



**50**  
Functional Devices, Inc.  
1969 - 2019



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1969 - 2019

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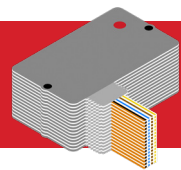


# GET BACK TO THE BASICS



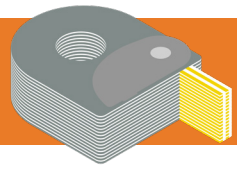


# RELAYS



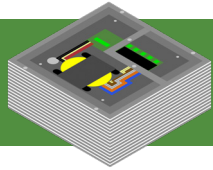
- Prepackaged: LED indicator, pre-wired, transient protection, and optional HOA switch
- 10-30 Amp contact ratings
- Coil voltages of 10-30 Vac/dc, 24 Vac/dc, 120 Vac, 208-277 Vac, 347 Vac or 480 Vac
- Dry contact input relays do not need a transformer and operate on a dry contact closure
- Low-input/optoisolated relays require less power from the controller
- Mechanically latching and polarized/alarm relays
- Red & NEMA 4 housings available

# CURRENT SENSORS



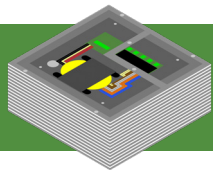
- Sense currents as low as 0.125 Amp or as high as 150 Amps
- Prepackaged: Sensor, LED indicators, and wires or terminals
- Fixed and adjustable models
- Relay/current sensor combinations available
- Current transducers with 0-5 V, 0-10 V, or 4-20 mA output
- Mini current switches as small as 1.5" x 2"
- Self-calibrating models available

# AC POWER SUPPLIES



- AC power supplies: 40 VA-500 VA
- Single and dual transformer models
- 500 VA, 300 VA, and 200 VA Class 2 power supplies (Five or three isolated, 24 Vac outputs)
- LED indicator with circuit breaker / switch on each transformer available on some models
- 120 Vac convenience outlets available, with or without primary 10 Amp circuit breaker
- UL508 models available
- High/Low voltage separation available
- Prepackaged enclosure, power supply, and sub-panel kits

# DC POWER SUPPLIES

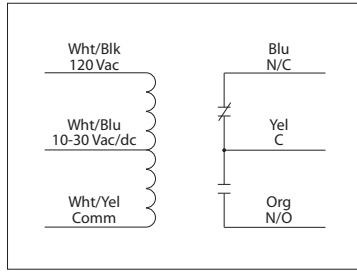


- 300 mA, 1 Amp, or 2.5 Amp output
- Adjustable output available
- Class 2 models available
- 120 Vac or 24 Vac input
- Isolated and non-isolated
- Enclosed or track mount

## 10 AMP PILOT CONTROL RELAYS

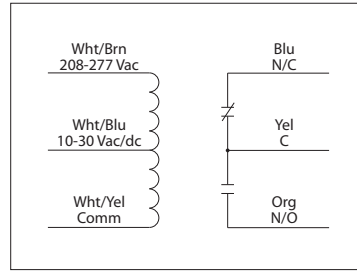
### RIBU1C

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



**RIBU1C-RD**  
**RIBH1C-RD**  
• Red housing

**RIBU1C-N4**  
**RIBH1C-N4**  
• NEMA 4X housing,  
UL508 only

## 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:** 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)

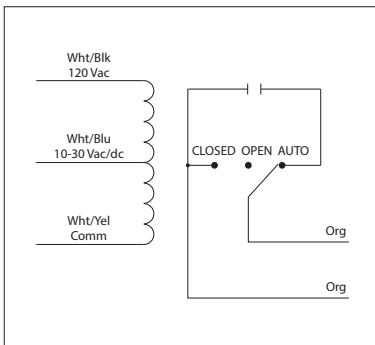
**Coil Current:**  
 33 mA @ 10 Vac      13 mA @ 10 Vdc  
 35 mA @ 12 Vac      15 mA @ 12 Vdc  
 46 mA @ 24 Vac      18 mA @ 24 Vdc  
 55 mA @ 30 Vac      20 mA @ 30 Vdc  
 28 mA @ 120 Vac (RIBU1C)  
 39 mA @ 208-277 Vac (RIBH1C)

**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

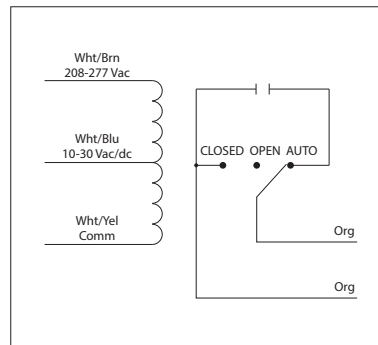
### RIBU1S

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



### RIBH1S

Enclosed Relay 10 Amp SPST-N/O + 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:** 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/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 (RIBU1S)  
 39 mA @ 208-277 Vac (RIBH1S)

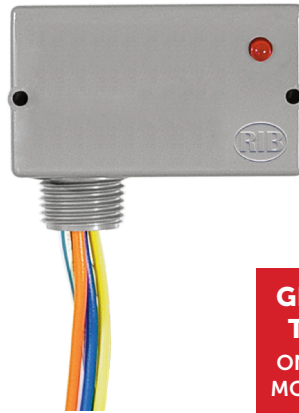
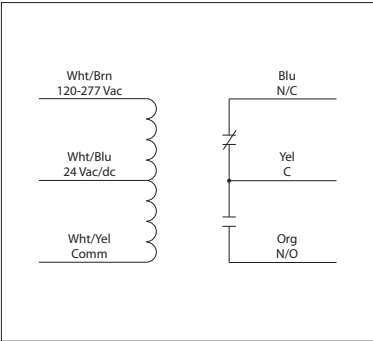
**Notes:**  
 • Order Normally Closed by adding "-NC" to end of model number

**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

## 10 AMP PILOT CONTROL RELAYS

### RIB2421C

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



RIB2421C-RD  
• Red housing

RIB2421C-N4  
• NEMA 4X housing,  
UL508 only



**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

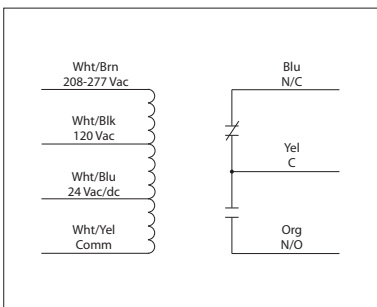
**Coil Current:**  
66 mA @ 24 Vac  
38 mA @ 24 Vdc  
40 mA @ 120-277 Vac

**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

## 20 AMP POWER CONTROL RELAYS

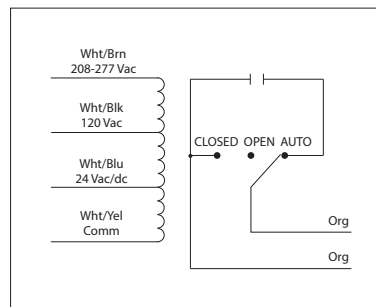
### RIB2421B

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



### RIB2421SB

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



RIB2421B



RIB2421SB

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

### 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)

**Contact Ratings (RIB2421B):**  
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:**  
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

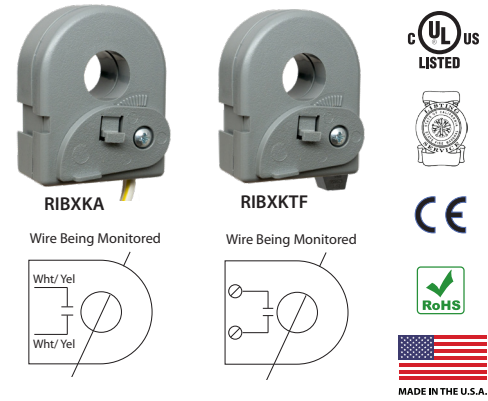
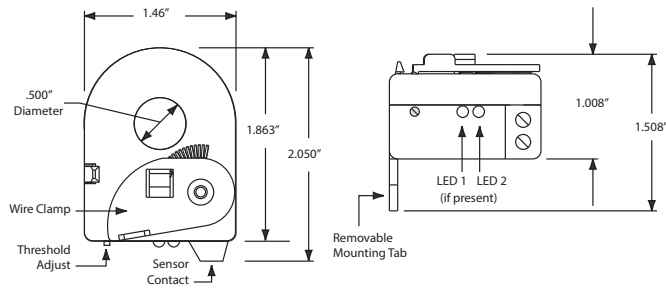
**Contact Ratings (RIB2421SB):**  
20 Amp Resistive @ 277 Vac  
20 Amp Ballast @ 277 Vac (N/O)  
10 Amp Ballast @ 277 Vac (N/C)  
*Not rated for Electronic Ballast*  
10 Amp Tungsten @ 120 Vac (N/O)  
770 VA Pilot Duty @ 120 Vac  
1,110 VA Pilot Duty @ 277 Vac  
2 HP @ 277 Vac  
1 HP @ 120 Vac

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

## AC CURRENT SWITCHES

### RIBXK Series

Enclosed Self-Powered Solid Core AC Sensors



### SPECIFICATIONS

### FUNCTIONAL DEVICES CERTIFIED FOR USE WITH ECMs

**Operating Temperature:** -30 to 140° F

**Humidity Range:** 5 to 95% (noncondensing)

**Max Sense Voltage:** 600 Vac

**Approvals:** UL Listed, UL916, UL864, C-UL, California State Fire Marshal, CE, RoHS

**Mounting/Installation:** Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.

**Sensor Contact Output:** Current below threshold: Open ; Current above threshold: Closed

**Sensor Contact:**

- Solid State Contact
- When sensor contact is off (open), leakage <30 uA @ 30Vac/dc
- When sensor contact is on (closed), voltage drop <.3 Vac/dc @ .1 Amp
- <1.6 Vac/dc @ .4 Amp

### RIBXK SERIES

Product Selection Guide. For full product information, see our website.

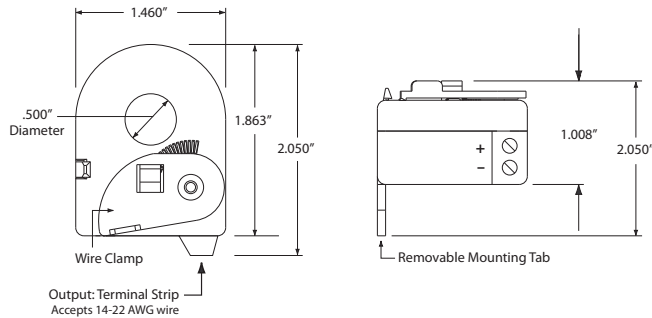
MODEL #	UL	SENSING RANGE	TYPE	THRESHOLD	SENSOR CONTACT TYPE	SWITCHING VOLTAGE RANGE	MAX. SWITCHING CURRENT	SENSOR CONTACT TERMINATION
RIBXKF	•	.25-150 A	Solid	Fixed, .25 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16" 18 AWG Wire Leads
RIBXKTF	•	.25-150 A	Solid	Fixed, .25 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire
RIBXKA	•	.50-150 A	Solid	Adjustable	Solid State Switch SPST	30 Vac/dc	.8 Amps Max	Wht/Yel 16" 18 AWG Wire Leads
RIBXKTA	•	.50-150 A	Solid	Adjustable	Solid State Switch SPST	30 Vac/dc	.8 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire

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

## AC TRANSDUCERS

### RIBXKTV Series

Enclosed Self-Powered Solid Core Current to DC Transducers



### SPECIFICATIONS

**Operating Temperature:** -30 to 140° F

**Humidity Range:** 5 to 95% (noncondensing)

**Accuracy:** 96.8% Full Scale

- Loading:**
- RIBXKTV5-10, 1% Error @ 180 kΩ
  - RIBXKTV5-20, 1% Error @ 90 kΩ
  - RIBXKTV5-50, 1% Error @ 40 kΩ
  - RIBXKTV5-100, 1% Error @ 15 kΩ

**Max Sense Voltage:** 600 Vac

**Approvals:** UL Listed, UL916, UL864, California State Fire Marshal, C-UL, CE, RoHS

**Mounting/Installation:** Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.

**Sensor Type:** Solid core with voltage output

### RIBXKTV SERIES

Product Selection Guide. For full product information, see our website.

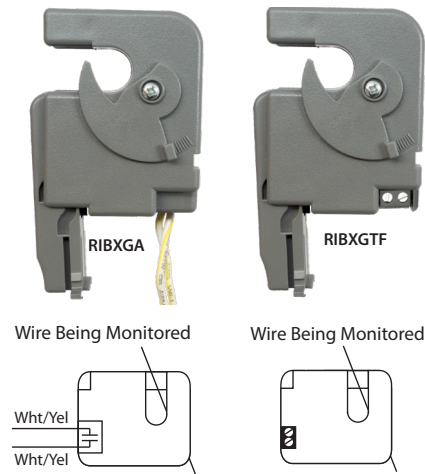
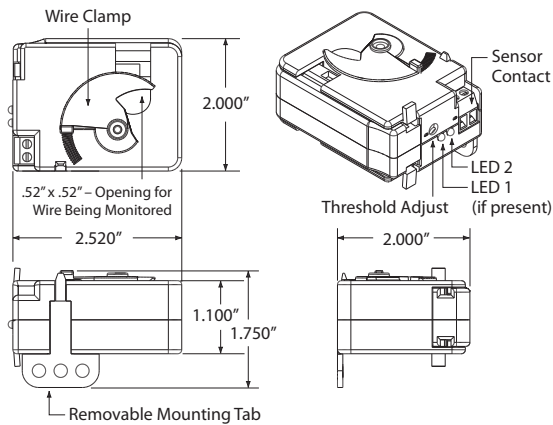
MODEL #	UL	SENSING RANGE	TYPE	THRESHOLD	SENSOR CONTACT TERMINATION	SENSOR OUTPUT
RIBXKTV5-10	•	0-10 A	Solid	Analog	Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc
RIBXKTV5-20	•	0-20 A	Solid	Analog	Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc
RIBXKTV5-50	•	0-50 A	Solid	Analog	Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc
RIBXKTV5-100	•	0-100 A	Solid	Analog	Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc

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

## AC CURRENT SWITCHES

### RIBXG Series

Enclosed Self-Powered Split Core AC Sensors



FEATURED PRODUCTS

### SPECIFICATIONS

### FUNCTIONAL DEVICES CERTIFIED FOR USE WITH ECMs

**Operating Temperature:** -30 to 140° F

**Humidity Range:** 5 to 95% (noncondensing)

**Max Sense Voltage:** 600 Vac

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

California State Fire Marshal, CE, RoHS

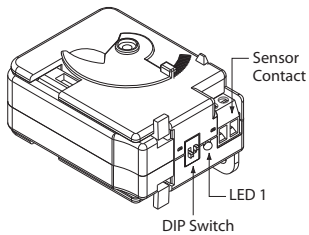
**Mounting/Installation:** Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.

**Sensor Contact Status:** Current below threshold: Open  
Current above threshold: Closed

#### Sensor Contact:

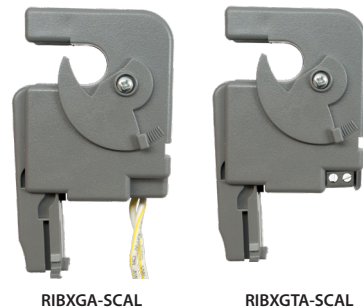
- Solid State Contact
- When sensor contact is off (open), leakage <30 uA @ 30Vac/dc
- When sensor contact is on (closed), voltage drop < .3 Vac/dc @ .1 Amp  
< 1.6 Vac/dc @ .4 Amp

### SELF-CALIBRATING AC SWITCHES (Models with -SCAL Suffix)



#### RIBXG-SCAL LED INDICATORS

LED Off	No Current
Two Winks	Current Below Range
Three Winks	Current In Range
Four Winks	Current Above Range
Continuous Winks	Calibration in Progress



The SCAL unit begins the 30 second self-calibration process the first time current is applied in the operating range. The threshold is then set. Subsequent calibrations may be performed by moving SW1 to the position opposite of its current position with or without current applied (hands can be safely away from live voltage). Once current begins flowing, or if it already is, the calibration process will begin. At the end of the 30 seconds, amperage will be read and set as the threshold. SW2 in the ON position provides a 15% (+/-3%) differential. In the OFF position, it provides a 25% (+/-3%) differential. SW2 can be selected at anytime and does not affect the threshold setting. Current in-range closes the sensor contact. Current above or below range opens the sensor contact.

Example: With a current of 10 amps set as the threshold and a 15% differential, sensor contact will be closed between 8.5 amps and 11.5 amps and open outside of this range. A small amount of hysteresis is provided to prevent dithering near the differential limits.

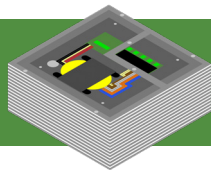
### RIBXG SERIES

Product Selection Guide. For full product information, see our website.

