MH5500	SP5504L ²	60.0 lbs.

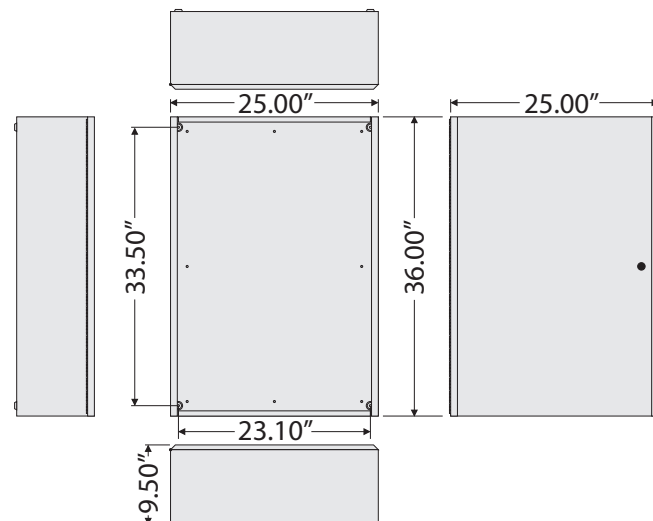
¹ = Polymetal: 23.00" H x 22.50" W ² = Perforated Steel: 23.00" H x 22.50" W

ENCLOSURE

Metal Housing, NEMA 1, 36.00" H x 25.00" W x 9.50" D



MH5800 SERIES



SPECIFICATIONS

Construction: 14 Gauge Steel
Cover Type: Full Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Note:
 • Consult factory for custom colors for large orders.
 • Order with coin latch by adding "-L4" to end of model number.

MH5800 SERIES ASSEMBLIES			
Model #	Enclosure	Sub-Panel	Weight
MH5800	MH5800		68.5 lbs.
MH5803L	MH5800	SP5803L ¹	74.2 lbs.
MH5804L	MH5800	SP5804L ²	80.8 lbs.

¹ = Polymetal: 34.125" H x 22.50" W ² = Perforated Steel: 34.125" H x 22.50" W



NOTES



WIRELESS DEVICES

EnOcean® Enabled Short Range Devices

- EnOcean® enabled wireless relay receivers work in conjunction with many switching devices that are EnOcean® enabled with 902 MHz transmitters.
- Wireless wall switches, occupancy sensors, thermostats, key card switches, patio and door switches are all devices which can activate the RIB® wireless control relays by using EnOcean’s “energy harvesting” technology. Energy harvesting refers to the process by which energy is captured and stored, then used to transmit a wireless signal, which in turn is received by the RIB® wireless relay.

WIRELESS CONTROL RELAYS

Model #	UL	Coil Voltage		Relays	Contacts	Repeat Function	Dry Contact Input	Ballast Size Enclosure	Notes	Spec Page
		AC/DC	AC							
RIBW01B-EN3	•		120	1	SPDT	•	•		Transceiver	34
RIBW208B-EN3	•		208	1	SPDT	•	•		Transceiver	34
RIBW240B-EN3	•		240	1	SPDT	•	•		Transceiver	34
RIBW277B-EN3	•		277	1	SPDT	•	•		Transceiver	34
RIBW24B-EN3	•	24		1	SPDT	•	•		Transceiver	34
RIBW01C-EN3	•		120	1	SPST-N/O	•		•	Receiver only	35
RIBW02C-EN3	•		208-277	1	SPST-N/O	•		•	Receiver only	35

WIRELESS TRANSMITTERS

Model #	Power Input	EnOcean® Energy Harvesting	Frequency	Color	Wireless Switch Cover Plate ¹	Spec Page
WWS-EN3	Self-Powered	•	902 MHz	White	WSTP-W	35
WDWS-EN3	Self-Powered	•	902 MHz	White		36

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

¹ = Sold separately

WIRELESS CONTROL RELAYS



Relay has built-in repeater function. Relay receives signal from wireless switch transmitter and rebroadcasts the signal to the next relay receiver.

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 Ratings:

- 73 mA @ 120 Vac ; 60 Hz (RIBW01B-EN3)
- 80 mA @ 208 Vac ; 60 Hz (RIBW208B-EN3)
- 80 mA @ 240 Vac ; 60 Hz (RIBW240B-EN3)
- 80 mA @ 277 Vac ; 60 Hz (RIBW277B-EN3)
- 139 mA @ 24 Vac (RIBW24B-EN3)
- 69 mA @ 24 Vdc (RIBW24B-EN3)

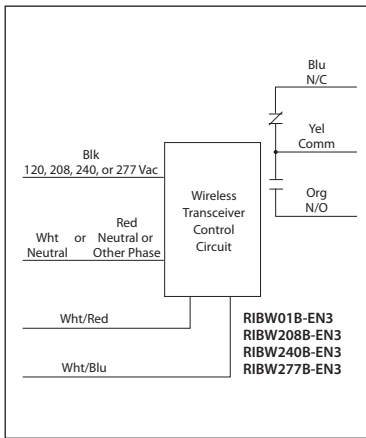
Notes:

- Compatible with EnOcean® 902 MHz Switches/Transmitters.
- Typical range: 50-150 ft.
- Open area transmission could be farther. Consult factory for more information.
- Repeater function only rebroadcasts original EnOcean® transmission. Up to two repeaters can be used.
- Version 1.5 firmware or later implements Functional Devices, Inc.'s EnOcean® Manufacturer ID of 0x055.
- For setup instructions, see website for -EN3 Series Application Manual: www.functionaldevices.com/pdf/bulletins/B1867_393231.pdf or scan QR code with your smart phone.



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)
- Red LED:** Relay Status / Learn Mode Status (Flashing)
- Dimensions:** 2.30" x 3.20" x 1.80" with .50" NPT Nipple
- Wires:** 16", 600V Rated
- Approvals:** UL Listed, UL916, C-UL, RoHS,
- Agency Compliance:** FCCID: SZV-TCM320U, IC: 5713A-TCM320U
- Housing Rating:** UL Accepted for Use in Plenum, NEMA 1
- Gold Flash:** No
- Override Switch:** No
- Frequency:** 902 MHz
- Receiver Sensitivity:** -93 dBm typical
- Conducted Power:** 5 mW typical
- Built-in Switch Modes:** Alarm, Repeater, Delay, Rocker, Momentary, Toggle



RIBW01B-EN3

Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 120 Vac Power, with Dry Contact Input

RIBW208B-EN3

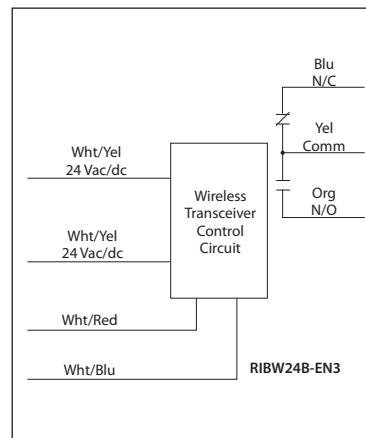
Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 208 Vac Power, with Dry Contact Input

RIBW240B-EN3

Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 240 Vac Power, with Dry Contact Input

RIBW277B-EN3

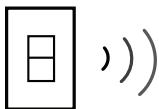
Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 277 Vac Power, with Dry Contact Input



RIBW24B-EN3

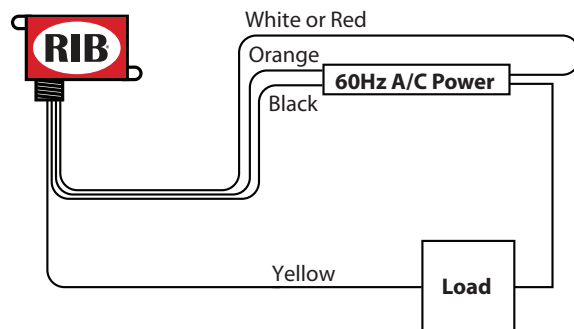
Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 24 Vac/dc Power, with Dry Contact Input

APPLICATION FOR WIRELESS CONTROL



EnOcean® Enabled 902 MHz Switch (Model WWS-EN3)

No power required



WIRELESS CONTROL RELAYS

Enclosed EnOcean® Enabled Wireless Relay Receiver / Repeater
5 Amp SPST-N/O, 120 Vac or 208-277 Vac Power Input

RIBW01C-EN3

120 Vac Power Input

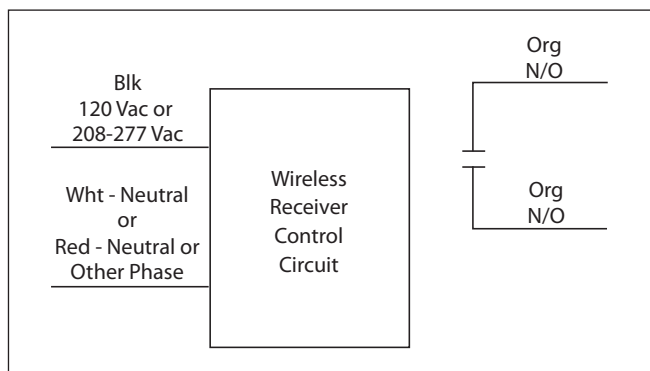
RIBW02C-EN3

208-277 Vac Power Input



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Smaller size design to fit inside ballast housing of
fluorescent light fixture.



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)
- Red LED: Relay Status / Learn Mode Status (Flashing)
- Dimensions: 4.60" x 1.20" x 1.70"
- Wires: 16", 600V Rated
- Approvals: UL Listed, UL916, C-UL
- Agency Compliance: FCCID: SZV-TCM320U
IC: 5713A-TCM320U
- Gold Flash: No
- Override Switch: No
- Frequency: 902 MHz
- Receiver Sensitivity: -93 dBm typical
- Conducted Power: 5 mW typical
- Built-in Switch Modes: Alarm, Repeater, Delay, Rocker, Momentary, Toggle

Contact Ratings:

5 Amp Ballast @ 120/277 Vac
5 Amp Tungsten @ 120 Vac
5 Amp Electronic Ballast @ 120 Vac

Power Input Ratings:

75 mA @ 120 Vac ; 60 Hz
(RIBW01C-EN3)
100 mA @ 208-277 Vac ; 60 Hz
(RIBW02C-EN3)

Notes:

- Compatible with EnOcean® 902 MHz Switches/Transmitters.
- Typical range: 50-150 ft. Open area transmission could be farther. Consult factory for more information.
- Repeater function only rebroadcasts original EnOcean® transmission. Up to two repeaters can be used.
- Version 1.5 firmware or later implements Functional Devices, Inc.'s EnOcean® Manufacturer ID of 0x055.
- For setup instructions, see website for -EN3 Series Application Manual: www.functionaldevices.com/pdf/bulletins/B1867_393231.pdf

WIRELESS ROCKER SWITCH

EnOcean® Enabled Wireless Wall Switch Transmitter Switch,
902 MHz

WWS-EN3

Transmitter Switch (White)

WSTP-W

Cover Plate (White)