MODEL #	UL	SENSING RANGE	TYPE	THRESHOLD	SENSOR CONTACT TYPE	SWITCHING VOLTAGE RANGE	MAX. SWITCHING CURRENT	SENSOR CONTACT TERMINATION
RIBXGF	•	.35-150 A	Split	Fixed, .35 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Whit/Yel 16" 18 AWG Wire Leads
RIBXGFL	•	.75-150 A	Split	Fixed, .75 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Whit/Yel 16" 18 AWG Wire Leads
RIBXGTF	•	.35-150 A	Split	Fixed, .35 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire
RIBXGTFL	•	.75-150 A	Split	Fixed, .75 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire
RIBXGA	•	.75-150 A	Split	Adjustable	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Whit/Yel 16" 18 AWG Wire Leads
RIBXGTA	•	.75-150 A	Split	Adjustable	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire
RIBXGA-SCAL	•	3-150 A	Split	Self-Calibrating	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Whit/Yel 16" 18 AWG Wire Leads
RIBXGTA-SCAL	•	3-150 A	Split	Self-Calibrating	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire

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



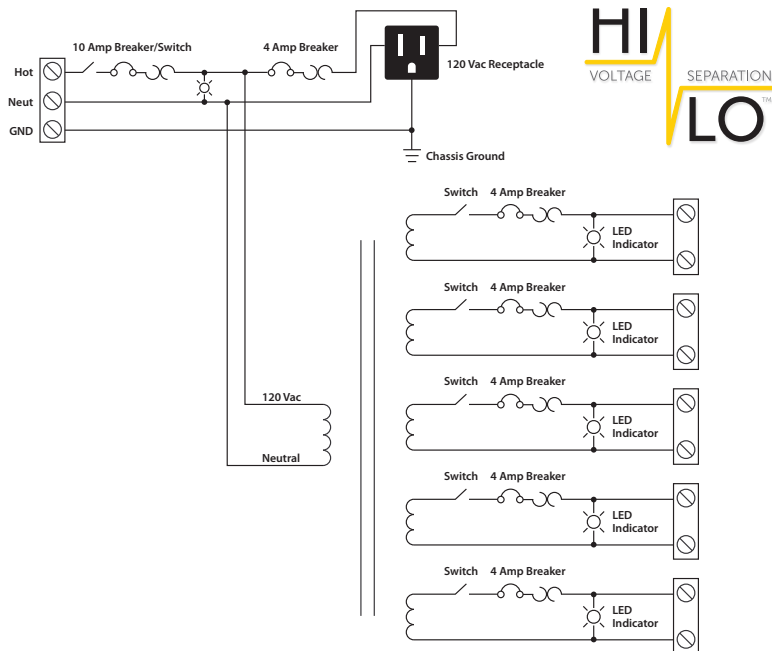


# POWER SUPPLIES

## AC POWER SUPPLY

### PSH500AB10-LVC

Enclosed 500VA Power Supply, High/Low Voltage Separation with Five 100VA Class 2 Outputs, 120 Vac to 24 Vac with 120 Vac Receptacle



PSH500AB10-LVC  
Shown With High Voltage Cover & Low Voltage Access Plate



## SPECIFICATIONS

**Transformer:** One (1) 500 VA  
**Over Current Protection:** Circuit Breaker  
**Primary:** 120 Vac  
**Frequency:** 50/60 Hz  
**Main Breaker ON/OFF:** Switch / Breaker (10 Amp)  
 (Kills power to entire unit:  
 1 Outlet & Transformer)  
**Approvals:** Class 2 (UL Approved UL5085-3),  
 UL916, C-UL, CE, RoHS  
**Dimensions:** 12.125" x 12.125" x 6.000"  
**Housing:** NEMA1 Metal Enclosure with  
 high/low separation

**5 Secondaries:**  
 24 Vac, with LED Indicators  
 4 Amp breaker for each output

**24 Vac ON/OFF:**  
 On / Off Switch & Breaker

**Input:**  
 120 Vac Finger-Safe Terminals, 8-18 AWG

**Output:**  
 5 Ungrounded, Isolated, 100 VA Class 2,  
 24 Vac Outputs. Removable Terminals  
 accept 16-22 AWG wire.

**Ambient Temperature Derating:**  
 4A up to 40° C ; 3A up to 50° C ; 2A up to 55° C  
 (When All 5 Outputs Operated Simultaneously)

**Standby Wattage:**  
 48.515 W @ 120 Vac

**Full Load Primary Current:**  
 4.66 A @ 120 Vac

**Secondary Output Voltage vs. Load:**  
 24.0 V @ 1 Amp  
 23.0 V @ 2 Amp  
 21.8 V @ 3 Amp  
 21.1 V @ 4 Amp

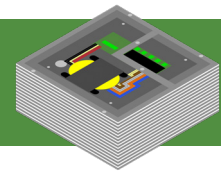
• When all 5 outputs operated  
 simultaneously, at room  
 temperature

**Notes:**

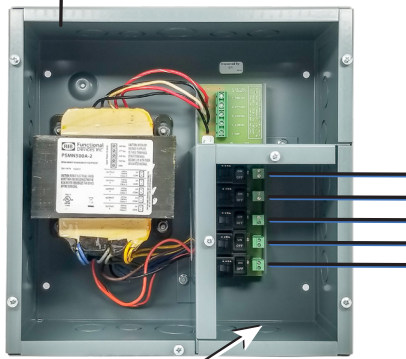
• 4A (Breaker protected) Convenience  
 Receptacle Provided



# POWER SUPPLIES



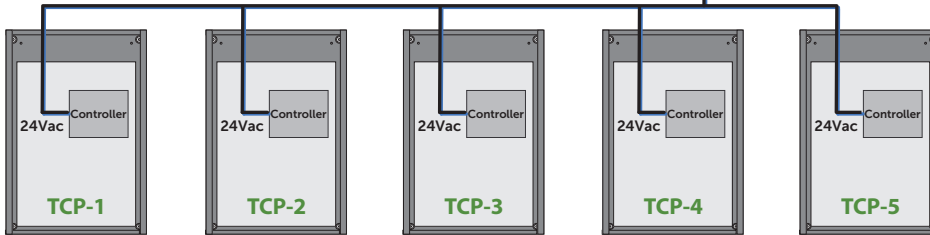
**Multi-tap Primary**  
480/277/240/120 Vac OR  
480/347/277/240/120 Vac



## LOW VOLTAGE COMPARTMENT POWER SUPPLY SERIES

Perfect for providing Class 2 low voltage to central power supply panels and peripheral devices

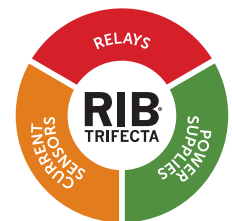
Low Voltage Compartment for safe access



Eliminate high voltage in your control panel and the need for personal protective equipment (PPE) by using our Low Voltage Compartment Power Supplies. This series of products has a separate wiring compartment (with removable cover) to safely access the removable terminal blocks.

### Product Features

- Three or five isolated 100 VA Class 2, 24 Vac outputs with 4 Amp Breaker and individual On/Off switches. Also available with five 40 VA outputs (See chart below)
- NEMA 1 metal enclosure has separate low voltage compartment with cover
- Multi-tap primaries: 480/277/240/120 Vac or 480/347/277/240/120 Vac
- Seismic Certification of Equipment and Components: OSP-0201-10
- UL916 & Class 2 (UL Approved UL5085-3)



### LOW VOLTAGE COMPARTMENT POWER SUPPLIES

Product Selection Guide. For full product information, see our website.

MODEL #	UL	TRANSFORMER(S)	INPUT POWER	HEIGHT	WIDTH	DEPTH	120 VAC OUTLET #	BREAKER PER OUTPUT	SECONDARY CONFIGURATION	HOUSING STYLE
PSH500A-LVC	•	500 VA (five 100 VA Outputs)	480/277/240/120 Vac	12.125"	12.125"	6.000"		5 x 4 Amp	Terminals	Enclosed with Low Voltage Compartment
PSH300A-LVC	•	300 VA (three 100 VA Outputs)	480/277/240/120 Vac	12.125"	12.125"	6.000"		3 x 4 Amp	Terminals	Enclosed with Low Voltage Compartment
PSH200A-LVC	•	200 VA (five 40 VA Outputs)	480/347/277/240/120 Vac	12.125"	12.125"	6.000"		5 x 2 Amp	Terminals	Enclosed with Low Voltage Compartment
PSH500AB10-LVC	•	500 VA (five 100 VA Outputs)	120 Vac	12.125"	12.125"	6.000"	•	5 x 4 Amp	Terminals	Enclosed with Low Voltage Compartment
PSH300AB10-LVC	•	300 VA (three 100 VA Outputs)	120 Vac	12.125"	12.125"	6.000"	•	3 x 4 Amp	Terminals	Enclosed with Low Voltage Compartment
PSH200AB10-LVC	•	200 VA (five 40 VA Outputs)	120 Vac	12.125"	12.125"	6.000"	•	5 x 2 Amp	Terminals	Enclosed with Low Voltage Compartment

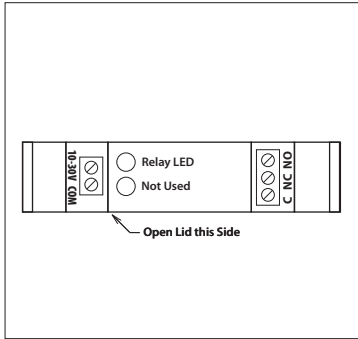
UL = Class 2 (UL Approved UL5085-3) : UL916 Energy Management USA & Canada

# = Convenience outlet has 4 Amp Breaker

## 10 AMP PILOT CONTROL RELAYS

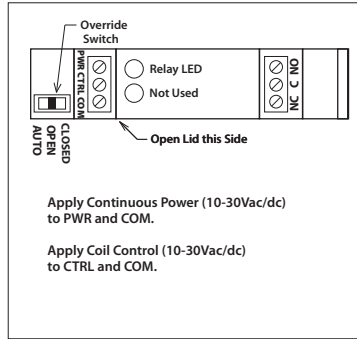
### RIBRL1C

DIN Mount Relay 10 Amp SPDT with 10-30 Vac/dc Coil



### RIBRL1S

DIN Mount Relay 10 Amp SPDT + Override 10-30 Vac/dc Coil



Apply Continuous Power (10-30Vac/dc) to PWR and COM.

Apply Coil Control (10-30Vac/dc) to CTRL and COM.



**ADIN35**  
DIN Rail Perforated  
35mm x 7.5mm x 1m



**ADIN35ES**  
Pair of End Stops  
for 35mm DIN Rail

Models ADIN35 and ADIN35ES sold separately. See data sheet on website for more product information.

### 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: 3.88" x 2.76" x 0.78"
- Terminal Strip: 14-22 AWG wire
- Approvals: UL Listed, UL916, C-UL, CE, RoHS
- Gold Flash: Yes
- Replacement Relay: ARL1C
- Accessories: ADIN35, ADIN35ES

- 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)

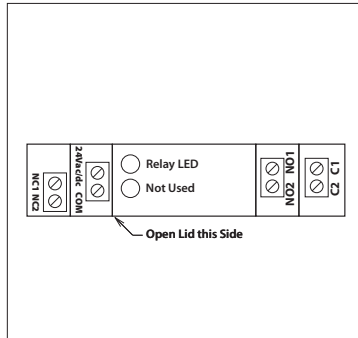
- Coil Current:**
- 33 mA @ 10 Vac      13 mA @ 10 Vdc
- 35 mA @ 12 Vac      15 mA @ 12 Vdc
- 46 mA @ 24 Vac      18 mA @ 24 Vdc
- 55 mA @ 30 Vac      20 mA @ 30 Vdc

- Power and Control Voltage:**
- 10-30 Vac/dc ; 50-60 Hz
- Drop Out = 2.1 Vac / 2.8 Vdc
- Pull In = 9 Vac / 10 Vdc

## 10 AMP PILOT CONTROL RELAYS

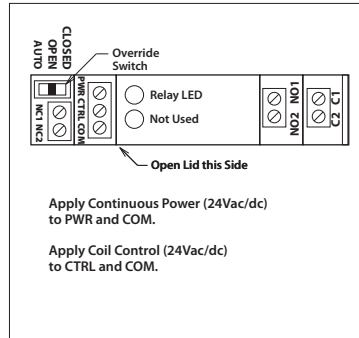
### RIBR24D

DIN Mount Relay 10 Amp DPDT with 24 Vac/dc Coil



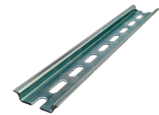
### RIBR24SD

DIN Mount Relay 10 Amp DPDT + Override 24 Vac/dc Coil



Apply Continuous Power (24Vac/dc) to PWR and COM.

Apply Coil Control (24Vac/dc) to CTRL and COM.



**ADIN35**  
DIN Rail Perforated  
35mm x 7.5mm x 1m



**ADIN35ES**  
Pair of End Stops  
for 35mm DIN Rail

Models ADIN35 and ADIN35ES sold separately. See data sheet on website for more product information.

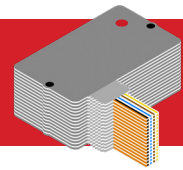
### Specifications

- # 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: 3.88" x 2.76" x 0.78"
- Terminal Strip: 14-22 AWG wire
- Approvals: UL Listed, UL916, C-UL, CE, RoHS
- Replacement Relay: AR24D
- Accessories: ADIN35, ADIN35ES

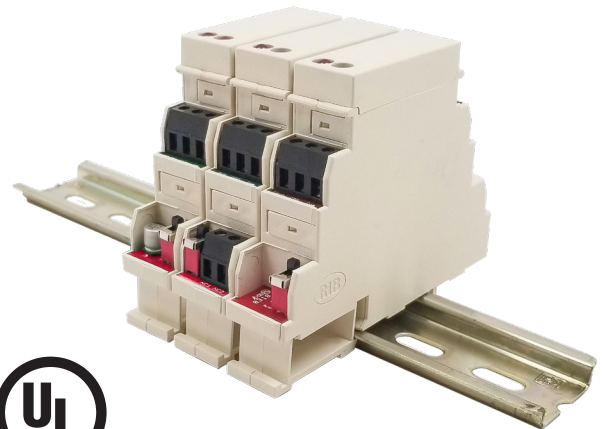
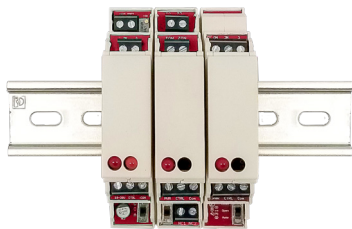
- Contact Ratings:**
- 10 Amp Resistive @ 30 Vdc
- 10 Amp General Use @ 277 Vac
- 1/2 HP @ 120-240 Vac (N/O)
- 1/3 HP @ 120-240 Vac (N/C)
- B300 Pilot Duty**
- 120Vac 30A Make 3A Break (360 VA)
- 240Vac 15A Make 1.5A Break (360 VA)
- 208Vac 17.3A Make 1.73A Break (360 VA)
- 277Vac 13A Make 1.3A Break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

- Power and Control Current:**
- 24 mA @ 18 Vac      20 mA @ 20 Vdc
- 32 mA @ 24 Vac      24 mA @ 24 Vdc
- 40 mA @ 30 Vac      36 mA @ 24 Vdc

- Coil Voltage Input:**
- 24 Vac/dc ; 50-60 Hz
- Drop Out = 3 Vac / 3.8 Vdc
- Pull In = 18 Vac / 20 Vdc



# DIN RAIL MOUNT RELAY IN A BOX<sup>®</sup>



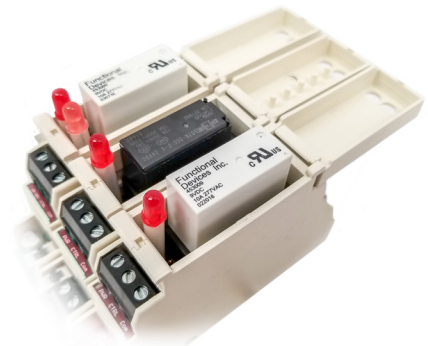
## Product Features

- Removable socket relay
- Prepackaged for easy installation
- 10 Amp contact rating
- 10-30 Vac/dc or 24 Vac/dc coil voltage
- Models available with override switch
- Current sensor models available
- UL916 Listed and Made in the USA



## Benefits

- Suitable for a wide variety of applications
- Multi-coil voltages eliminate need to stock multiple equivalent relays



## DIN RAIL MOUNT RELAYS

Product Selection Guide. For full product information, see our website.

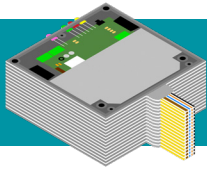
MODEL #	UL <sup>1</sup>	COIL VOLTAGE		RELAY CONTACTS	CONTACT RATINGS			OVERRIDE SWITCH	TRACK MOUNT <sup>^</sup>
		AC/DC			RESISTIVE	MOTOR	PILOT DUTY		
RIBRL1C	• <sup>1</sup>	10-30		1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240/277 Vac		DIN Rail
RIBRL1S	• <sup>1</sup>	10-30		1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240/277 Vac	1 #	DIN Rail
RIBR24D	• <sup>1</sup>	24		1 DPDT	10 A @ 277 Vac	1/2 HP @ 120-240 Vac (N/O)	B300		DIN Rail
RIBR24SD	• <sup>1</sup>	24		1 DPDT	10 A @ 277 Vac	1/2 HP @ 120-240 Vac (N/O)	B300	1 #	DIN Rail

DIN Rail (ADIN35) and pair of end stops (ADIN35ES) sold separately.

<sup>1</sup> = UL Listed : UL916 Energy Management ; USA & Canada

# = Coil side relay override (requires unit to be powered)

^ = Track mount sold separately

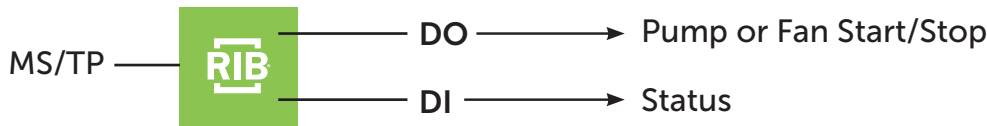


# NETWORK COMPATIBLE DEVICES

## ASHRAE BACnet™ DEVICES APPLICATIONS

See the diagrams below for examples of common uses.

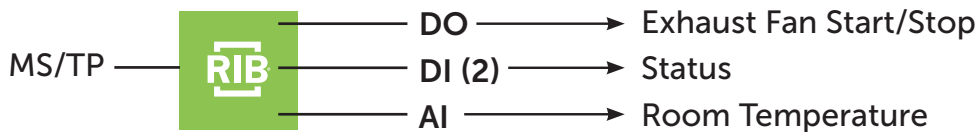
### RIBTW2401B-BC, RIBTW2402B-BC



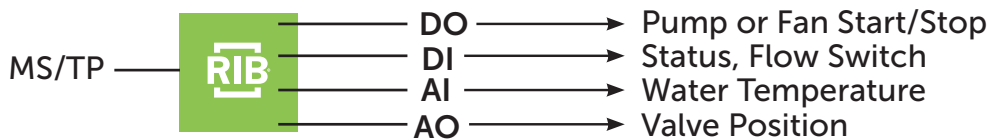
### RIBMNWX2401B-BC, RIBTWX2401B-BC, RIBMNWX2402B-BC, RIBTWX2402B-BC



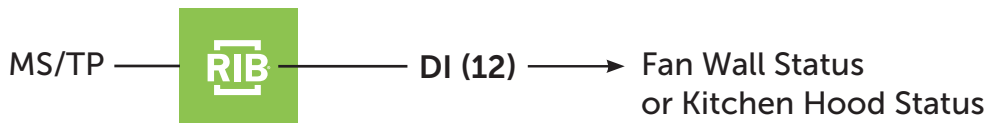
### RIBMNW24B-BCAI, RIBTW24B-BCAI



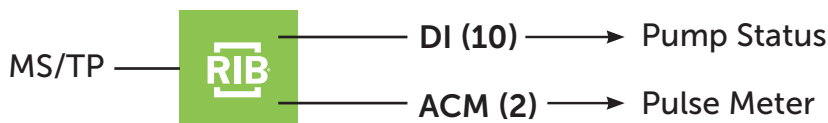
### RIBTW24B-BCAO



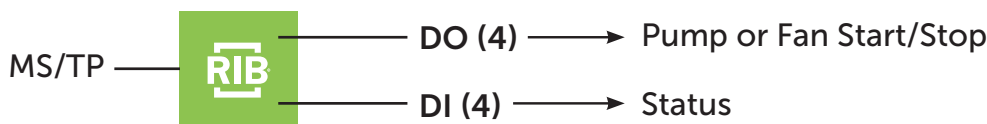
### RIBMNWD12-BCDI



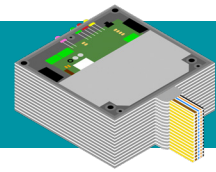
### RIBMNWD12-BC



### RIBMW24B-44-BC



# NETWORK COMPATIBLE DEVICES



FEATURED PRODUCTS

## PREPACKAGED ASHRAE BACnet™ DEVICES MAKE THE JOB EASY.

Use when a few more control points are needed and a multi-output controller is too much for the job.