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SPECIFICATIONS

- Operating Modes: On/Off, Toggle, Scene control
- Power Supply: Powered by finger press
(Electrodynamic Energy Harvester)
- Frequency: 902 MHz
- Antenna: Integrated antenna, 15cm
- Transmission Power: Max. 10mw EIRP
- Energy Bowtravel/Operating Force: 50,000 actuations tested to
EN60669 / VDE 0632
- Operating Temperature: -25 to 65° C
- Relative Humidity: 5 to 92% (noncondensing)
- Dimensions: 2.75" x 4.50" x 0.62"
- Weight: 3 oz.
- Agency Compliance: FCCID: SZV-PTM 210U
IC: 5713A-PTM210U

Notes:

- Compatible with EnOcean® 902 MHz Switches/Transmitters.
- Typical range: 80 ft. Open area transmission could be farther. Consult factory for more information.
- EEP F6-02-02
- For setup instructions, see website for -EN3 Series Application Manual: www.functionaldevices.com/pdf/bulletins/B1867_393231.pdf or scan QR code with your smart phone.



WIRELESS SOLAR DOOR / WINDOW SWITCH

EnOcean® Enabled Wireless Wall Switch Transmitter Switch, 902 MHz



WDWS-EN3 Transmitter Switch



PRODUCT DESCRIPTION

The Door/Window Sensor helps provide energy savings for an area by detecting when a door or window opens or closes.

It is a wireless solar-powered sensor that can be used on its own to detect the open and closed status of entry doors or windows, or it can be linked with occupancy sensors to more accurately track when a room is occupied or vacant.

The sensor is easy to install on door and window frames, and virtually anything indoors that opens and closes.

Features:

- Sends wireless message to other devices whenever a door or window opens or closes
- Harvests ambient solar energy to power the sensor and send wireless communication
- Mounts easily on standard doors or windows
- Works with motion sensors to track room occupancy
- Supplemental battery option for extreme low-light conditions

SPECIFICATIONS

Charge Time before Linking: 2.7 hours @ 10 lux
3.7 minutes @ 200 lux

Light Required to Sustain Operation: 15 lux for 6 actuations/hour
50 lux for 30 actuations/hour
100 lux for 60 actuations/hour

Charge Time for Full Charge: 21 hours @ 200 lux (after startup)
42 hours @ 200 lux (cold start)

**Operating Life in Darkness
(after full charge):** 174 hours heartbeat only
67 hours @ 10 actuations/hour
10 hours @ 100 actuations/hour

Maximum Sensor Gap: 0.25" (6.4mm)

Dimensions (Sensor): 3.15" L x 0.83" W x 0.59" D (80mm x 21mm x 15mm)

Dimensions (Magnet): 3.15" L x 0.47" W x 0.50" D (80mm x 12mm x 13mm)

Weight (Total): 0.97 oz. (27.5 g)

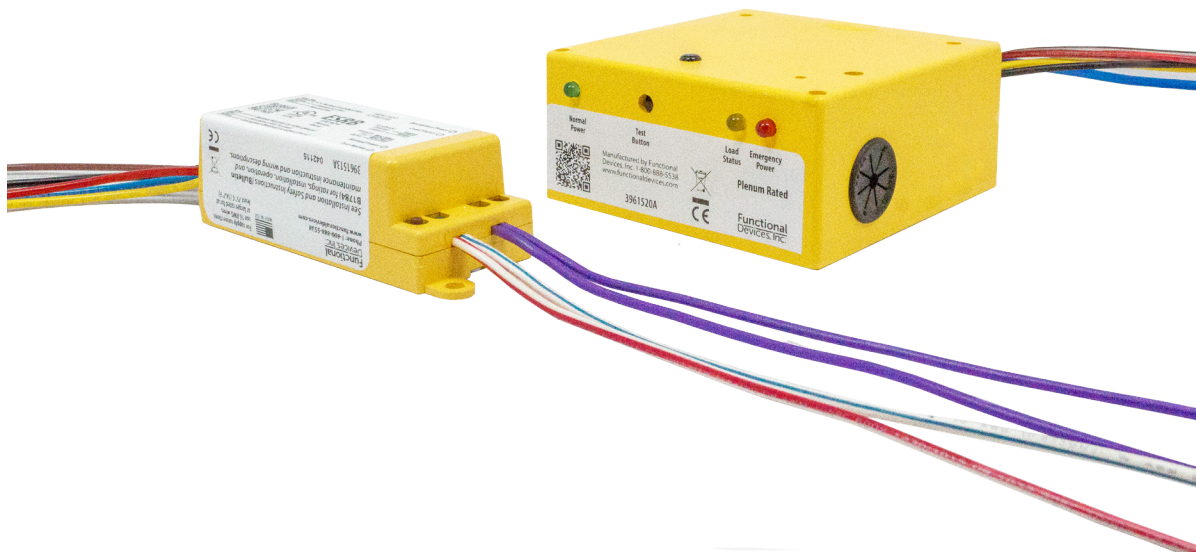
Environment: Indoor use only
32° to 131° F (0° to 55° C)
5 to 95% relative humidity (noncondensing)

Agency Compliance: FCC ID: SZV-STM 320U
IC: 5713A-STM 320U

Notes:

- Typical range: 80 ft. Open area transmission could be farther. Consult factory for more information.
- Only for use with -EN3 Series relays.
- EEP D5-00-01
- For setup instructions, see website for -EN3 Series Application Manual:
www.functionaldevices.com/pdf/bulletins/B1867_393231.pdf
or scan QR code with your smart phone.





UL924 EMERGENCY BYPASS/ SHUNT RELAYS

- Our UL924 Emergency Bypass / Shunt Relays are designed for applications that require an emergency load to be switched on during a loss of normal power. These economically priced relays are available prepackaged in their own NEMA 1 enclosure. Enclosures are available in two form factors: ballast channel mountable or nipple mountable for use with a junction box.

EMERGENCY BYPASS / SHUNT RELAYS (UL924)

FEATURES

Perfect for all emergency shunt lighting applications

- Up to 16 Amp electronic ballast rating
- 0-10 Vdc dimmer override
- Coil input range: 120 Vac through 277 Vac
- Bypass/shunt override
- Normal control of emergency lighting
- LED indicators for normal voltage, emergency voltage, and load status
- Nipple mount, wall mount, or ballast channel mount
- 10 Amp and 20 Amp SPST versions including magnetic ballast, electronic ballast, and tungsten ratings
- Made in the U.S.A.
- Remote test capability (model ESRTB)



APPLICATIONS

Our Emergency Shunt Relays are designed to fill every need in your emergency lighting applications.

- Emergency lighting can be controlled under normal conditions using the wall switch input.
- A two second self-test of the unit is performed every time the wall switch input is turned off.
- The on-board local test button and LEDs allow for installation to be tested immediately.
- Remote test capability allows for a button, switch, controller, etc. to be conveniently mounted anywhere desired. [Class 2 acceptable] See model ESRTB (remote test button).
- Under normal operation, emergency light can be controlled by a controller using the dry contact input.
- The dry contact output can be used to override 0-10 V dimmers to full brightness (or for feedback to controllers, etc.)
- High contact ratings allow for multiple loads on a single relay unit.
- Different housings allow for wall or nipple mount (model ESRN), or ballast channel mount (model ESRB).

INPUT AND OUTPUT CHARACTERISTICS

ELECTRICAL SPECIFICATIONS (ESRB, ESRN)

Normal Power Supply Voltage	120-277Vac
Normal Power Current Draw	24mA max
Normal Power Operating Frequency	50/60Hz

Emergency Power Supply Voltage	120-277Vac
Emergency Power Current Draw	118mA max
Emergency Power Operating Frequency	50/60Hz

Remote Test Input (Class 2, Dry Contact)	ESRTB or other switching method ^{1 2}
---	--

Feedback/Dimmer Contact Switching Capability (Dry Contact Output)	130mA @ 250V max
--	------------------

Relay Contact (ESRN) SPST	20A Magnetic Ballast @ 277V 16A Electronic Ballast @ 277V 10A Tungsten @ 120V
----------------------------------	---

Relay Contact (ESRB) SPST	10A Magnetic Ballast @ 277V 10A Electronic Ballast @ 277V 10A Tungsten @ 120V
----------------------------------	---

- 1: If not using the ESRTB Remote Test Button (sold separately), switching methods should be rated for at least 24Vdc. External voltage should not be supplied to this input. No specific current rating is required.
- 2: To maintain Class 2, a maximum of 45 ESRB, ESRN test inputs can be wired in parallel per ESRTB.

MECHANICAL SPECIFICATIONS

Housing: UL accepted for use in Plenum, NEMA 1

Wire: 16" 600V Rated

Weight: 0.675 lbs. (ESRN) ; 0.40 lbs (ESRB)

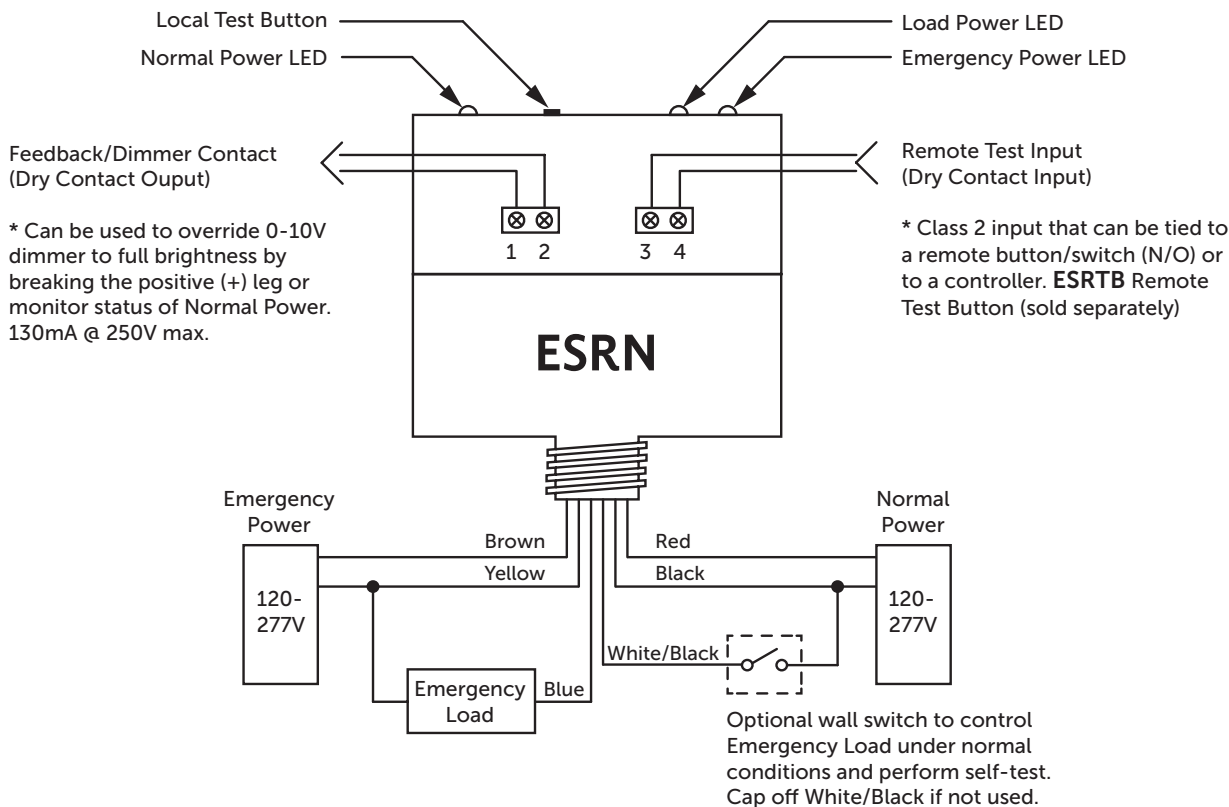
Operating Temperature: -30° to 140° F (-35° to 60° C)