RIBTWX2402B-BC



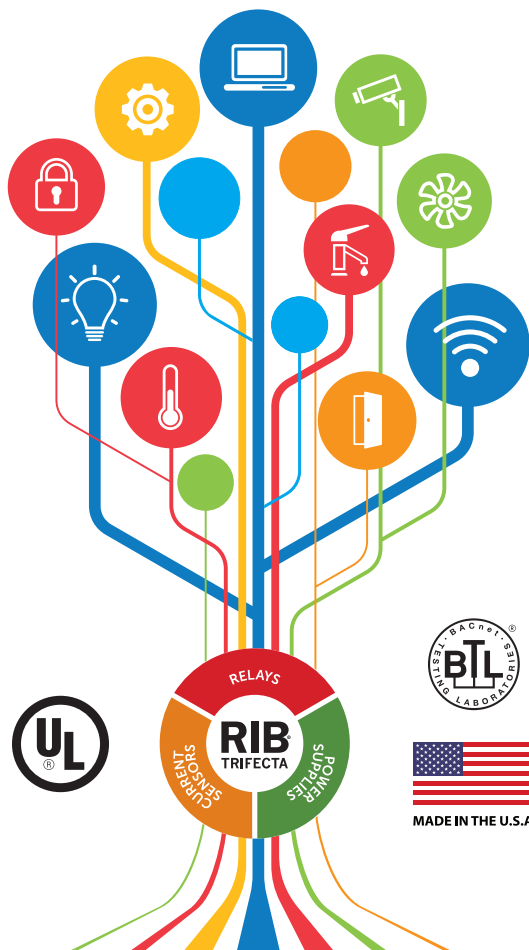
RIBTW2401B-BC



RIBMNW24B-BCAI



PSH600-UPS-BC



### Features

- MS/TP network
- One binary output (20 Amp)
- One binary input (dry contact)
- Field addressable
- DIP switch selectable baud rate
- Power inputs: 24 Vac/dc or 120 / 208-277 Vac
- Enclosed or track mount models
- UL Listed
- BTL Certified
- Made in the USA

### Several Devices with Varying Options

- Relays
- Relay & current sensor combinations
- Expansion module
- Analog input
- Analog output
- Thermistor input
- Accumulator input
- 600 VA UPS power supply kit
- Fan safety alarm circuit / general purpose logic board

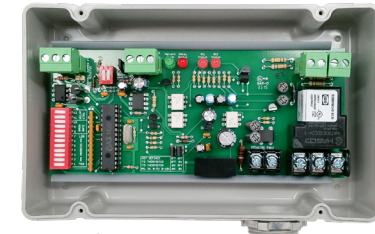
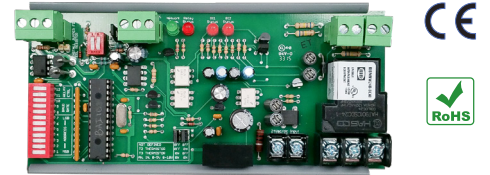
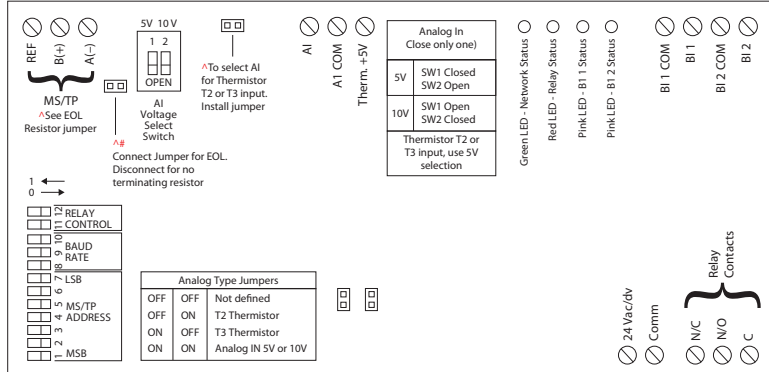


**RIBMNW24B-BCAI**

2.75" Track Mount BACnet® MS/TP Network Relay Device with Binary Output Set Point Function; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (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 with Binary Output Set Point Function; 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.



Code Version 1.5

**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
- Network Communication:** Green LED
- Relay Status:** Red LED On = Activated
- BI1 Status:** Pink LED On = Activated
- BI2 Status:** Pink LED On = Activated
- Dimensions:** 6.25" x 2.75" x 1.75" (RIBMNW24B-BCAI)  
4.28" x 7.00" x 2.00" with .75" NPT Nipple (RIBTW24B-BCAI)
- Track Mount:** MT212-6 Mounting Track Provided
- Approvals:** UL Listed, UL916, C-UL, CE, RoHS
- Housing Rating:** UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X
- Gold Flash:** No
- Relay Override Switch:** DIP Switch Control (See Bulletin B1243)
- Network Media:** Twisted Pair 22-24AWG, shielded recommended
- Terminations:** 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.
- Polarity:** Network is polarity sensitive
- Baud Rate:** 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable - See Bulletin B1243)

- 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
- Notes:**
  - PIC Statement available on website. [http://www.functionaldevices.com/downloads/pics/BACnet-BCAL\\_PICS.pdf](http://www.functionaldevices.com/downloads/pics/BACnet-BCAL_PICS.pdf)

- Notes:**
  - 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). For Set Point Functiona settings, See Bulletin B1243
  - **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 Bulletin B1243 for diagram)

- 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:
 

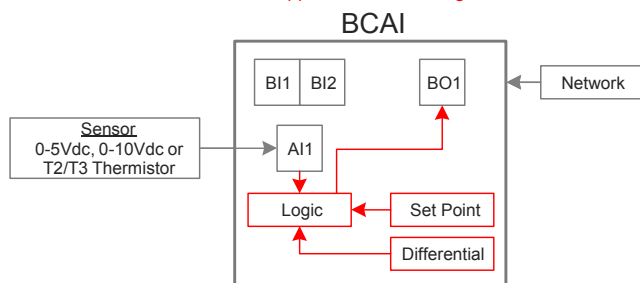
MS/TP Address - 004
Device ID - 277004

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), AI 1 (Analog input), AV1 (Set Point), AV2 (Differential), BV1 (Function Enable), BV2 (Function Mode), BV3 (Function Status)
  - 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

**Set Point Function**

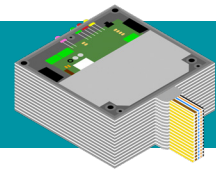
for App. Version 1.5 or higher



Set Point Function must be enabled via the Network for logic to execute. Once configured, the function will continue to operate even if communication is lost (see Bulletin B1243 for setup).



# NETWORK COMPATIBLE DEVICES



FEATURED PRODUCTS

## LOCAL LOGIC BACnet™ NETWORK DEVICE WITH SET POINT FUNCTION FOR BINARY OUTPUT



RIBTW24B-BCAI  
shown without cover



RIBMNW24B-BCAI

### Features

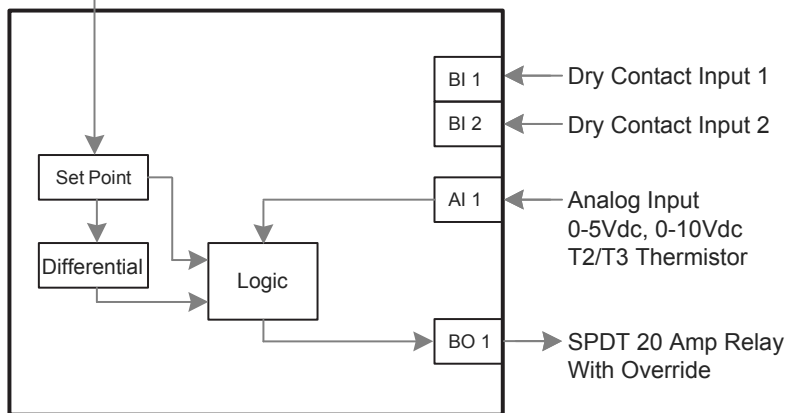
- BACnet® MS/TP network
- One binary output: 20 Amp SPDT + override
- Two binary inputs: Dry contact
- One analog input: Thermistor T2 or T3, 0-5Vdc, 0-10Vdc
- 24 Vac/dc power
- NEMA 1 enclosure, available in NEMA 4 enclosure
- UL Listed
- Made in the USA



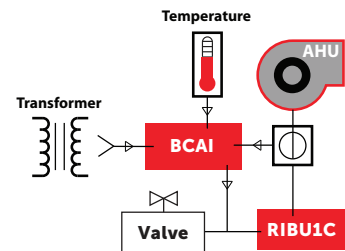
### Designed for Remote/Local Applications

Cabinet unit heater, cooler/freezer, exhaust fan, fluid level - sump pump, building pressure, etc.

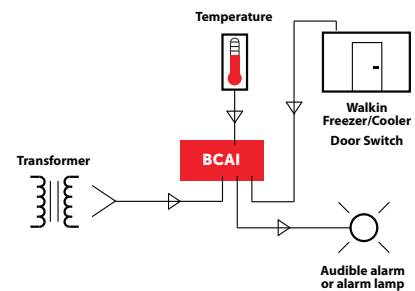
BACnet® MS/TP



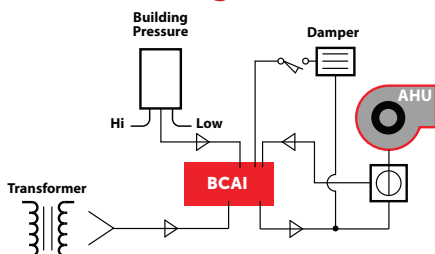
### Cabinet Unit Heater



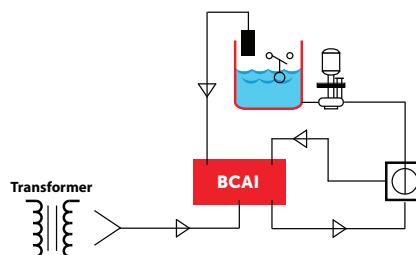
### Cooler/Freezer



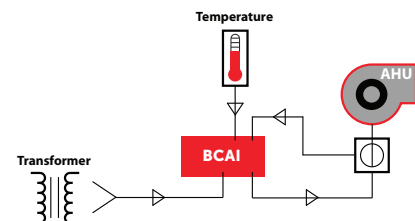
### Building Pressure



### Fluid Level - Sump Pump



### Exhaust Fan

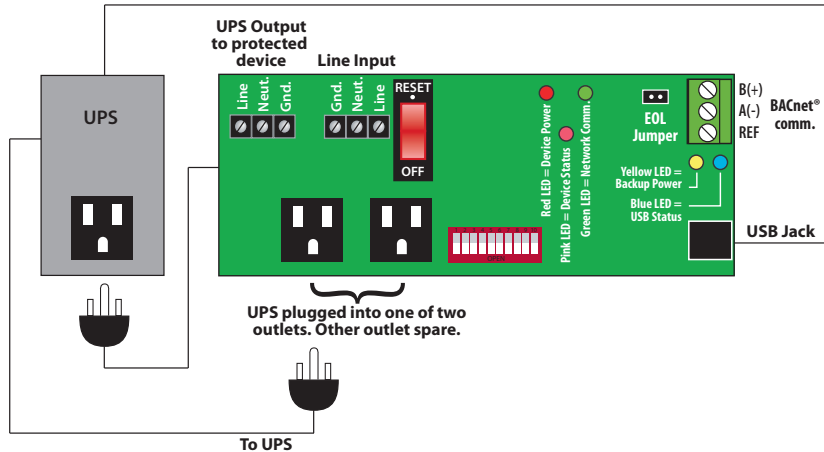


# UNINTERRUPTIBLE POWER SUPPLY KIT - BACnet® COMPATIBLE

FEATURED PRODUCTS

## PSH600-UPS-BC

Enclosed BACnet® Network 600 VA UPS Backup Power Control Center



### SPECIFICATIONS

#### BOARD AND ENCLOSURE:

- Operating Temperature:** -30 to 140° F
- Humidity Range:** 5 to 95% (noncondensing)
- Indicators:** Device Power: Red LED  
Device Status: Pink LED  
Network Communication: Green LED  
Backup Power: Yellow LED  
USB Status: Blue LED
- Main Breaker ON/OFF:** Switch / Breaker (10 Amp)
- Dimensions:** 12" x 16" x 6"
- Track Mount:** 2.750" x 8.000"  
MT212-8N Mounting Track Included
- Approvals:** UL Listed, UL916, C-UL, CE, RoHS
- Line Input:** 120Vac, 10A(max)
- Convenience Receptacles:** 120Vac, 10A(max combined)

Information provided over BACnet® network can be used to schedule "predictive maintenance" such as UPS battery replacement, etc.

- Power Input Rating:** 25mA @ 120Vac
- Network Media:** Twisted Pair 22-24 AWG, shielded recommended (MS/TP)  
USB A/B (device to UPS, included)
- Terminations:** Functional Devices product installed at both ends of the MS/TP network - Use 120 Ohm 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, 192000, 38400, 76800, 115200 ( 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
1	0	0	76800
1	0	1	115200

\* 0 = Open ; 1 = Closed  
All other combinations = 9600 baud

- Notes:**
- Circuit breaker for short-circuit protection.
  - 14/3 Line Cord included (3').

- 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

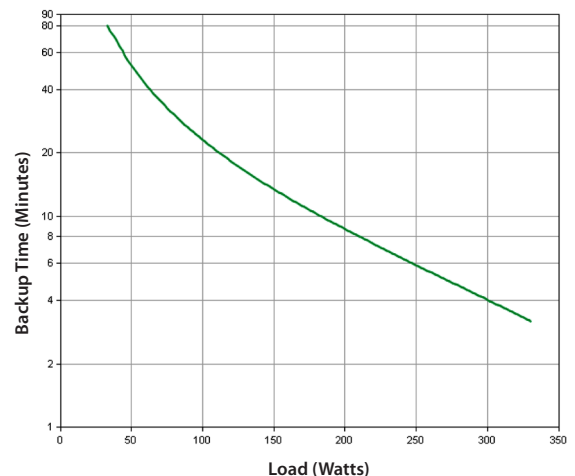
- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- Devices Instance changed via Object Identifier Property of Device Object.
- Status of UPS connection, Battery run time, line power ,UPS load (VA and %), and battery capacity can be read from BACnet network.

#### UPS:

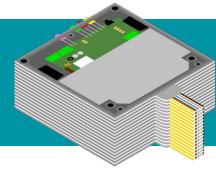
- UPS:** 600VA
- Backup Time:** 2.5 Min. @ Full 600 VA Load  
10.2 Min. @ 1/2 Load
- Input:** 120 Vac, 12 Amp
- Output:** 120 Vac, 4.6 Amp
- Max Load:** 330 Watt
- Frequency:** 50/60 Hz
- Temperature Rating of UPS:** 32 to 104° F
- UPS Transfer Time:** 6ms
- Approvals:** UL Listed, UL1778

- Notes:**
- Average battery life: 3-5 years depending on the number of discharge cycles and environmental temperature
  - This model is not designed to notify user of battery failure.
  - This model is designed to work exclusively with Functional Devices Model UPS600
  - UPS may change based on quality and availability.

#### ESTIMATED BACKUP TIME VS. LOAD



# NETWORK COMPATIBLE DEVICES



FEATURED PRODUCTS

## ASHRAE BACnet™ COMPATIBLE 600VA UPS POWER SUPPLY

Provides power to your critical controller in hospitals, laboratories, and research centers in the event of a power outage.

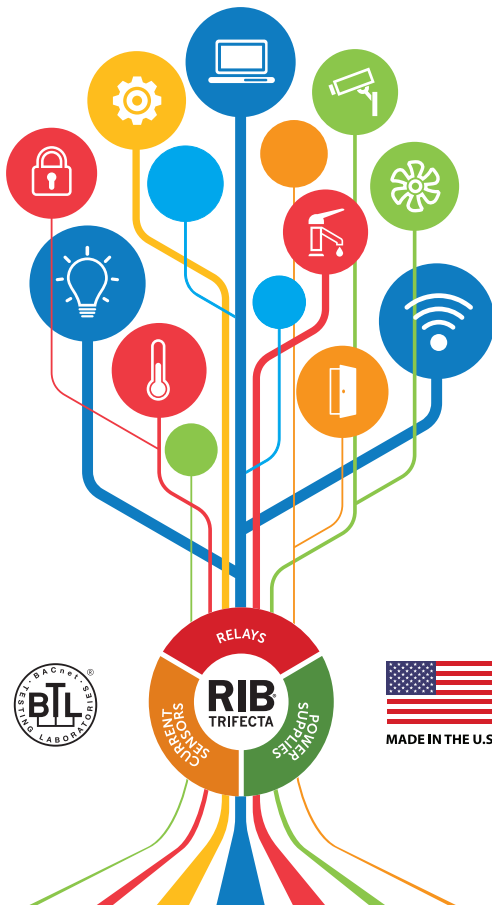
600VA Commercial UPS

NEMA 1 Enclosure

BACnet® Compatible Interface Board



PSH600-UPS-BC



### Features

- Hardwire line voltage to UPS
- Hardwire UPS to final load
- Clean & neat use of a UPS, keeping equipment and cords tucked inside the enclosure
- Extra 120 Vac outlet & 10 Amp circuit breaker on/off switch for testing functionality of UPS

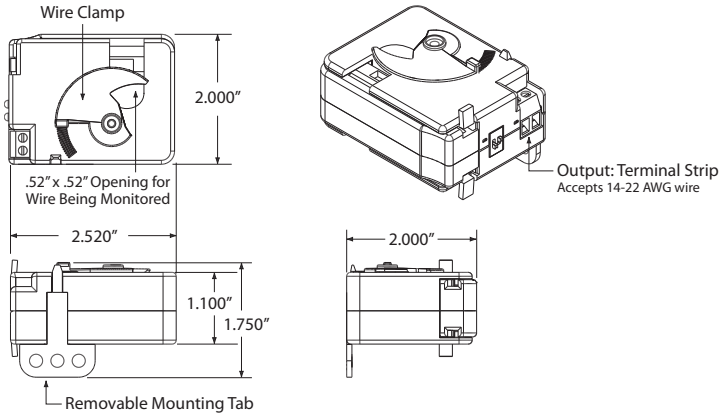
### ASHRAE BACnet™ Objects

- Line or UPS power, UPS percent load, UPS battery capacity, VA load, USB connection, and remaining battery time

AC TRANSDUCER

RIBXGTV5

Enclosed Self-Powered Split Core Multi-Range (0-20A, 50A, or 100A) AC Transducer with 0-5Vdc Terminal Output



SPECIFICATIONS

**Operating Temperature:** -30 to 140° F  
**Humidity Range:** 5 to 95% (noncondensing)  
**Accuracy:** 98.3% Full Scale  
**Loading:** RIBXGTV5, (0-20 Amp), 5% Error @ 58 kΩ  
 RIBXGTV5, (0-50 Amp), 5% Error @ 31.3 kΩ  
 RIBXGTV5, (0-100 Amp), 5% Error @ 12.3 kΩ

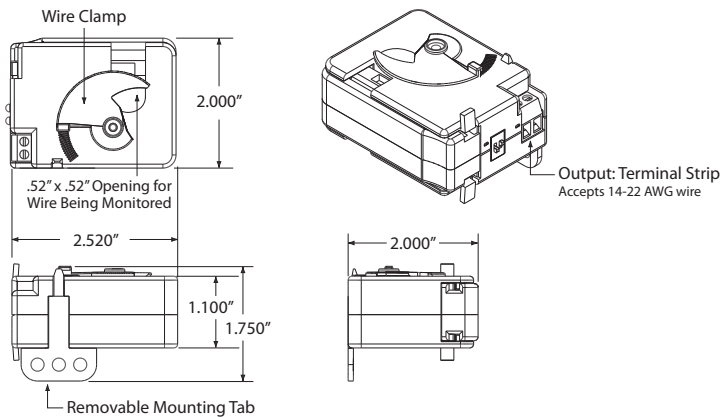
**Max Sense Voltage:** 600 Vac  
**Approvals:** UL Listed, UL916, UL864, California State Fire Marshal, C-UL, CE, RoHS  
**Mounting/Installation:** Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.  
**Sensor Type:** Split core with voltage output

DIP SWITCH		
1	2	Sensing Range
OFF	OFF	0-20 Amp
OFF	ON	0-50 Amp
ON	OFF	0-100 Amp

AC TRANSDUCER

RIBXGTV10

Enclosed Self-Powered Split Core Multi-Range (0-20A, 50A, or 100A) AC Transducer with 0-10Vdc Terminal Output



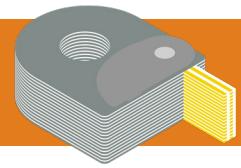
SPECIFICATIONS

**Operating Temperature:** -30 to 140° F  
**Humidity Range:** 5 to 95% (noncondensing)  
**Accuracy:** 98.8% Full Scale  
**Loading:** RIBXGTV10, (0-20 Amp), 5% Error @ 60.4 kΩ  
 RIBXGTV10, (0-50 Amp), 5% Error @ 25.24 kΩ  
 RIBXGTV10, (0-100 Amp), 5% Error @ 13.65 kΩ

**Max Sense Voltage:** 600 Vac  
**Approvals:** UL Listed, UL916, UL864, California State Fire Marshal, C-UL, CE, RoHS  
**Mounting/Installation:** Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.  
**Sensor Type:** Split core with voltage output

DIP SWITCH		
1	2	Sensing Range
OFF	OFF	0-20 Amp
OFF	ON	0-50 Amp
ON	OFF	0-100 Amp

# CURRENT TRANSDUCERS



FEATURED PRODUCTS

## USE OUR MULTI-RANGE SPLIT CORE CURRENT TRANSDUCERS TO CALCULATE ENERGY USAGE USING AMPERAGE FEEDBACK.

**0-5 Vdc or 0-10 Vdc terminal output  
DIP switch selectable sensing ranges**



### Small Size

- 2.00" x 2.52" x 1.10"
- Easily fits inside an enclosure with room to spare
- Includes foot mounting insert

### Unique Core Opening

- Slide opening (vs. hinged opening)
- One inch of extra space allows for core to fully extend
- Monitor wires up to a half-inch in diameter

### Ratcheting Wire Clamp

- Ratcheting clamp tightens around wire
- Clamp sensors on wires where foot mounting is not ideal



Slide opening helps with installation in small spaces

Ratcheting clamp tightens around wire

Foot mounting insert included

## CURRENT TRANSDUCERS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	SENSING RANGE	TYPE	THRESHOLD	SENSOR CONTACT TERMINATION	SENSOR OUTPUT
RIBXGTV5	•	0-20 A, 0-50 A, 0-100 A	Split	Analog	Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc
RIBXGTV10	•	0-20 A, 0-50 A, 0-100 A	Split	Analog	Terminal Strip, Accepts #14-22 AWG Wire	0-10 Vdc

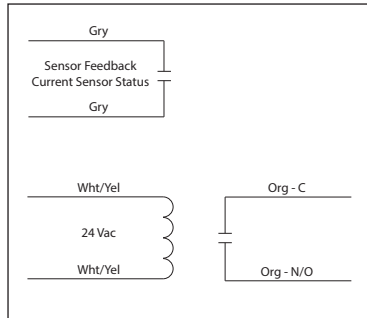
UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada



## RELAY & AC CURRENT SWITCH COMBOS

### RIBHX24BF

Enclosed 20 Amp SPST-N/O Relay/AC Fixed Current Sensor Combination, with 24 Vac Coil



### SPECIFICATIONS

### FUNCTIONAL DEVICES CERTIFIED FOR USE WITH ECMs

- 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:** Red LED On = Activated
- Current Sensor Status:** Pink LED On = Current Over Trip Point (0.25 Amp)
- Dimensions:** 1.70" x 2.80" x 1.50" with .50" NPT nipple
- Wire Length:** 16", 600V Rated
- Approvals:** UL Listed, UL916, C-UL, CE, RoHS
- Housing Rating:** UL Accepted for Use in Plenum, NEMA 1
- Gold Flash:** No
- Sensor Type:** Internal, with contact status
- Sensor Threshold:** Fixed, .25 Amp
- Sensor Range:** .25-20 Amps
- Sensor Feedback Output:** Solid State Contact 30 Vac/dc, 100 mA

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

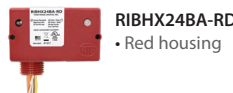
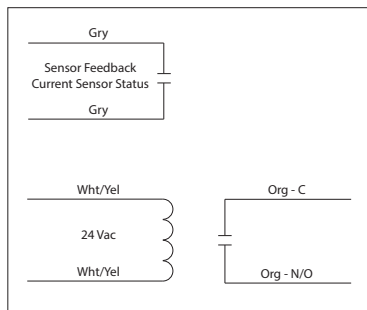
- Coil Current:**
- 128 mA @ 24 Vac
- 71 mA @ 30 Vdc
- Coil Voltage Input:**
- 24 Vac; 50-60 Hz
- Drop Out = 3 Vac
- Pull In = 18 Vac

- Sensor Contact:**
- When current sensor status is off (open), leakage <30 uA @ 30Vac/dc
- When current sensor status is on (closed), voltage drop < .3 Vac/dc @ .1 Amp
- < 1.6 Vac/dc @ .4 Amp

## RELAY & AC CURRENT SWITCH COMBOS

### RIBHX24BA

Enclosed 20 Amp SPST-N/O Relay/AC Adjustable Current Sensor combination, with 24 Vac/dc coil



### SPECIFICATIONS

### FUNCTIONAL DEVICES CERTIFIED FOR USE WITH ECMs

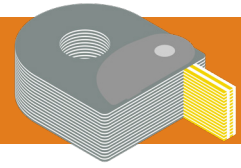
- Expected Relay Life:** 10 million cycles minimum mechanical
- Operating Temperature:** -30 to 140° F
- Humidity Range:** 5 to 95% (noncondensing)
- Operate Time:** 20ms
- Relay Status:** Red or Green LED On = Activated
- Current Sensor Status:** Green LED On = Current Over Trip Point Adjustable
- Dimensions:** 1.70" x 2.80" x 1.50" with .50" NPT nipple
- Wire Length:** 16", 600V Rated
- Approvals:** UL Listed, UL916, C-UL, CE, RoHS
- Housing Rating:** UL Accepted for Use in Plenum, NEMA 1
- Gold Flash:** No
- Sensor Type:** Internal, with contact status
- Sensor Threshold:** Adjustable, .25 Amp
- Sensor Range:** .25-20 Amps
- Sensor Feedback Output:** Solid State Contact 30 Vac/dc, 100 mA
- Hysteresis:** Solid

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

- Coil Current:**
- 128 mA @ 24 Vac
- 71 mA @ 30 Vdc
- Coil Voltage Input:**
- 24 Vac; 50-60 Hz
- Drop Out = 3 Vac
- Pull In = 18 Vac

- Sensor Contact:**
- When current sensor status is off (open), leakage <30 uA @ 30Vac/dc
- When current sensor status is on (closed), voltage drop < .3 Vac/dc @ .1 Amp
- < 1.6 Vac/dc @ .4 Amp





# RELAY & CURRENT SENSOR COMBINATIONS

## MOUNT OUTSIDE YOUR ENCLOSURES



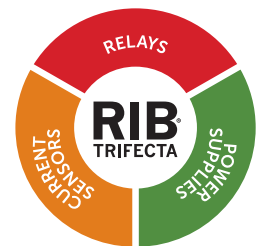
**ADJUSTABLE THRESHOLD**



**FIXED THRESHOLD**



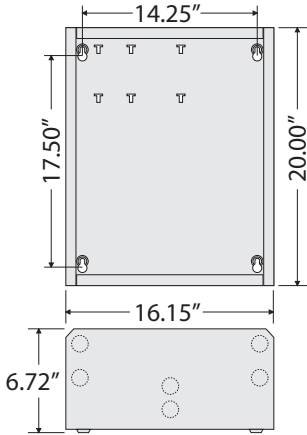
- Prepackaged with a 20 Amp relay and internal current sensor
- NEMA 1 enclosure approved for plenum spaces
- Nipple mount allows for installation outside of your enclosures
- Adjustable or fixed threshold
- LEDs indicate coil activation & when current is over trip point
- UL Listed
- Made in the USA



**AC POWER SUPPLY KITS**

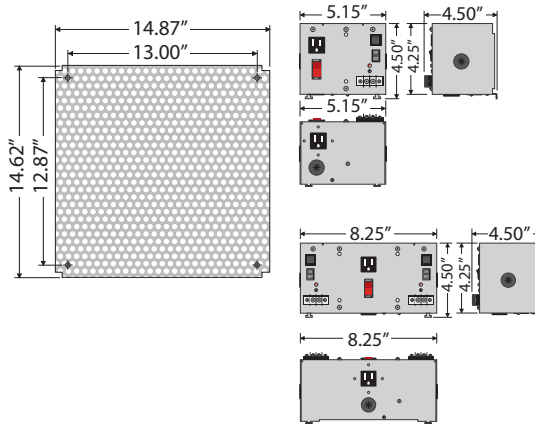
**MHP4604100AB10**

Enclosed Single 100 VA Power Supply with Subpanel:  
Models MH4600 + SP4604 + PS100AB10



**MHP4604100A100AB10**

Enclosed Dual 100 VA Power Supply with Subpanel:  
Models MH4600 + SP4604 + PS100A100AB10



MHP4604100AB10



MHP4604100A100AB10

**POWER SUPPLY (PS100AB10)**

**Transformer:** One 100 VA Split-Bobbin  
**Over Current Protection:** Circuit Breaker  
**Frequency:** 50/60 Hz  
**24 Vac ON/OFF:** On / Off Switch & Breaker  
**Main Breaker ON/OFF:** Switch / Breaker (10 Amp)  
 (Kills power to entire unit: Outlets, Aux. Output, & Transformer)\*  
 Total Combined Output 9A  
**Approvals:** Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS  
**Dimensions:** 4.500" x 8.625" x 4.500"

**Input Wires:** Input Power Wires  
 BLK: 120 Vac  
 WHT: Neutral  
 GRN: Ground

Outlet Wires  
 BLK: 120 Vac  
 WHT: Neutral  
 GRN: Ground

**Output Wires:** Auxiliary Output  
 BLU: 120 Vac

**Notes:**

- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- Design is in accordance with ASCE 7-05 Chapter 13

**POWER SUPPLY (PS100A100AB10)**

**Transformer:** Two 100 VA Split-Bobbin  
**Over Current Protection:** Circuit Breaker  
**Frequency:** 50/60 Hz  
**24 Vac ON/OFF:** On / Off Switch & Breaker  
**Main Breaker ON/OFF:** Switch / Breaker (10 Amp)  
 (Kills power to entire unit: Outlets, Aux. Output, & Transformer)\*  
 Total Combined Output 9A  
**Approvals:** Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS  
**Dimensions:** 4.500" x 8.625" x 4.500"

**Input Wires:** Input Power Wires  
 BLK: 120 Vac  
 WHT: Neutral  
 GRN: Ground

Outlet Wires  
 BLK: 120 Vac  
 WHT: Neutral  
 GRN: Ground

**Output Wires:** Auxiliary Output  
 BLU: 120 Vac

**Notes:**

- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- Design is in accordance with ASCE 7-05 Chapter 13

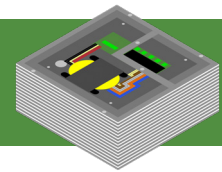
**PERFORATED STEEL SUB-PANEL (SP4604)**

**Mounting Area:** 217.40" square  
**Approvals:** Plenum Rated  
**Dimensions:** 14.62" x 14.87"

**METAL HOUSING (MH4600)**

**Construction:** 14 Gauge Steel  
**Cover Type:** Reversible Hook Hinge Key Latch Door  
**Approvals:** UL Listed, C-UL, CE Approved, RoHS  
**Dimensions:** 16.15" (W) x 20.00" (H) x 6.72" (D)

# POWER SUPPLIES



FEATURED PRODUCTS

## MOUNTING YOUR CONTROLLER AND PERIPHERAL DEVICES IS EASY AND CONVENIENT IN OUR PREPACKAGED SOLUTION

**Metal enclosure, power supply, and sub-panel with several options to fit your needs**

If you're planning to install a controller and other peripheral devices, it is important to consider where the items will be placed within an enclosure and how they will be powered. We have a line of products that can address both of those needs: the MHP Series. These products include a metal enclosure, power supply and a sub-panel with several prepackaged options to meet your specific needs.

### Power Supply

- Enclosed single or dual 100 VA
- 10 Amp on/off circuit breaker switch(es)
- 120 Vac convenience outlets
- 24 Vac output terminal strip(s)
- High/low voltage separation

### Enclosure

- Two size choices
- Reversible door with key latch
- Sturdy 14-Gauge steel

### Sub-Panel

- Perforated steel or polymetal
- Easily removable for mounting equipment

**WIDE ENCLOSURE ALLOWS MORE ROOM FOR WIRE WAYS**



**Wide Enclosure  
Single 100 VA Power Supply  
Perforated Steel Sub-Panel**

MHP4604100AB10



**Narrow Enclosure  
Single 100 VA Power Supply  
Perforated Steel Sub-Panel**

MHP3904100AB10



**Narrow Enclosure  
Dual 100 VA Power Supply  
Polymetal Sub-Panel**

MHP3903100A100AB10

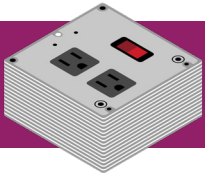


## PREPACKAGED AC POWER SUPPLY KITS

Product Selection Guide. For full product information, see our website.

MODEL #	TRANS-FORMER(S)	INPUT POWER	HEIGHT	WIDTH	DEPTH	120 VAC OUTLETS	AUX OUTPUT WIRE	ON/OFF SWITCH	MAIN BREAKER ON INPUT POWER *	SECONDARY CONFIGURATION	METAL HOUSING	SUB-PANEL / TRACK MOUNT
MHP3903100AB10	100 VA	120 Vac	12.500"	24.500"	6.500"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH3900	SP3803S (Polymetal)
MHP3904100AB10	100 VA	120 Vac	12.500"	24.500"	6.500"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH3900	SP3804S (Perforated)
MHP4604100AB10	100 VA	120 Vac	16.150"	20.000"	6.720"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH4600	SP4604 (Perforated)
MHP3903100A100AB10	100 VA, 100 VA	120 Vac	12.500"	24.500"	6.500"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH3900	SP3803S (Polymetal)
MHP3904100A100AB10	100 VA, 100 VA	120 Vac	12.500"	24.500"	6.500"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH3900	SP3804S (Perforated)
MHP4604100A100AB10	100 VA, 100 VA	120 Vac	16.150"	20.000"	6.720"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH4600	SP4604 (Perforated)

\* = Kills power to entire unit: Outlets, Aux. Output, & Transformer; Total Combined Output 9A




## POWER CONTROL



Models shown (L to R) without covers:  
PSH2C2RB10; PSM2RB10; PSH600-UPS-BC

# Uninterruptible Power Supply Kits

- 600 or 850 VA commercial UPS
  - NEMA 1 metal enclosure
  - UPS interface board
-  **BACnet™** compatible model available



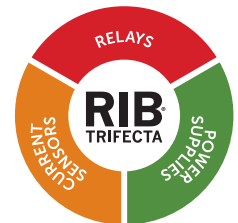


# UPS POWER SUPPLY SERIES

Our UPS Power Supply Series is perfect for applications in critical environments such as hospitals, laboratories and research & surgery centers. These products keep your critical controller powered on during a loss of normal utility power with the ability to hardwire line voltage to the provided UPS, in addition to hardwiring the UPS to the final load.

## Benefits & Features

- Keeps your critical controller on in the case of power loss
- BACnet® compatible model is BTL Certified and includes six objects: Line or UPS power, UPS percent load, UPS battery capacity, VA load, USB connection, and remaining battery time
- Cords tuck inside enclosure for clean & neat use of a UPS
- 600 VA UPS is hot-swappable
- 120 Vac convenience outlet(s) provided
- 10 Amp circuit breaker/switch can be used to test functionality of UPS
- Switch controls line voltage



## UPS POWER SUPPLIES

Product Selection Guide. For full product information, see our website.