Humidity Range: 5 to 95% (noncondensing) ; Rated for dry and damp locations only

Approvals: UL listed, UL924, C-UL, CE

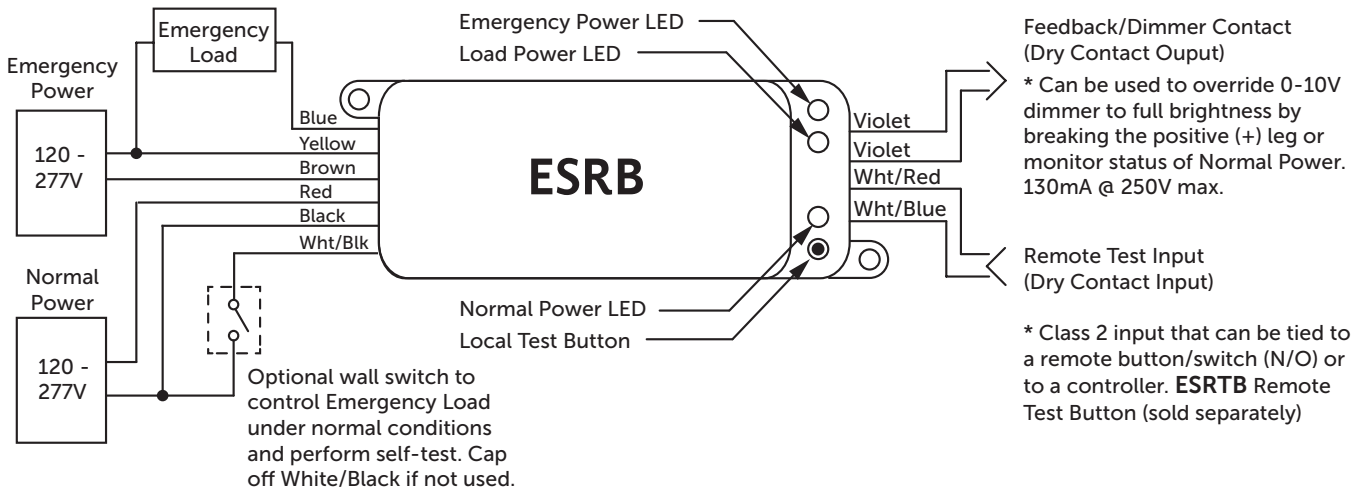
WIRING INFORMATION

Wire Color	Description	Notes
Black	Normal Hot	—
White/Black	Wall Switch Input (Self-Test Input)	WHITE/BLACK wires must be from same branch circuit as BLACK and RED. When switched off, a two second delay keeps the load on to test emergency power. Does not test feedback/dimmer output.
Red	Normal Neutral or other Phase	—
Brown	Emergency Hot	—
Blue	Emergency Hot Switched to Load	Switches out the voltage from BROWN
Yellow	Emergency Neutral or other Phase	—
White/Blue (ESRB) Terminal Screw 4 (ESRN)	Remote Test Input (Class 2, Dry Contact Input)	When wiring multiple units together, WHITE/BLUE or Terminal Screw 4 must be a shared common.
White/Red (ESRB) Terminal Screw 3 (ESRN)	Feedback/Dimmer Contact (Dry Contact Output)	Relay contacts are OPEN when normal power is absent or Remote Test Input is CLOSED. Relay contacts are CLOSED when normal power is present or Remote Test Input is OPEN.
Violets (ESRB) Terminal Screws 1, 2 (ESRN)	Wall Switch Input does not test this output.	



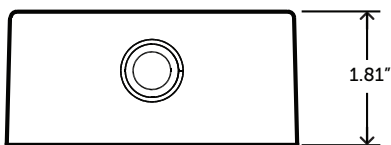
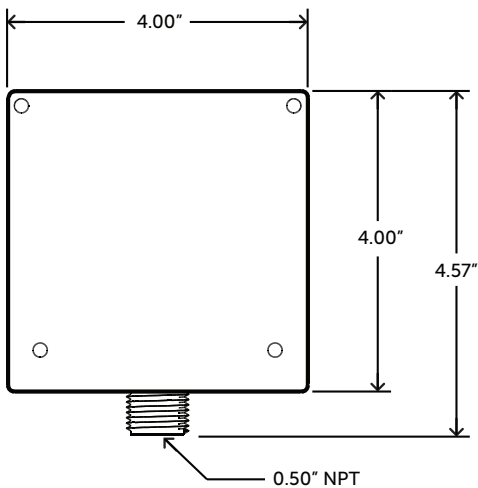
INPUT AND OUTPUT CHARACTERISTICS

WIRING DESCRIPTIONS

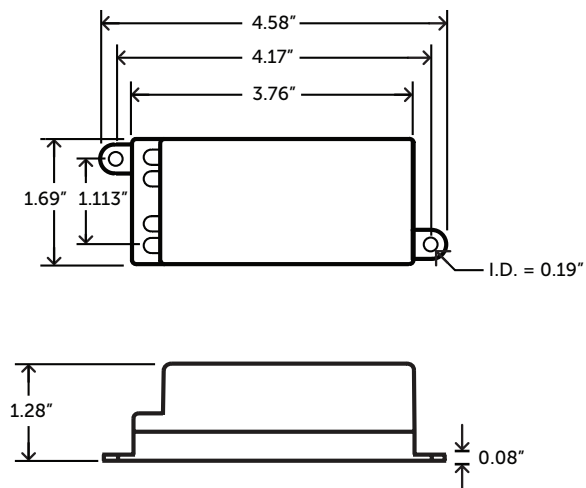


DIMENSIONS

ESRN

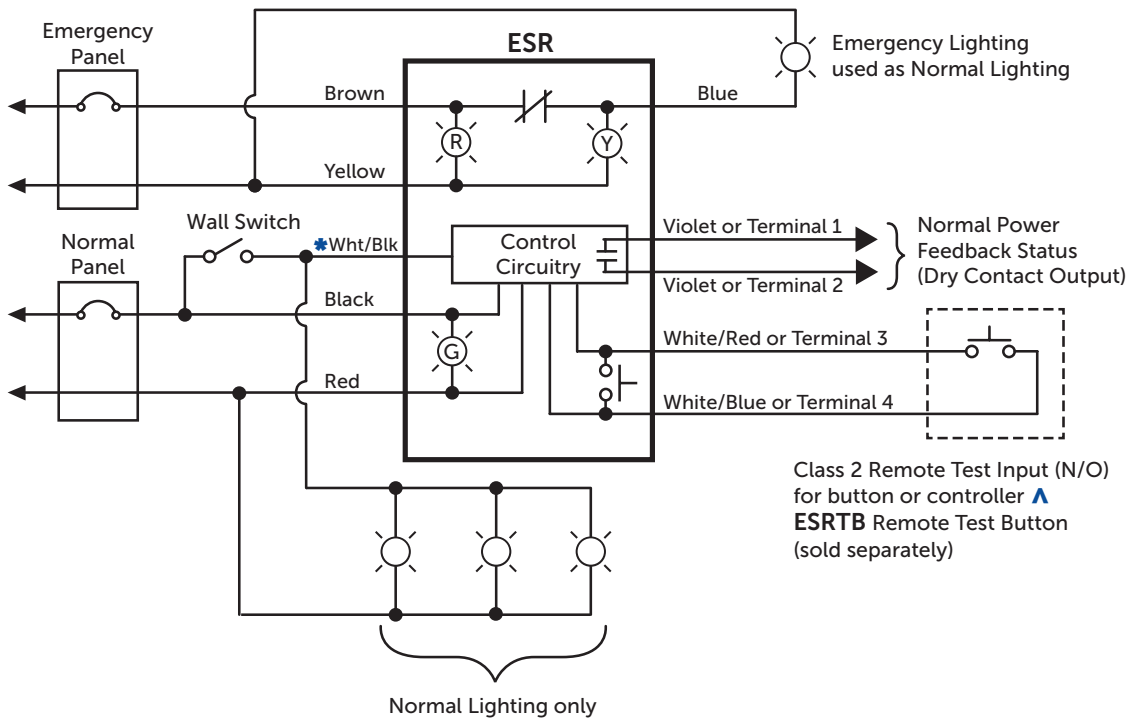


ESRB



TYPICAL APPLICATIONS

USING EMERGENCY LIGHTING AS NORMAL LIGHTING

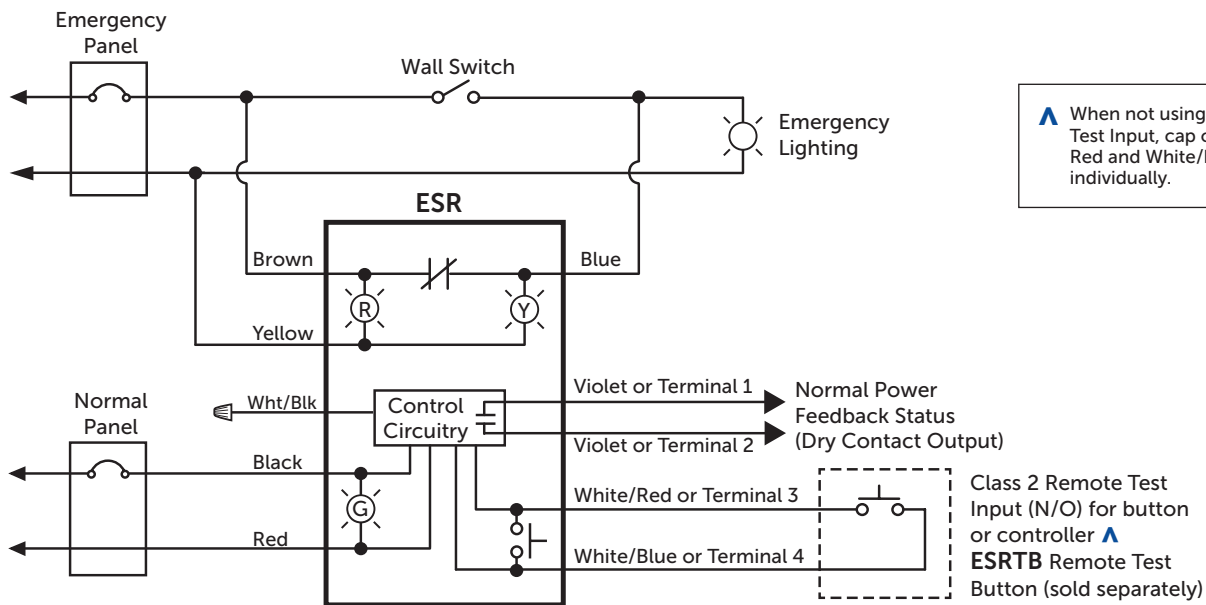


✳ The Wht/Blk wire must be on the same branch circuit as the Normal Power Input.