MODEL #	UL	STATUS	UPS	CIRCUIT BREAKER	120 VAC OUTLET(S)	BACnet COMPATIBLE	KIT	ENCLOSED	TRACK MOUNT	HEIGHT	WIDTH	DEPTH
PSH600-UPS (Kit)			600 VA	•	•		N/A	•		12.000"	14.000"	6.000"
PSH2RB10	•			•	•		PSH600-UPS	•		12.000"	14.000"	6.000"
PSM2RB10	•			•	•		PSH600-UPS		MT4-4N included	4.000"	3.250"	1.750"
PSH600-UPS-STAT (Kit)		•	600 VA	•	•		N/A	•		12.000"	16.000"	6.000"
PSH2C2RB10	•	•		•	•		PSH600-UPS-STAT	•		12.000"	16.000"	6.000"
PSMN2C2RB10	•	•		•	•		PSH600-UPS-STAT		MT212-6N included	2.750"	6.655"	1.750"
PSH850-UPS-STAT (Kit)		•	850 VA	•	•		N/A	•		14.000"	16.000"	6.000"
PSH2C2RB10-L	•	•		•	•		PSH850-UPS-STAT	•		14.000"	16.000"	6.000"
PSH600-UPS-BC (Kit)		•	600 VA	•	•	•	N/A	•		12.000"	16.000"	6.000"

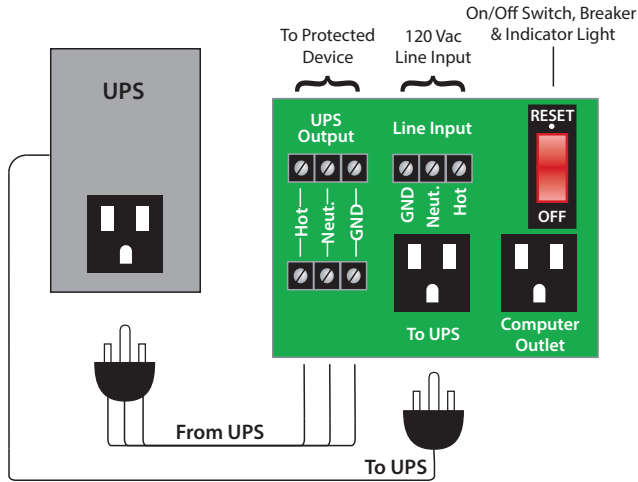
UL = UL Listed : UL916 Energy Management; UL Listed Canada

## UNINTERRUPTIBLE POWER SUPPLY KIT

FEATURED PRODUCTS

### PSH600-UPS

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 600 VA UPS. (No Status Contacts)



Shown Without Cover

### SPECIFICATIONS

#### UPS

**UPS:** 600VA

**Backup Time:** 2.5 Min. @ Full 600 VA Load  
10 Min. @ 1/2 Load

**Power Consumption** Up to 3 Amp @120 Vac

**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)

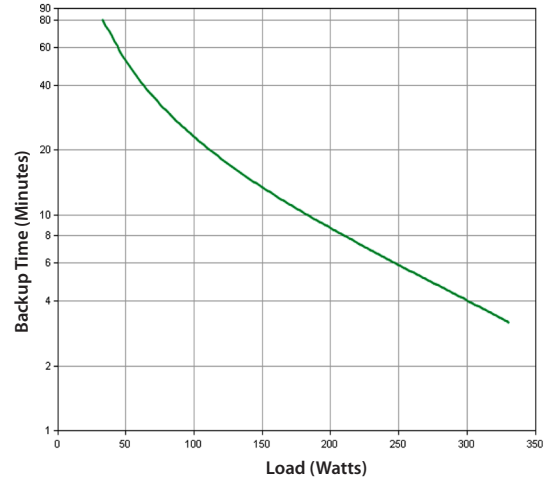
**Approvals:** UL Listed, UL916, C-UL, CE, RoHS

**Dimensions:** 12.000" x 14.000" x 6.000"  
Metal Housing with Screw Cover

#### 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**
- UPS may change based on quality and availability

### ESTIMATED BACKUP TIME VS. LOAD





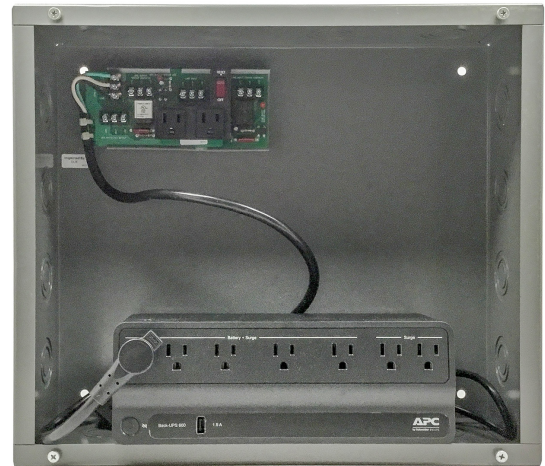
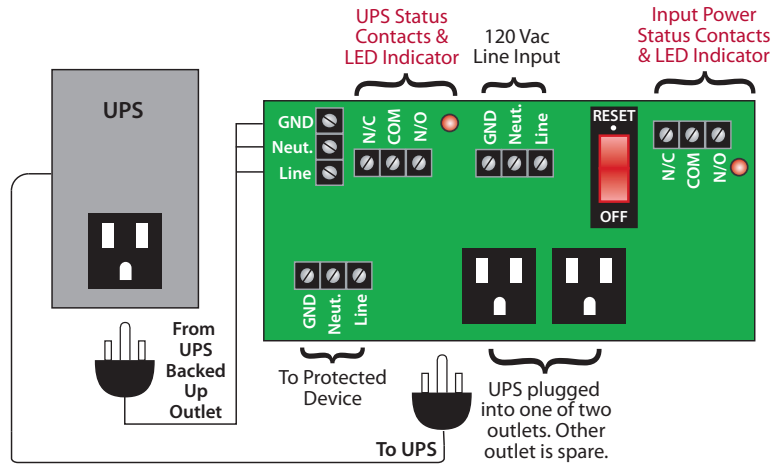
## UNINTERRUPTIBLE POWER SUPPLY KIT

### PSH600-UPS-STAT

Kit Consisting of Enclosed Power Control Center Model PSH2C2RB10 (10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input) with a 600VA UPS. (Status Contacts)



FEATURED PRODUCTS



### SPECIFICATIONS

#### UPS

**UPS:** 600VA  
**Backup Time:** 2.5 Min. @ Full 600 VA Load  
 10 Min. @ 1/2 Load  
**Power Consumption** Up to 3 Amp @120 Vac  
**Max Load:** 330 Watt  
**Frequency:** 50/60 Hz  
**Temperature Rating of UPS:** 32 to 104° F  
**UPS Transfer Time:** 6ms  
**Approvals:** UL Listed, UL1778

#### PSH2C2RB10

**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 16.000" x 6.000"  
 Metal Housing with Screw Cover

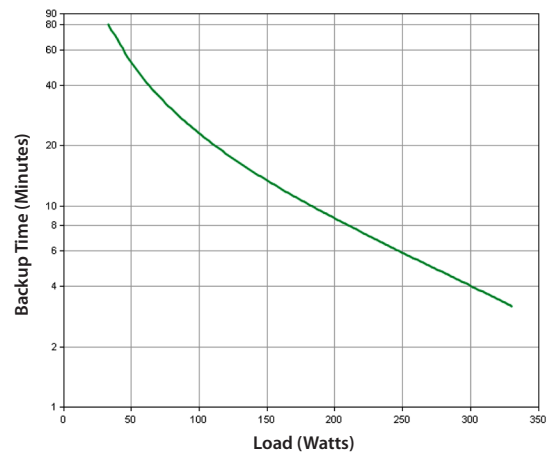
#### Line Input Status Contacts and UPS Output Status Contacts Rated:

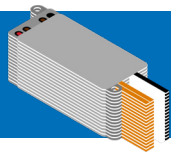
10 Amp @ 277 Vac General Use  
 10 Amp @ 30 Vdc (N/O)  
 7 Amp @ 30 Vdc (N/C)  
 1/2 HP @ 125 Vac  
 1/4 HP @ 277 Vac  
 1000 VA @ 120 Vac Magnetic Ballast (N/C)  
 C300 Pilot Duty  
 16.8 VA @ 24 Vac Pilot Duty

#### Notes:

- To order without UPS, so that any other commercial UPS with appropriate ratings and within housing space limitations may be used, see model PSH2C2RB10.
- To order interface board for replacement or for separate use, order model PSMN2C2RB10.
- Average battery life: 3-5 years depending on the number of discharge cycles and environmental temperature**
- UPS may change based on quality and availability

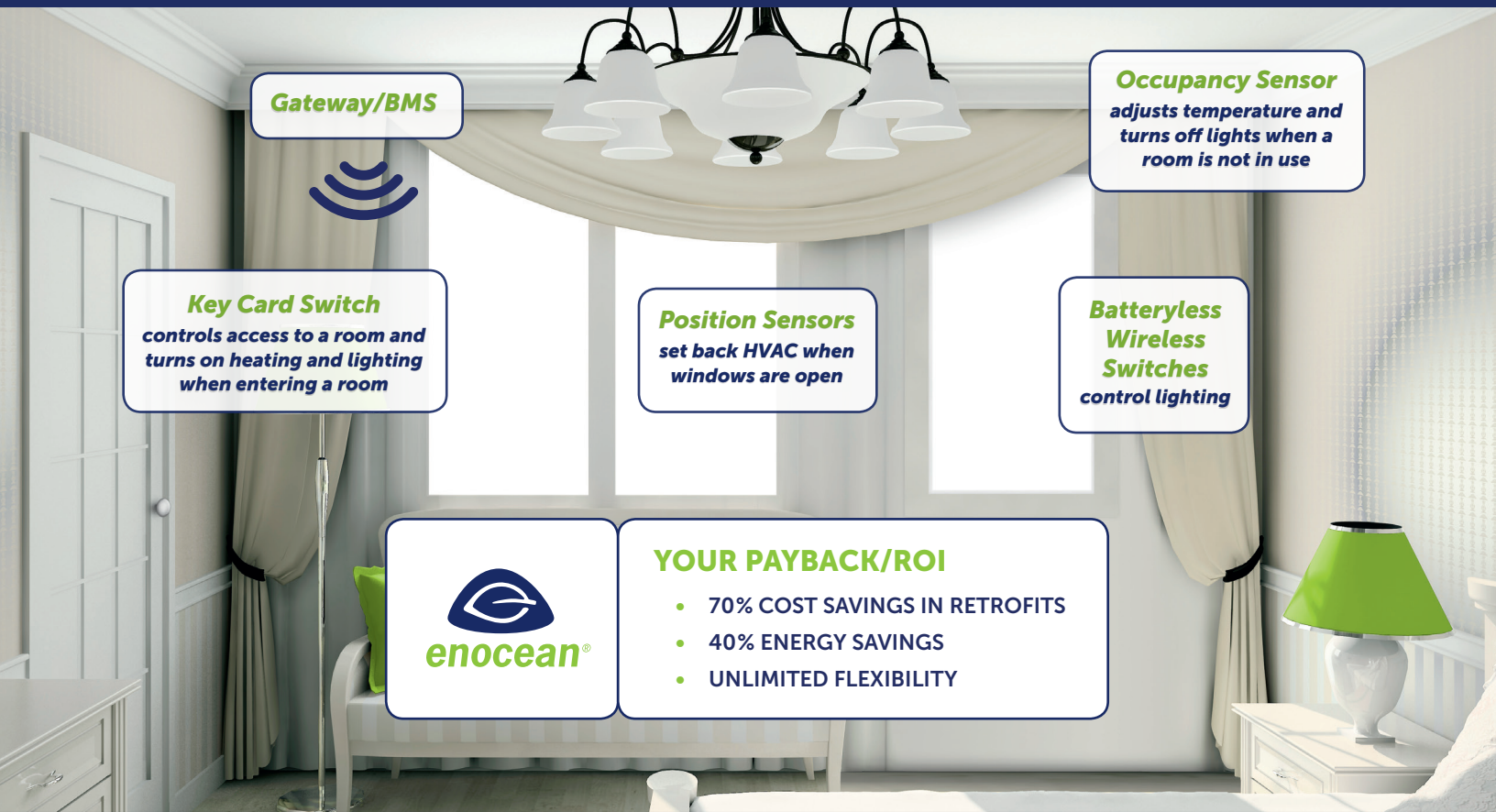
### ESTIMATED BACKUP TIME VS. LOAD





# WIRELESS DEVICES

## HVAC & Lighting Energy Management



### Gateway/BMS



### Key Card Switch

controls access to a room and turns on heating and lighting when entering a room

### Position Sensors

set back HVAC when windows are open

### Occupancy Sensor

adjusts temperature and turns off lights when a room is not in use

**Batteryless  
Wireless  
Switches**  
control lighting



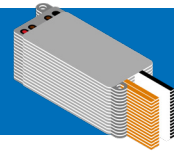
### YOUR PAYBACK/ROI

- 70% COST SAVINGS IN RETROFITS
- 40% ENERGY SAVINGS
- UNLIMITED FLEXIBILITY

**902 MHz • Maintenance-free**  
**Flexibility of applications • Time saving**  
**Cost savings in installation, renovation, and energy usage**

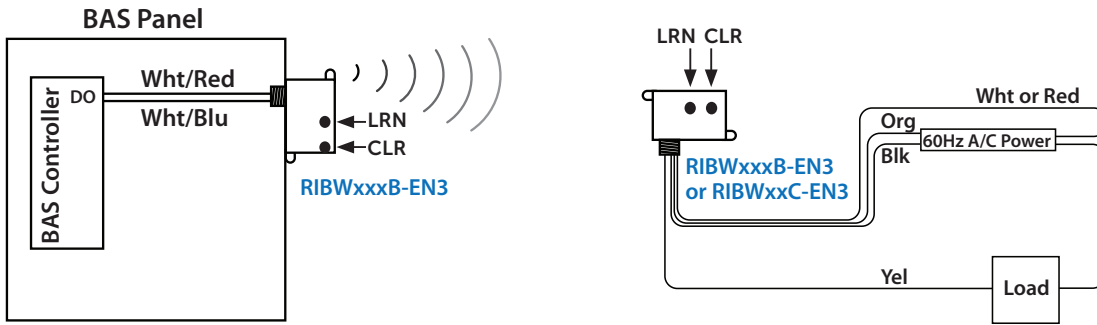
Many hotels keep their rooms at a comfortable temperature for the duration of their guests' stays – whether the guests are in or out of their room. With guest comfort as a priority, hotels and motels typically use almost 40 percent of their electricity on heating and cooling rooms, even though studies show that most sold rooms are unoccupied for 12 or more hours a day. Used correctly, the right controls could offer significant energy savings without compromising the comfort of guests.

Information from: EnOcean® Alliance & ENERGY STAR Building Upgrade Manual



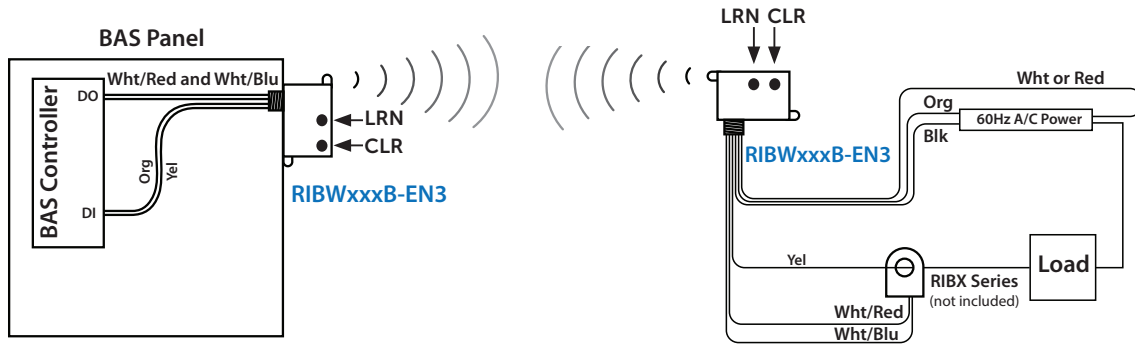
## Wireless Solutions for BAS Applications

### Unidirectional Control with a BAS Controller



In this application, the BAS system dry-contact output controls the transmitter on model RIBWxxxB-EN3, and a second RIBWxxxB-EN3 or RIBWxxC-EN3 is the receiver.

### Bidirectional Control with a BAS Controller



In this application, the BAS system dry-contact output controls the transmitter on model RIBWxxxB-EN3. A second RIBWxxxB-EN3 receives the signal and activates its relay. A current switch detects current flow through the load and closes the dry-contact input on the second RIBWxxxB-EN3. The first RIBWxxxB-EN3 receives the transmission and closes its relay. This contact closure to the BAS system lets the controller know the load status.

## EnOcean® Enabled 902 MHz Wireless Devices

### Wireless Relays



**Ballast Mount Relay Receiver**  
RIBWxxC-EN3



**Nipple Mount Relay Transceiver**  
RIBWxxxB-EN3

### Transmitter Switches



**Window/Door Position Switch**  
WDWS-EN3



**Rocker Switch**  
WWS2-EN3



**Keycard Switch**  
WKC-EN3

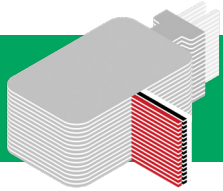
### Vacancy/Occupancy Sensors



**Wall Mount**  
WVSWM-EN3



**Ceiling Mount**  
WVSCM-EN3



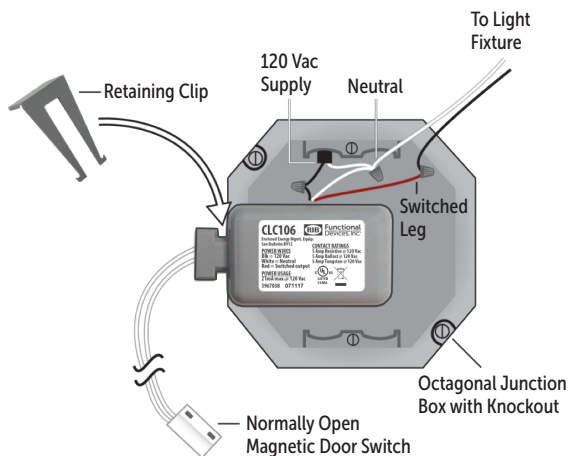
## ENERGY SAVING DEVICES

# LIGHT CONTROLLERS

FOR USE IN CLOSETS, PANTRIES, WALK-INS, AND CABINETS

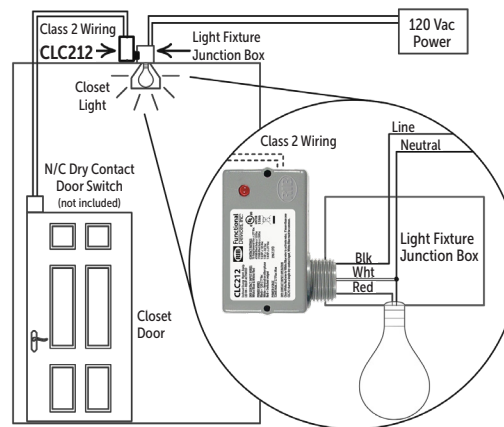
Our Closet Light Controllers are designed to switch lighting loads on and off by the closing or opening of a variety of switches, including door jamb, magnetic, and ball switches. Models are available for retrofit and new construction jobs, and with or without an energy-saving time out setting.