▲ When not using the Remote Test Input, cap off the White/Red and White/Blue wires individually.

To use Remote Test Input, the wall Input must be open/off. Input can also be sent to a controller.

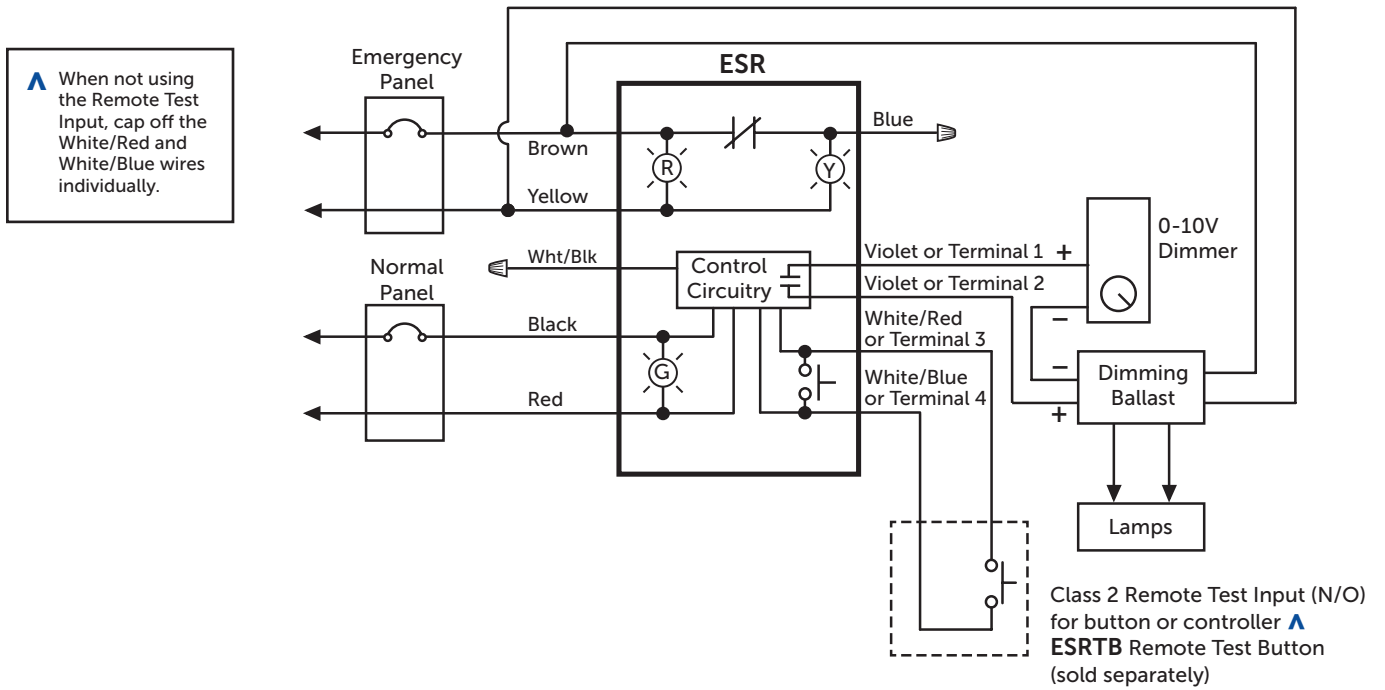
BASIC SWITCH BYPASS/SHUNT



▲ When not using the Remote Test Input, cap off the White/Red and White/Blue wires individually.

TYPICAL APPLICATIONS

OVERRIDING A 0-10VDC DIMMER



TYPICAL APPLICATIONS

TEST PROCEDURE: FOUR OPTIONS TO TEST THE ESRB AND ESRN AFTER INSTALLATION:

Initial Test for Correct Wiring

Apply Emergency Power to the Emergency Power Input and Normal Power to the Normal Power Input. (If using the Wall Switch Input, apply Normal Power to the switch also, but keep the switch OFF/OPEN.)

- a. The Red LED (Emergency Power available) should be ON.
- b. The Green LED (Normal Power available) should be ON.
- c. The Yellow LED (Load Status) should be OFF.
- d. The Load should be OFF.
- e. The Feedback/Dimmer Contact should be CLOSED.

Local Test Button

1. Turn switched circuit OFF. Emergency light should be OFF.
2. Press and hold "Local Test Button"
3. Emergency light should turn ON.
4. Release "Local Test Button" and emergency light should turn off.

Remote Test Button (Model ESRTB - sold separately)

1. Turn switched circuit OFF. Emergency light should be OFF.
2. Press and hold "Remote Test Button"
3. Emergency light should turn ON.
4. Release "Remote Test Button" and emergency light should turn off.

Wall Switch

1. Turn ON wall switch if not already on.
2. Emergency light should turn ON.
3. Turn wall switch OFF.
4. Emergency light will remain on for two seconds before turning off.

To test the ESRB and ESRN periodically, repeat the appropriate Test Procedure above in accordance with national and local codes.

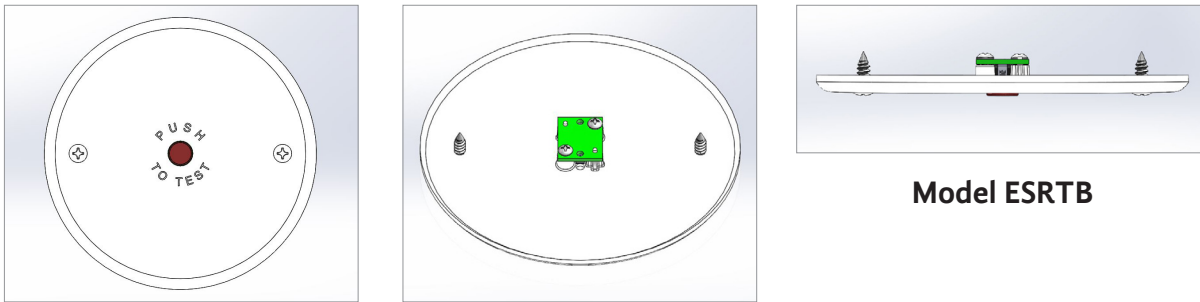
TROUBLESHOOTING

Condition	Action
Red LED is OFF	<ul style="list-style-type: none">• Check Emergency Power Input wiring (BROWN and YELLOW wires) and voltage.
Green LED is OFF	<ul style="list-style-type: none">• Check Normal Power Input wiring (BLACK and RED wires) and voltage.
Yellow LED is ON but Load is OFF	<ul style="list-style-type: none">• Check Load wiring (BLUE wire and Load's neutral).• Verify Load's operating voltage is the same as the Emergency Power Input Voltage.• Replace unit.• Check bulbs and ballast.
Load is ON but Yellow LED is OFF	<ul style="list-style-type: none">• Replace unit.
Yellow LED and Load do not turn on when being tested	<ul style="list-style-type: none">• Check bulbs and ballast.• Check wiring connections if using a remote test option.• Press local test button on the unit.• Replace unit.
Yellow LED and Load will not turn OFF	<ul style="list-style-type: none">• Verify status of Normal Power Input.• Open Wall Switch Input.• Verify that no test inputs are stuck closed. (i.e. Remote Test Input is not closed).

MOMENTARY TEST BUTTON

The ESRTB is a momentary pushbutton to be used to remotely test the ESRB and ESRN Emergency Bypass/Shunt Relays. It can either be installed directly to the ceiling or to a standard 4" x 4" round or octagonal Junction Box. The two wire terminations connect directly to the ESRB's and ESRN's Class 2, dry contact "Remote Test Input."

Note: The ESRTB is only to be used with the ESRB and ESRN Emergency Bypass/Shunt Relays.



Model ESRTB

WIRING SPECIFICATIONS

Acceptable Wiring: 18-24 AWG, Solid or Stranded with at least 1/4" stripped

Wiring Terminations: There are no screws to tighten or tabs to press in order to install the wiring. Wiring is done by inserting the wire through the hole on the circuit board.

Wiring Contact Degradation: After 5 cycles

FACEPLATE SPECIFICATIONS

Actuator: Red momentary pushbutton

Color: White

Overall Diameter: 4 3/8"

Operating Actuator Force: 160 gf (1.57N)

Expected Life: 200,000 cycles minimum

Approvals: UL94 flame rated plastic

MOUNTING SPECIFICATIONS

Direct-mount to Ceiling (fig. 1): Mount directly to surface by cutting appropriate sized wiring hole (1 1/2" square or round hole minimum; 2 1/2" square or round hole maximum.) Screw ESRTB to the surface using the provided screws or other screws of installer's choice.

Junction Box (fig. 2): 4" round or 4" x 4" octagonal with #8 cover plate screw holes. Screw holes must be 3 1/2" apart.

Included Hardware: Two (2) #8 self-drilling screws. Screws have white oval Phillips heads and 1/4" grip.

fig. 1

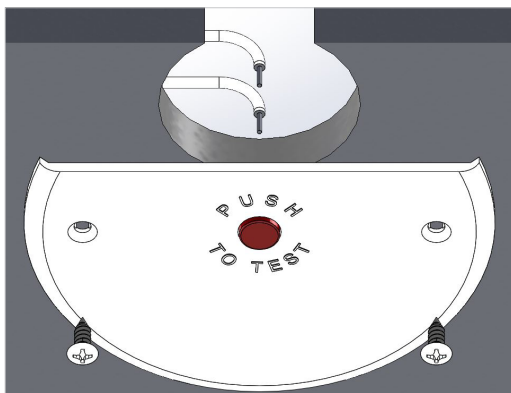
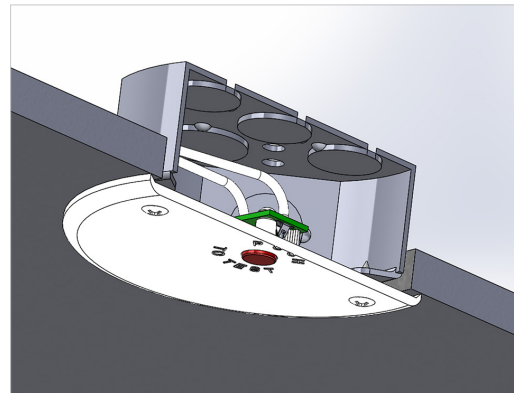


fig. 2





NOTES

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MH3500 Series	29	RIB2421B	6	TR100VA009	20
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MH4400 Series	30	RIB347P	10	TR150VA008	20
MH5500 Series	31	RIBAN24C	7	TR20VA004	20
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PSPW2RB4	23	RIBW240B-EN3	34		



NOTES



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