### Retrofits



- 5 Amp relay
- 120 Vac power
- Fits easily inside junction box
- Includes retaining clip
- No transformer needed (dry contact input)
- Models CLC106, CLC106-NC
- Includes magnetic door jamb switch

### New Construction



15 Minute Time Out



60 Minute Time Out



- 10 Amp N/O relay
- 120-277 Vac power
- No transformer needed (dry contact input)
- Light 18 AWG wire used to control relay, instead of armored cable
- Available with time out setting
- Models CLC212, CLC212-D15, CLC212-D60
- Switch sold separately (models ACLCMAGSM & ACLCMAGDJ)



# EMERGENCY LIGHTING

## UL924 RELAYS

for Bypass/Shunt and Automatic Load Control Applications



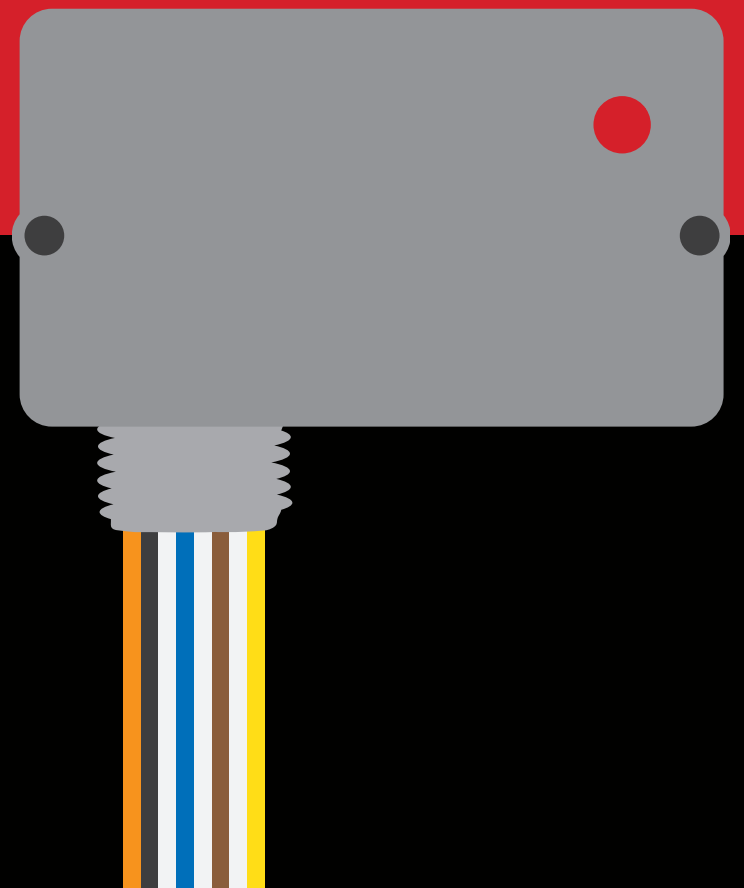
**FOR MORE PRODUCT INFORMATION:**  
[www.functionaldevices.com/ul924](http://www.functionaldevices.com/ul924)



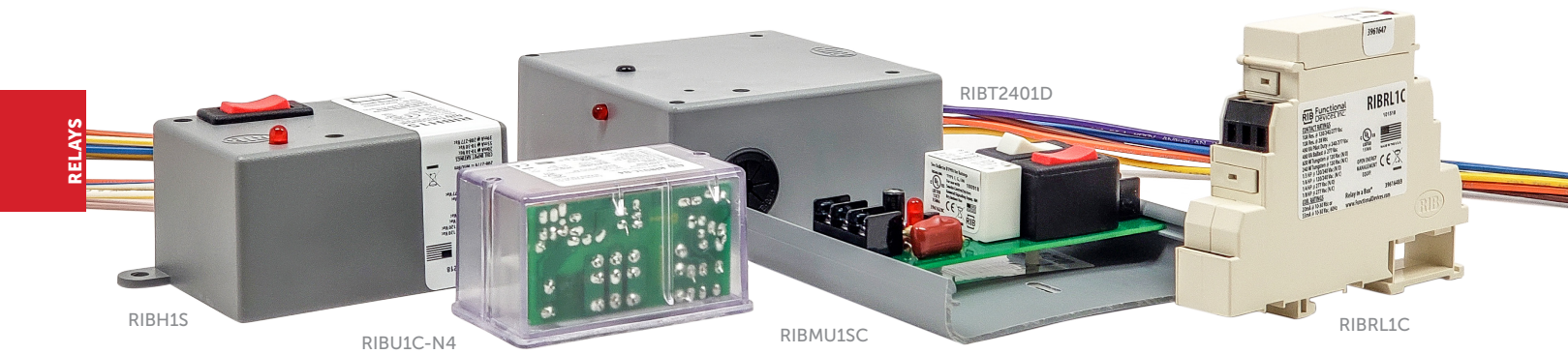
## NOTES

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# RELAYS



# PILOT RELAYS: 10–15 AMPS



## Convenient Prepackaging is a Great Time Saver

- LED indicator
- Multiple contact ratings
- Override / HOA switch options available
- High/low voltage separation available
- 10-15 Amp models
- Pre-wired
- Enclosed or track mount
- Time delay models



## ENCLOSED PILOT RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE		RELAY CONTACTS	CONTACT RATINGS			HIGH/LOW SEPARATION	OVERRIDE SWITCH	HOUSING STYLE *	SHIPPING WEIGHT
		AC/DC	AC		RESISTIVE	MOTOR	PILOT DUTY				
RIBU1C	•	10-30	120	1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac			A	0.300 lb.
RIBH1C	•	10-30	208-277	1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac			A	0.302 lb.
RIBU2C	•	10-30	120	2 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac			B	0.507 lb.
RIBH2C	•	10-30	208-277	2 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac			B	0.528 lb.
RIBL3C	•	10-30		3 SPST	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•		C	0.742 lb.
RIBL4C	•	10-30		3 SPST, 1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•		C	0.890 lb.
RIBU1S	•	10-30	120	1 SPST	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac		1	B	0.404 lb.
RIBH1S	•	10-30	208-277	1 SPST	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac		1	B	0.410 lb.
RIBU1SM-250	•	10-30	120	1 SPST	10 A @ 120/250 Vac	1/3 HP @ 120-240 Vac (N/O)	345 VA @ 120/240 Vac		1+monitor	B	0.472 lb.
RIBH1SM-250	•	10-30	208-277	1 SPST	10 A @ 120/250 Vac	1/3 HP @ 120-240 Vac (N/O)	345 VA @ 120/240 Vac		1+monitor	B	0.520 lb.
RIB2401D	•	24	120	1 DPDT	10 A @ 277 Vac	1/2 HP @ 120/240 Vac (N/O)	B300			A	0.336 lb.
RIB2402D	•	24	208-277	1 DPDT	10 A @ 277 Vac	1/2 HP @ 120/240 Vac (N/O)	B300			A	0.350 lb.
RIBU1SC	•	10-30	120	1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac		2+	B	0.445 lb.
RIBH1SC	•	10-30	208-277	1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac		2+	B	0.447 lb.
RIBL1C-DC	•	10-30 Vdc only		1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac			A	0.285 lb.
RIB2421C	•	24	120-277	1 SPDT	10 A @ 277 Vac	1 HP @ 250 Vac	C300			A	0.301 lb.
RIBD2421C~	•	24	120-277	1 SPDT	10 A @ 277 Vac	1 HP @ 250 Vac	C300	•		C	0.642 lb.
RIBU2SC	•	10-30	120	1 SPST, 1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac		1	B	0.526 lb.
RIBU2S2	•	10-30	120	2 SPST	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	•	2	C	0.735 lb.

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

\* = See Housing Guide on pages 86-87

~ = Time Delay

+ = SPDT with override requires 2 switches

# = Coil side relay override (requires unit to be powered)

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

# PILOT RELAYS: 10–15 AMPS

## T STYLE PILOT RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE		RELAY CONTACTS	CONTACT RATINGS			HIGH/LOW SEPARATION	OVERRIDE SWITCH	HOUSING STYLE *	SHIPPING WEIGHT
		AC/DC	AC		RESISTIVE	MOTOR	PILOT DUTY				
RIBTU1C	•	10-30	120	1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•		C	0.568 lb.
RIBTH1C	•	10-30	208-277	1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•		C	0.620 lb.
RIBTU2C	•	10-30	120	2 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•		C	0.695 lb.
RIBTH2C	•	10-30	208-277	2 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•		C	0.705 lb.
RIBU1CW	•	10-30	120	1 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•		C	0.550 lb.
RIBH1CW	•	10-30	208-277	1 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•		C	0.553 lb.
RIBTU1S	•	10-30	120	1 SPST	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	•	1	C	0.573 lb.
RIBTH1S	•	10-30	208-277	1 SPST	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	•	1	C	0.652 lb.
RIBTU1SC	•	10-30	120	1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	•	2 +	C	0.690 lb.
RIBTH1SC	•	10-30	208-277	1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	•	2 +	C	0.661 lb.
RIBT2401D	•	24	120	1 DPDT	10 A @ 277 Vac	1/2 HP @ 120-240 Vac (N/O)	B300	•		C	0.609 lb.

RELAYS

## TRACK MOUNT PILOT RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE		RELAY CONTACTS	CONTACT RATINGS			OVERRIDE SWITCH	TRACK MOUNT ^	SHIPPING WEIGHT
		AC/DC	AC		RESISTIVE	MOTOR	PILOT DUTY			
RIBRL1C	• 1	10-30		1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240/277 Vac		DIN Rail	0.184 lb.
RIBRL1S	• 1	10-30		1 SPDT	10 A @ 277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240/277 Vac	1 #	DIN Rail	0.194 lb.
RIBR24D	• 1	24		1 DPDT	10 A @ 277 Vac	1/2 HP @ 120-240 Vac (N/O)	B300		DIN Rail	0.285 lb.
RIBR24SD	• 1	24		1 DPDT	10 A @ 277 Vac	1/2 HP @ 120-240 Vac (N/O)	B300	1 #	DIN Rail	0.285 lb.
RIBAN12C	• 2	12		1 SPDT	10 A @ 277 Vac	1 HP @ 250 Vac	C300		MT212 Series & DIN Rail	0.178 lb.
RIBAN24C	• 2	24		1 SPDT	10 A @ 277 Vac	1 HP @ 250 Vac	C300		MT212 Series & DIN Rail	0.180 lb.
RIBM12C	•	12		1 SPDT	15 A @ 125 Vac	1 HP @ 250 Vac	C300		MT4 Series	0.111 lb.
RIBM12S	•	12		1 SPST	15 A @ 125 Vac	1 HP @ 250 Vac	C300	1	MT4 Series	0.127 lb.
RIBM24C	•	24		1 SPDT	15 A @ 125 Vac	1 HP @ 250 Vac	C300		MT4 Series	0.110 lb.
RIBM24S	•	24		1 SPST	15 A @ 125 Vac	1 HP @ 250 Vac	C300	1	MT4 Series	0.129 lb.
RIBM2401D	•	24	120	1 DPDT	10 A @ 277 Vac	1/2 HP @ 120/240 Vac (N/O)	B300		MT4 Series	0.160 lb.
RIBM2402D	•	24	208-277	1 DPDT	10 A @ 277 Vac	1/2 HP @ 120/240 Vac (N/O)	B300		MT4 Series	0.172 lb.
RIBMU1C	•	10-30	120	1 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac		MT4 Series	0.134 lb.
RIBMH1C	•	10-30	208-277	1 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac		MT4 Series	0.143 lb.
RIBMU1S	•	10-30	120	1 SPST	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	1	MT4 Series	0.150 lb.
RIBMH1S	•	10-30	208-277	1 SPST	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	1	MT4 Series	0.190 lb.
RIBMU2C	•	10-30	120	2 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac		MT4 Series	0.249 lb.
RIBMH2C	•	10-30	208-277	2 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac		MT4 Series	0.348 lb.
RIBMU1SM-250	•	10-30	120	1 SPST	15 A @ 125 Vac	1/3 HP @ 120-240 Vac (N/O)	345 VA @ 120/240 Vac (N/O)	1+monitor	MT4 Series	0.218 lb.
RIBMH1SM-250	•	10-30	208-277	1 SPST	15 A @ 125 Vac	1/3 HP @ 120-240 Vac (N/O)	345 VA @ 120/240 Vac (N/O)	1+monitor	MT4 Series	0.259 lb.
RIBMU1SC	•	10-30	120	1 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	2 3	MT4 Series	0.178 lb.
RIBMH1SC	•	10-30	208-277	1 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	2 3	MT4 Series	0.227 lb.
RIBMN12C	•	12		1 SPDT	15 A @ 125 Vac	1 HP @ 250 Vac	C300		MT212 Series	0.087 lb.
RIBMN12S	•	12		1 SPST	15 A @ 125 Vac	1 HP @ 250 Vac	C300	1	MT212 Series	0.103 lb.
RIBMN24C	•	24		1 SPDT	15 A @ 125 Vac	1 HP @ 250 Vac	C300		MT212 Series	0.087 lb.
RIBMN24S	•	24		1 SPST	15 A @ 125 Vac	1 HP @ 250 Vac	C300	1	MT212 Series	0.107 lb.
RIBMN24S-J	•	24		1 SPST	15 A @ 125 Vac	1 HP @ 250 Vac	C300	1	MT212 Series	0.120 lb.
RIBMN24C-4T	•	24		4 SPDT	15 A @ 125 Vac	1 HP @ 250 Vac	C300		MT212-6 Included	0.454 lb.
RIBMN24S-4T	•	24		4 SPST	15 A @ 125 Vac	1 HP @ 250 Vac	C300	4	MT212-6 Included	0.550 lb.
RIBMN2401D	•	24	120	1 DPDT	10 A @ 277 Vac	1/2 HP @ 120/240 Vac (N/O)	B300		MT212 Series	0.132 lb.
RIBMNU1C	•	10-30	120	1 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac		MT212 Series	0.136 lb.
RIBMNH1C	•	10-30	208-277	1 SPDT	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac		MT212 Series	0.141 lb.
RIBMNU1S	•	10-30	120	1 SPST	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	1	MT212 Series	0.177 lb.
RIBMNH1S	•	10-30	208-277	1 SPST	15 A @ 150 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 277 Vac	1	MT212 Series	0.221 lb.
RIBMNU1SM-250	•	10-30	120	1 SPST	15 A @ 125 Vac	1/3 HP @ 120-240 Vac (N/O)	345 VA @ 120/240 Vac (N/O)	1+monitor	MT212 Series	0.263 lb.
RIBMNH1SM-250	•	10-30	208-277	1 SPST	15 A @ 125 Vac	1/3 HP @ 120-240 Vac (N/O)	345 VA @ 120/240 Vac (N/O)	1+monitor	MT212 Series	0.248 lb.

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

UL 1 = UL Listed : UL916 Energy Management ; USA & Canada

UL 2 = UL Listed : UL508 only ; USA & Canada

+ = SPDT with override requires 2 switches

\* = See Housing Guide on pages 86-87

^ = Track mount sold separately

# = Coil side relay override (requires unit to be powered)

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

# POWER RELAYS: 20–30 AMPS



## Convenient Prepackaging is a Great Time Saver

- LED indicator
- Multiple contact ratings
- Override / HOA switch options available
- High/low voltage separation available
- 20-30 Amp models
- Pre-wired
- Enclosed or track mount
- Time delay models



## ENCLOSED POWER RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE		RELAY CONTACTS	CONTACT RATINGS			HIGH/LOW SEPARATION	OVERRIDE SWITCH	HOUSING STYLE *	SHIPPING WEIGHT
		AC/DC	AC		RESISTIVE	MOTOR	PILOT DUTY				
RIB2401B	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac			B	0.500 lb.
RIB2402B	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac			B	0.501 lb.
RIB2401SB	•	24	120	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		1	B	0.497 lb.
RIB2402SB	•	24	208-277	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		1	B	0.510 lb.
RIB2421B	•	24	120/208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac			B	0.525 lb.
RIB2421SB	•	24	120/208-277	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		1	B	0.540 lb.
RIB2401SBC	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		2 +	B	0.565 lb.
RIB2402SBC	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		2 +	B	0.598 lb.
RIB01P	•		120	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac	•		C	0.956 lb.
RIB02P	•		208-277	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac	•		C	0.965 lb.
RIB347P	•		347	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac	•		C	0.952 lb.
RIB04P	•		480	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac	•		C	0.952 lb.
RIB013P	•		120	1 3PST	20 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac	•		C	1.008 lb.
RIB023P	•		208-277	1 3PST	20 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac	•		C	1.020 lb.
RIB043P	•		480	1 3PST	20 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac	•		C	0.993 lb.
RIB243P	•	24		1 3PST	20 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac	•		C	0.974 lb.
RIB24Z	•	24		1 SPST N/O, 1 SPST N/C	30 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac			B	0.748 lb.
RIB12P	•	12		1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac			B	0.725 lb.
RIB12P30	•	12		1 DPDT	30 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac			B	0.888 lb.
RIB24P	•	24		1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac			B	0.724 lb.
RIB24P30	•	24		1 DPDT	30 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac			B	0.874 lb.
RIB01P30	•		120	1 DPST	30 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac	•		C	0.982 lb.
RIB01P30-S	•		120	1 DPST	30 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac	•	1 #	C	1.013 lb.
RIB02P30	•		208-277	1 DPST	30 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac	•		C	0.980 lb.

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

\* = See Housing Guide on pages 86-87

+ = SPDT with override requires 2 switches

# = Coil side relay override (requires unit to be powered)

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.



# POWER RELAYS: 20–30 AMPS

## T STYLE POWER RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE		RELAY CONTACTS	CONTACT RATINGS			HIGH/LOW SEPARATION	OVERRIDE SWITCH	HOUSING STYLE *	SHIPPING WEIGHT
		AC/DC	AC		RESISTIVE	MOTOR	PILOT DUTY				
RIBT24B	•	24		1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.675 lb.
RIBT24SB	•	24		1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	1	C	0.673 lb.
RIBT2401B	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.663 lb.
RIBT2402B	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.670 lb.
RIBT2401SB	•	24	120	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	1	C	0.674 lb.
RIBT2402SB	•	24	208-277	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	1	C	0.676 lb.
RIBT2401SBC	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	2+	C	0.790 lb.
RIBT2402SBC	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	2+	C	0.806 lb.
RIBTD2401B~	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.735 lb.
RIBT242B	•	24		2 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.863 lb.
RIBT243B	•	24		2 SPST, 1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.961 lb.
RIBT24P	•	24		1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac	•		C	0.930 lb.
RIBT24Z	•	24		1 SPST N/O, 1 SPST N/C	30 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac	•		C	0.983 lb.
RIBT243P	• <sup>1</sup>	24		3PST	20 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac	•		C	0.980 lb.

## TRACK MOUNT POWER RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE		RELAY CONTACTS	CONTACT RATINGS			OVERRIDE SWITCH	TRACK MOUNT ^	SHIPPING WEIGHT
		AC/DC	AC		RESISTIVE	MOTOR	PILOT DUTY			
RIBM2401B	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		MT4 Series	0.171 lb.
RIBM2402B	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		MT4 Series	0.178 lb.
RIBM2401SB	•	24	120	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1	MT4 Series	0.208 lb.
RIBM2402SB	•	24	208-277	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1	MT4 Series	0.214 lb.
RIBM2401SBC	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	2+	MT4 Series	0.242 lb.
RIBM2402SBC	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	2+	MT4 Series	0.248 lb.
RIBM24ZN		24		1 DPDT	30 A @ 300 Vac	3 HP @ 480-600 Vac	NEMA B600		MT4 Series	0.283 lb.
RIBM24ZL	•	24		1 DPST	30 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac		MT4 Series	0.404 lb.
RIBM24ZL	•	24		1 DPST	30 A @ 300 Vac	3 HP @ 480-600 Vac	Heavy Pilot Duty @ 600 Vac		MT212 Series	0.403 lb.
RIBM243PN	UL	24		1 3PDT	30 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac		MT4 Series	0.345 lb.
RIBM013PN			120	1 3PDT	30 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac		MT4 Series	0.368 lb.
RIBM023PN	UL		208-277	1 3PDT	30 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac		MT4 Series	0.396 lb.
RIBM043PN			480	1 3PDT	30 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac		MT4 Series	0.358 lb.
RIBM043PN-HD	UL		480	1 3PDT	30 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	Heavy Pilot Duty @ 600 Vac		MT4 Series	0.490 lb.

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

~ = Time Delay

\* = See Housing Guide on pages 86-87

UL<sup>1</sup> = UL Listed : UL916 Energy Management ; USA & Canada

+ = SPDT with override requires 2 switches

^ = Track mount sold separately

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

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

# LATCHING RELAYS



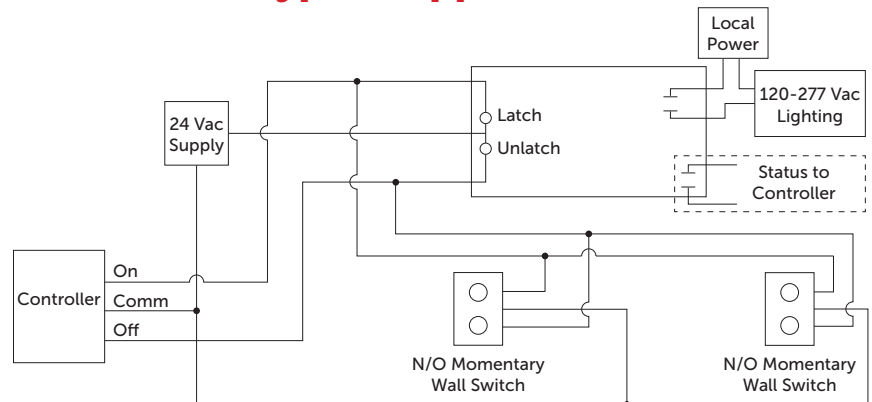
These relays are switched by pulse commands from an appropriate power source or a controller. The relay contacts are mechanically latched in position, so that the load remains in its last state (on or off) during a loss of power. A pulse of opposing polarity latches the relay in the alternate state.



## Product Features

- Prepackaged for quick and easy installation
- Electromechanical relay
- Mechanically latching
- Status LED and auxiliary output models available
- Electronic ballast rating
- 20 Amp rating

## Typical Application



## ENCLOSED LATCHING RELAYS

Product Selection Guide. For full product information, see our website.

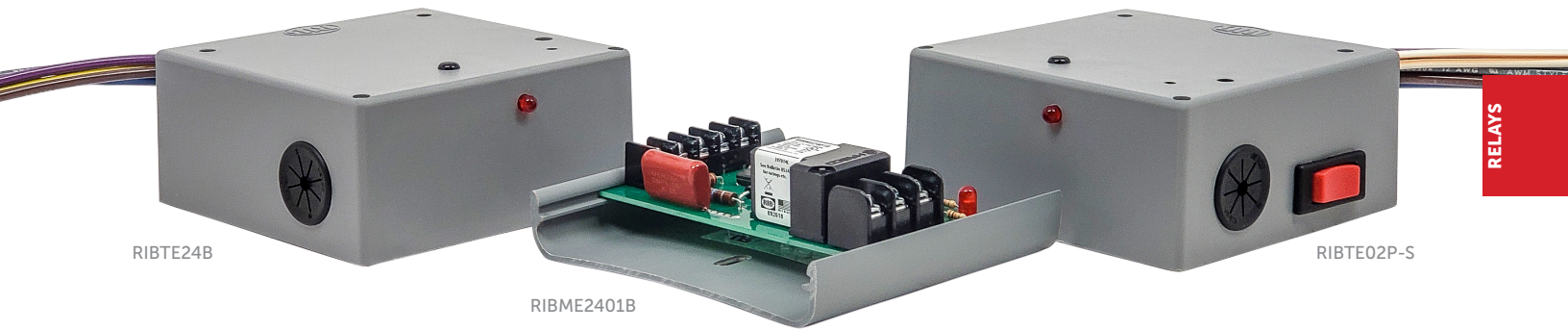
MODEL #	UL	COIL VOLTAGE		CONTACT RATINGS			OVERRIDE SWITCH	AUXILIARY OUTPUT	HOUSING STYLE *	SHIPPING WEIGHT
		AC/DC	RELAY CONTACTS	RESISTIVE	MOTOR	PILOT DUTY				
RIBL12B	•	12	1 SPST	20 A @ 120-277 Vac	3 HP @ 240 Vac	720 VA @ 120-277 Vac			A	0.420 lb.
RIBL12SB	•	12	1 SPST	20 A @ 120-277 Vac	3 HP @ 240 Vac	720 VA @ 120-277 Vac	•		A	0.420 lb.
RIBL12BM	•	12	1 SPST	20 A @ 120-277 Vac	3 HP @ 240 Vac	720 VA @ 120-277 Vac		•	B	0.490 lb.
RIBL12SBM	•	12	1 SPST	20 A @ 120-277 Vac	3 HP @ 240 Vac	720 VA @ 120-277 Vac	•	•	B	0.490 lb.
RIBL24B	•	24	1 SPST	20 A @ 120-277 Vac	3 HP @ 240 Vac	720 VA @ 120-277 Vac			A	0.420 lb.
RIBL24SB	•	24	1 SPST	20 A @ 120-277 Vac	3 HP @ 240 Vac	720 VA @ 120-277 Vac	•		A	0.420 lb.
RIBL24BM	•	24	1 SPST	20 A @ 120-277 Vac	3 HP @ 240 Vac	720 VA @ 120-277 Vac		•	B	0.600 lb.
RIBL24SBM	•	24	1 SPST	20 A @ 120-277 Vac	3 HP @ 240 Vac	720 VA @ 120-277 Vac	•	•	B	0.592 lb.

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

\* = See Housing Guide on pages 86-87

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

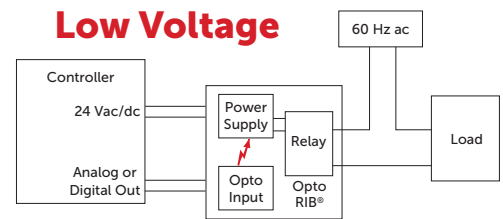
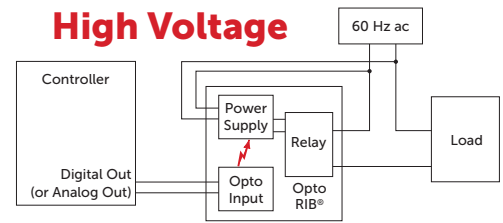
# LOW-INPUT / OPTOISOLATED RELAYS



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

## Product Features

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



## ENCLOSED LOW-INPUT / OPTOISOLATED RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	CONTROL INPUT	POWER INPUT	RELAY CONTACTS	CONTACT RATINGS			HIGH/LOW SEPARATION	OVERRIDE SWITCH	HOUSING STYLE *	SHIPPING WEIGHT
					RESISTIVE	MOTOR	PILOT DUTY				
RIBTELC	•	5-25 Vac/dc	10-30 Vac/dc	1 SPDT	10 A @ 120-277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•		C	0.578 lb.
RIBTELS	•	5-25 Vac/dc	10-30 Vac/dc	1 SPST	10 A @ 120-277 Vac	1/3 HP @ 120-240 Vac (N/O)	480 VA @ 240-277 Vac	•	1	C	0.666 lb.
RIBTE24B	•	5-25 Vac/dc	24 Vac/dc	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.711 lb.
RIBTE01B	•	5-25 Vac/dc	120 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.730 lb.
RIBTE02B	•	5-25 Vac/dc	208-277 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.734 lb.
RIBTE24SB	•	5-25 Vac/dc	24 Vac/dc	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	1	C	0.760 lb.
RIBTE01SB	•	5-25 Vac/dc	120 Vac	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	1	C	0.743 lb.
RIBTE02SB	•	5-25 Vac/dc	208-277 Vac	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	1	C	0.747 lb.
RIBTE24P	•	5-25 Vac/dc	24 Vac/dc	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	1,640 VA @ 480 Vac	•		C	0.976 lb.
RIBTE01P	•	5-25 Vac/dc	120 Vac	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	1,640 VA @ 480 Vac	•		C	0.995 lb.
RIBTE02P	•	5-25 Vac/dc	208-277 Vac	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	1,640 VA @ 480 Vac	•		C	1.015 lb.
RIBTE01P-S	•	5-25 Vac/dc	120 Vac	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	1,640 VA @ 480 Vac	•	1 #	C	1.034 lb.
RIBTE02P-S	•	5-25 Vac/dc	208-277 Vac	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	1,640 VA @ 480 Vac	•	1 #	C	1.068 lb.

## TRACK MOUNT LOW-INPUT / OPTOISOLATED RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	CONTROL INPUT	POWER INPUT	RELAY CONTACTS	CONTACT RATINGS			OVERRIDE SWITCH	TRACK MOUNT ^	SHIPPING WEIGHT
					RESISTIVE	MOTOR	PILOT DUTY			
RIBME2401B	•	5-25 Vac/dc	24 Vac/dc/120 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		MT4 Series	0.197 lb.
RIBME2402B	•	5-25 Vac/dc	24 Vac/dc/208-277 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		MT4 Series	0.226 lb.

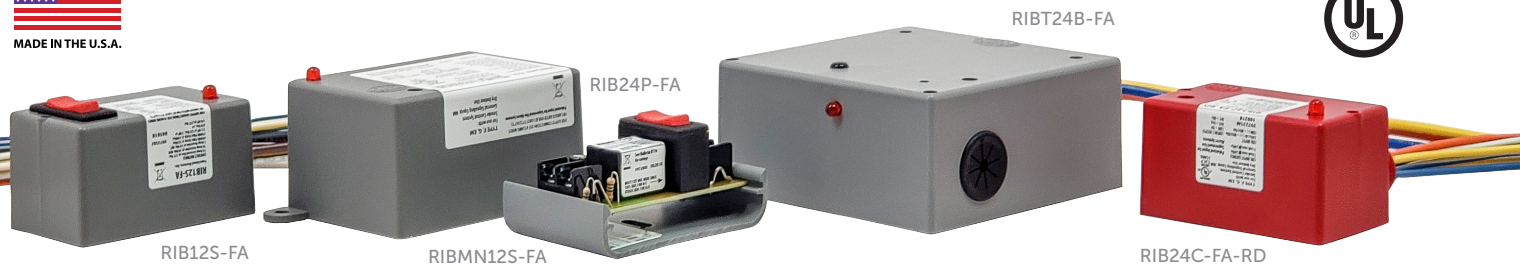
UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada \* = See Housing Guide on pages 86-87 ^ = Track mount sold separately # = Coil side relay override (requires unit to be powered)

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

# POLARIZED / ALARM RELAYS



RELAYS

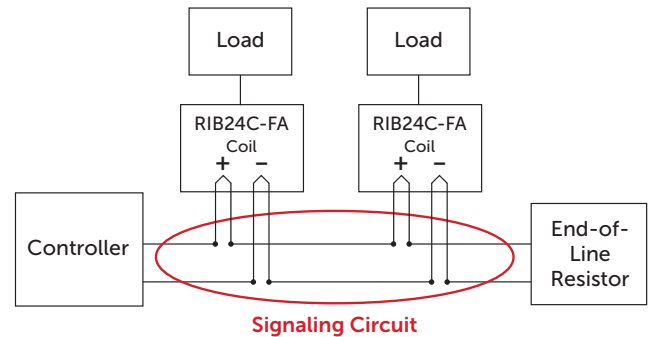


These relays are polarized to work in a supervised system and may be turned on and off by reversing polarity. These prepackaged relays make installation quick and easy and can be used in fire alarm systems, smoke control systems, etc.

## Product Features

- 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®
- Prepackaged for quick and easy installation

## Typical Application



## ENCLOSED POLARIZED / ALARM RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE	RELAY CONTACTS	CONTACT RATINGS			HIGH/LOW SEPARATION	OVERRIDE SWITCH	HOUSING STYLE *	SHIPPING WEIGHT
				RESISTIVE	MOTOR	PILOT DUTY				
RIB12C-FA	•	12 Vac/dc	1 SPDT	10 A @ 277 Vac	1 HP @ 250 Vac	770 VA @ 250 Vac			A	0.293 lb.
RIB24C-FA	•	24 Vac/dc	1 SPDT	10 A @ 277 Vac	1 HP @ 250 Vac	770 VA @ 250 Vac			A	0.291 lb.
RIB12S-FA	•	12 Vac/dc	1 SPST	10 A @ 277 Vac	1 HP @ 250 Vac	770 VA @ 250 Vac		1	A	0.290 lb.
RIB24S-FA	•	24 Vac/dc	1 SPST	10 A @ 277 Vac	1 HP @ 250 Vac	770 VA @ 250 Vac		1	A	0.291 lb.
RIBT24B-FA	•	24 Vac/dc	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.660 lb.
RIB24P-FA	•	24 Vac/dc	1 DPDT	20 A @ 300 Vac	3 HP @ 480-600 Vac	1,640 VA @ 480 Vac			B	0.755 lb.

## TRACK MOUNT POLARIZED / ALARM RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE	RELAY CONTACTS	CONTACT RATINGS			OVERRIDE SWITCH	TRACK MOUNT ^	SHIPPING WEIGHT
				RESISTIVE	MOTOR	PILOT DUTY			
RIBMN12C-FA	•	12 Vac/dc	1 SPDT	15 A @ 125 Vac	1 HP @ 250 Vac	770 VA @ 250 Vac		MT212 Series	0.113 lb.
RIBMN24C-FA	•	24 Vac/dc	1 SPDT	15 A @ 125 Vac	1 HP @ 250 Vac	770 VA @ 250 Vac		MT212 Series	0.120 lb.
RIBMN12S-FA	•	12 Vac/dc	1 SPST	15 A @ 125 Vac	1 HP @ 250 Vac	770 VA @ 250 Vac	1	MT212 Series	0.127 lb.
RIBMN24S-FA	•	24 Vac/dc	1 SPST	15 A @ 125 Vac	1 HP @ 250 Vac	770 VA @ 250 Vac	1	MT212 Series	0.127 lb.

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

\* = See Housing Guide on pages 86-87

^ = Track mount sold separately

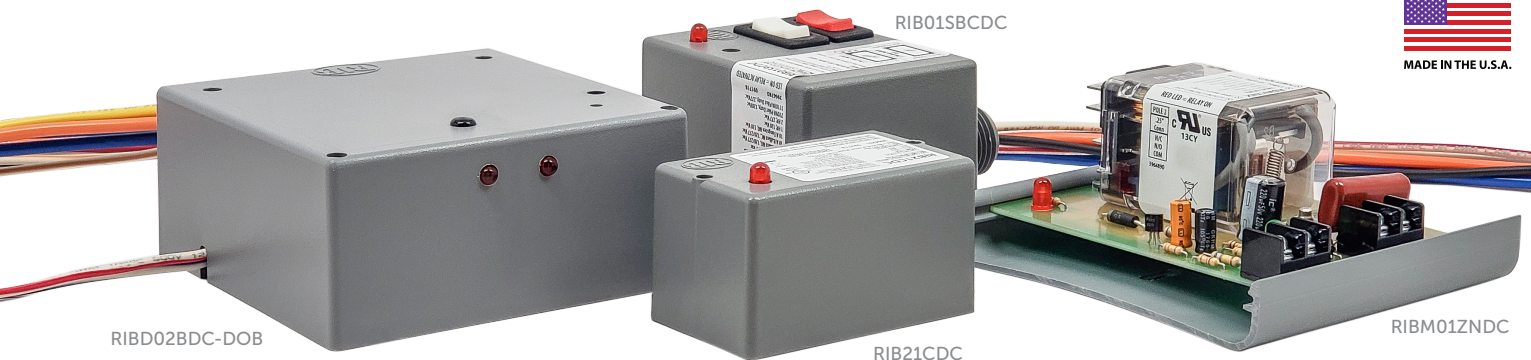
For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.



# DRY CONTACT INPUT RELAYS



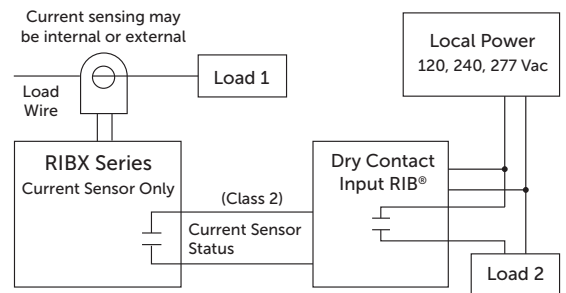
RELAYS



## Product Features

- Prepackaged for quick and easy installation
- Provides low-voltage (Class 2) power needed to activate the relay (self-powered) by closing the dry contact input
- Activated by a wide range of dry contacts such as thermostats, switches, other relays, solid-state switches, etc.
- Power to energize the relay can be brought to the relay on a separate pair of wires along with the control output of the controller, or can be a local power source near the relay
- Relay contacts are isolated from the input power and the dry contact input, so they can be wired to switch any other power-load or low-voltage load (see specifications for contact ratings)

## Typical Application



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

## ENCLOSED DRY CONTACT INPUT RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	POWER INPUT	RELAY CONTACTS	CONTACT RATINGS			HIGH/LOW SEPARATION	OVERRIDE SWITCH	HOUSING STYLE *	SHIPPING WEIGHT
				RESISTIVE	MOTOR	PILOT DUTY				
RIB21CDC	•	120-277 Vac	1 SPDT	10 A @ 277 Vac	1 HP @ 250 Vac	770 VA @ 250 Vac			A	0.314 lb.
RIB01BDC	•	120 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac			B	0.514 lb.
RIB02BDC	•	208-277 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac			B	0.520 lb.
RIB01SBDC	•	120 Vac	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		1	B	0.513 lb.
RIB02SBDC	•	208-277 Vac	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		1	B	0.518 lb.
RIB01SBDCDC	•	120 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		2	B	0.590 lb.
RIB02SBDCDC	•	208-277 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac		2	B	0.580 lb.
RIBD01BDC ~	•	120 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.781 lb.
RIBD02BDC ~	•	208-277 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.790 lb.
RIBD01BDC-DOB ~	•	120 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.784 lb.
RIBD02BDC-DOB ~	•	208-277 Vac	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		C	0.805 lb.

## TRACK MOUNT DRY CONTACT INPUT RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	POWER INPUT	RELAY CONTACTS	CONTACT RATINGS			OVERRIDE SWITCH	TRACK MOUNT ^	SHIPPING WEIGHT
				RESISTIVE	MOTOR	PILOT DUTY			
RIBM01ZND	•	120 Vac	1 DPDT	30 A @ 300 Vac	3 HP @ 480-600 Vac	B600		MT4 Series	0.352 lb.
RIBM02ZND	•	208-277 Vac	1 DPDT	30 A @ 300 Vac	3 HP @ 480-600 Vac	B600		MT4 Series	0.356 lb.
RIBM013PND	•	120 Vac	1 3PDT	30 A @ 300 Vac	7.5 HP @ 480 Vac, 3 Phase	2122 VA @ 480 Vac, 3 Phase		MT4 Series	0.402 lb.

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

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

~ = Time Delay

\* = See Housing Guide on pages 86-87

^ = Track mount sold separately

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.



# SPECIALTY PERIPHERAL CONTROLS



RELAYS



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 / GENERAL PURPOSE LOGIC BOARDS

For full product information, see our website.

MODEL #	UL	POWER INPUT	ALARM CIRCUITS	BACnet COMPATIBLE	HOUSING STYLE *	TRACK MOUNT INCLUDED	SHIPPING WEIGHT
RIBMNLB	•	24 Vac	4			MT212-6	0.566 lb.
RIBLB	•	24 Vac	4		D		1.127 lb.
RIBMNWLB-7-BC	•	24 Vac	7	•		MT212-6	0.587 lb.
RIBMNLB-6	•	24 Vac	6			MT212-6	0.624 lb.
RIBMNLB-4	•	24 Vac	4			MT212-6	0.516 lb.
RIBMNLB-2	•	24 Vac	2			MT212-6	0.332 lb.
RIBMNLB-1	•	24 Vac	1			MT212-4	0.286 lb.
RIBLB-6	•	24 Vac	6		D		1.187 lb.
RIBLB-4	•	24 Vac	4		D		1.088 lb.
RIBLB-2	•	24 Vac	2		D		1.000 lb.
RIBMNLB-6NO	•	24 Vac	6			MT212-6	0.637 lb.
RIBMNLB-4NO	•	24 Vac	4			MT212-6	0.533 lb.
RIBMNLB-2NO	•	24 Vac	2			MT212-6	0.343 lb.

## I/O EXPANDERS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	POWER INPUT	RELAY CONTACTS	TRACK MOUNT INCLUDED	SHIPPING WEIGHT
RIBM24Q2C	• 1	24 Vac/dc	2 SPDT	MT212-4	0.296 lb.
RIBM24Q3C	• 1	24 Vac/dc	3 SPDT	MT212-4	0.354 lb.
RIBM24Q4C	• 1	24 Vac/dc	4 SPDT	MT212-6	0.494 lb.
RIBM24Q4C-PX	• 1	24 Vac/dc	4 SPDT	MT212-6	0.493 lb.

## MANUAL ANALOG OVERRIDE SWITCH

Product Selection Guide. For full product information, see our website.

MODEL #	POWER INPUT	SWITCH	TRACK MOUNT ^	SHIPPING WEIGHT
RIBMNA1D0	24 Vac/dc	Manual / Auto	MT212 Series	0.172 lb.

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

\* = See Housing Guide on pages 86-87

UL 1 = UL Listed : UL916 Energy Management ; USA & Canada

^ = Track mount sold separately

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

NOTES

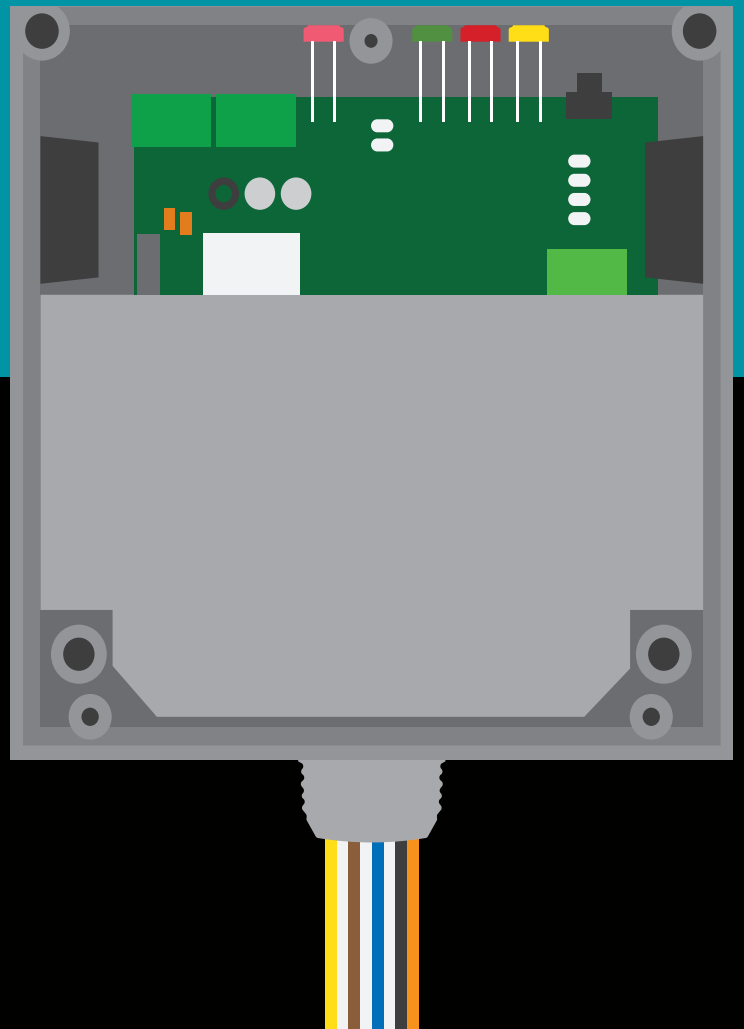
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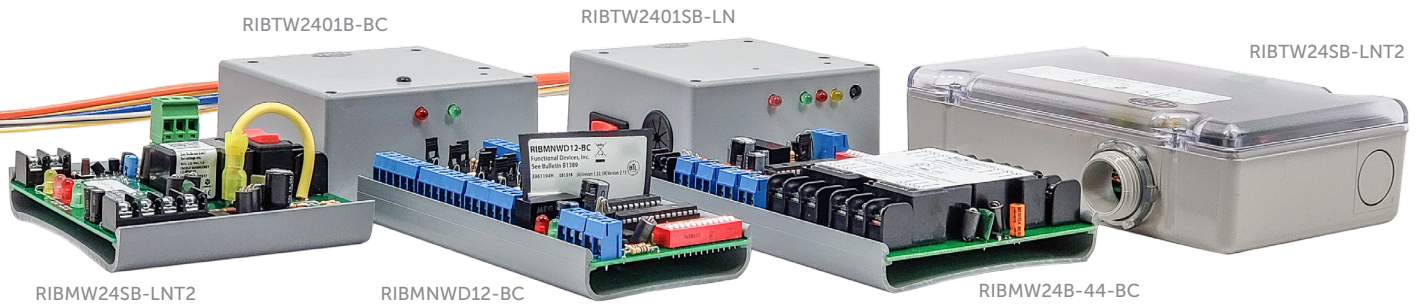
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RELAYS

# NETWORK COMPATIBLE DEVICES



NETWORK  
COMPATIBLE

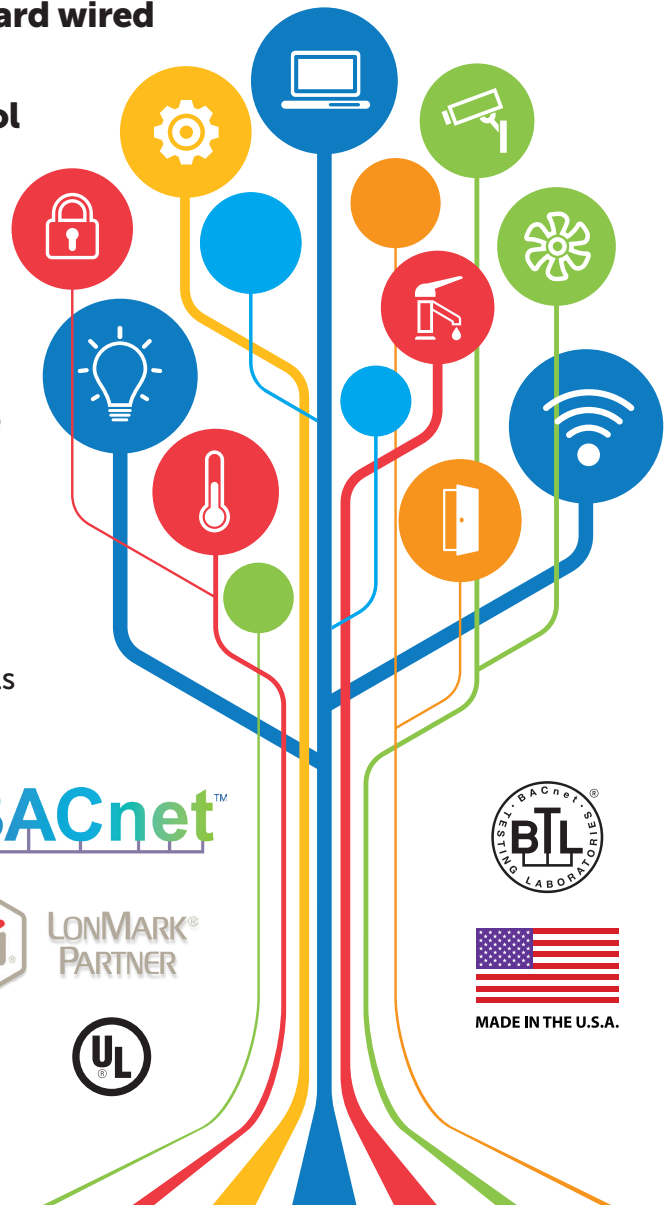


# NETWORK COMPATIBLE DEVICES

**Our Network Compatible Devices can be hard wired and used instead of more expensive multi-output controllers when a few more control points are needed, and large controllers are too much for the job. They can also be used when control points are widely spread throughout the job site. These devices have been prepackaged to save the installer the time, trouble, and expense of buying separate components and assembling them on the job.**

## Product Features

- BACnet®, LonWorks®, Wi-Fi and Modbus protocols
- Analog input
- Analog output
- Binary output
- Binary input
- Thermistor inputs available
- On-board current sensors available
- Track mount and enclosed versions
- NEMA 4X available
- UL Listed



LONMARK  
PARTNER



MADE IN THE U.S.A.



# NETWORK COMPATIBLE DEVICES

## BACNET® DEVICES

Product Selection Guide. For full product information, see our website.

MODEL #	POWER INPUT			CONTACT RATINGS			DRY CONTACT BINARY INPUT	ANALOG INPUT	ANALOG OUTPUT	ACCUMULATOR INPUT	INTERNAL CURRENT SENSOR	PRECON® THERMISTOR INPUT	OVERRIDE SWITCH	TRACK MOUNT / HOUSING STYLE *	SHIPPING WEIGHT
	UL	AC/DC	AC	RELAY CONTACTS	RESISTIVE	MOTOR									
RIBTW2401B-BC	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1					#	C	0.846 lb.
RIBTW2402B-BC	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1					#	C	0.864 lb.
RIBMNX2401B-BC	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1			•		#	MT212-6	0.532 lb.
RIBTWX2401B-BC	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1			•		#	D	1.060 lb.
RIBMNX2402B-BC	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1			•		#	MT212-6	0.532 lb.
RIBTWX2402B-BC	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1			•		#	D	1.092 lb.
RIBMNW24B-BCAI	•	24		1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	2	1			10kΩ Type 2 or 3	#	MT212-6	0.522 lb.
RIBTW24B-BCAI	•	24		1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	2	1			10kΩ Type 2 or 3	#	D	1.096 lb.
RIBTW24B-BCAO	•	24		1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1	1	1		10kΩ Type 2 or 3	#	D	1.040 lb.
RIBMWD12-BCDI	•	24						12						MT212-6	0.512 lb.
RIBMWD12-BC	•	24						12		2				MT212-6	0.540 lb.
RIBMW24B-44-BC	•	24		4 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	4					#	MT4-6	0.830 lb.

**OTHER BACNET® DEVICES:** Fan Safety Alarm Circuit / General Purpose Logic Board (pg. 44) and UPS Kit (pg. 71)

## LONMARK® DEVICES

Product Selection Guide. For full product information, see our website.

MODEL #	POWER INPUT			CONTACT RATINGS			DRY CONTACT BINARY INPUT	ANALOG INPUT	INTERNAL CURRENT SENSOR	PRECON® THERMISTOR INPUT	OVERRIDE SWITCH	TRACK MOUNT / HOUSING STYLE *	SHIPPING WEIGHT		
	UL	AC/DC	AC	RELAY CONTACTS	RESISTIVE	MOTOR								PILOT DUTY	
RIBTW2401B-LN	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1					C	0.823 lb.	
RIBTW2402B-LN	•	24	208-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1					C	0.820 lb.	
RIBTW2401SB-LN	•	24	120	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1				1	C	0.840 lb.	
RIBTW2402SB-LN	•	24	208-277	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1				1	C	0.804 lb.	
RIBMNX2401SB-LN	•	24	120	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac			•		1	MT212-6	0.530 lb.	
RIBTWX2401SB-LN	•	24	120	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac			•		1	D	1.065 lb.	
RIBMNX2402SB-LN	•	24	208-277	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac			•		1	MT212-6	0.538 lb.	
RIBTWX2402SB-LN	•	24	208-277	1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac			•		1	D	1.024 lb.	
RIBMW24SB-LNAI	•	24		1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1	1				1	MT4-4	0.500 lb.
RIBTW24SB-LNAI	•	24		1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1	1				1	D	1.027 lb.
RIBMW24SB-LNT2	•	24		1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1			10kΩ Type 2		1	MT4-4	0.476 lb.
RIBTW24SB-LNT2	•	24		1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1			10kΩ Type 2		1	D	1.020 lb.
RIBMW24SB-LNT3	•	24		1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1			10kΩ Type 3		1	MT4-4	0.476 lb.
RIBTW24SB-LNT3	•	24		1 SPST	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1			10kΩ Type 3		1	D	1.056 lb.

## WI-FI DEVICES

Product Selection Guide. For full product information, see our website.

MODEL #	POWER INPUT			CONTACT RATINGS			DRY CONTACT BINARY INPUT	UNIVERSAL INPUT	OVERRIDE SWITCH	HOUSING STYLE *	SHIPPING WEIGHT	
	UL	AC/DC	AC	RELAY CONTACTS	RESISTIVE	MOTOR						PILOT DUTY
RIBTW24B-WI-N4	•	24		1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1		#	D	0.830 lb.
RIBTW2401B-WIUI-N4	•	24	120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	1	2	#	D	1.454 lb.

## MODBUS DEVICES

Product Selection Guide. For full product information, see our website.

MODEL #	POWER INPUT			CONTACT RATINGS			DRY CONTACT BINARY INPUT	ANALOG INPUT	PRECON® THERMISTOR INPUT	OVERRIDE SWITCH	TRACK MOUNT / HOUSING STYLE *	SHIPPING WEIGHT	
	UL	AC/DC	AC	RELAY CONTACTS	RESISTIVE	MOTOR							PILOT DUTY
RIBMNW24B-MBAI	•	24		1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	2	1	10kΩ Type 2	#	MT212-6	0.532 lb.
RIBTW24B-MBAI	•	24		1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	2	1	10kΩ Type 2	#	D	1.074 lb.

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

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

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

\* = See Housing Guide on pages 86-87

▲ = Track mount included

Precon® is a registered trademark of Kele and Associates.

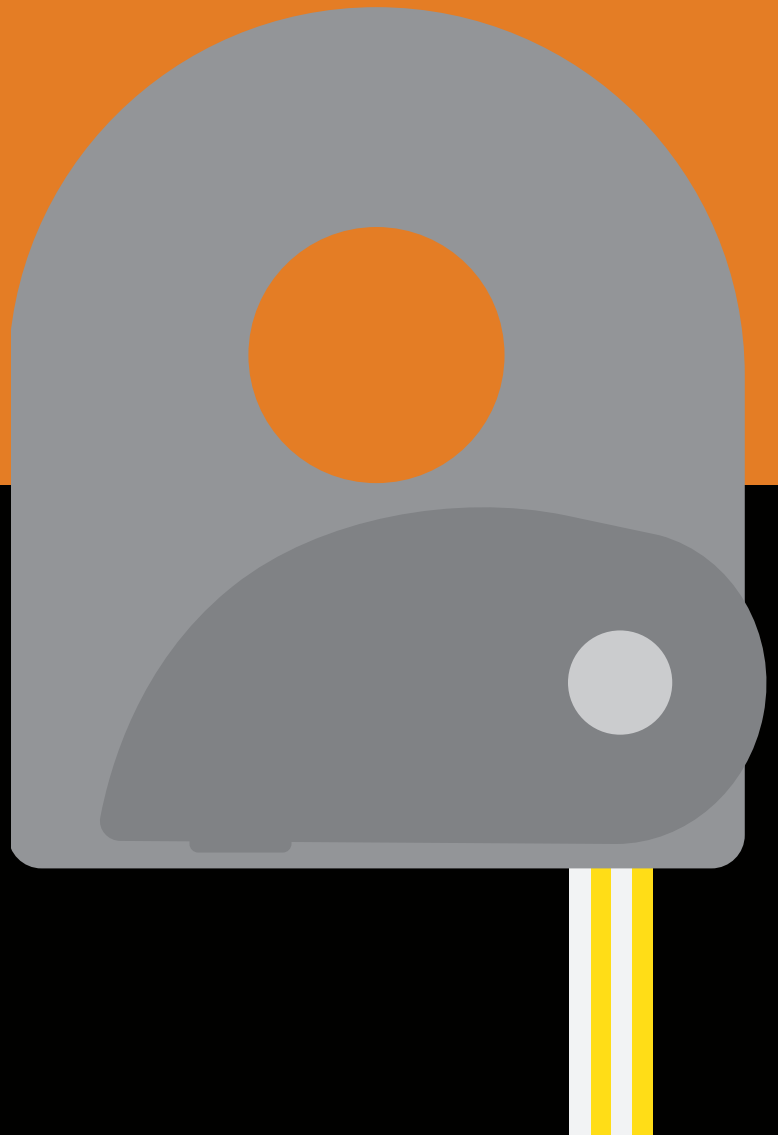
For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

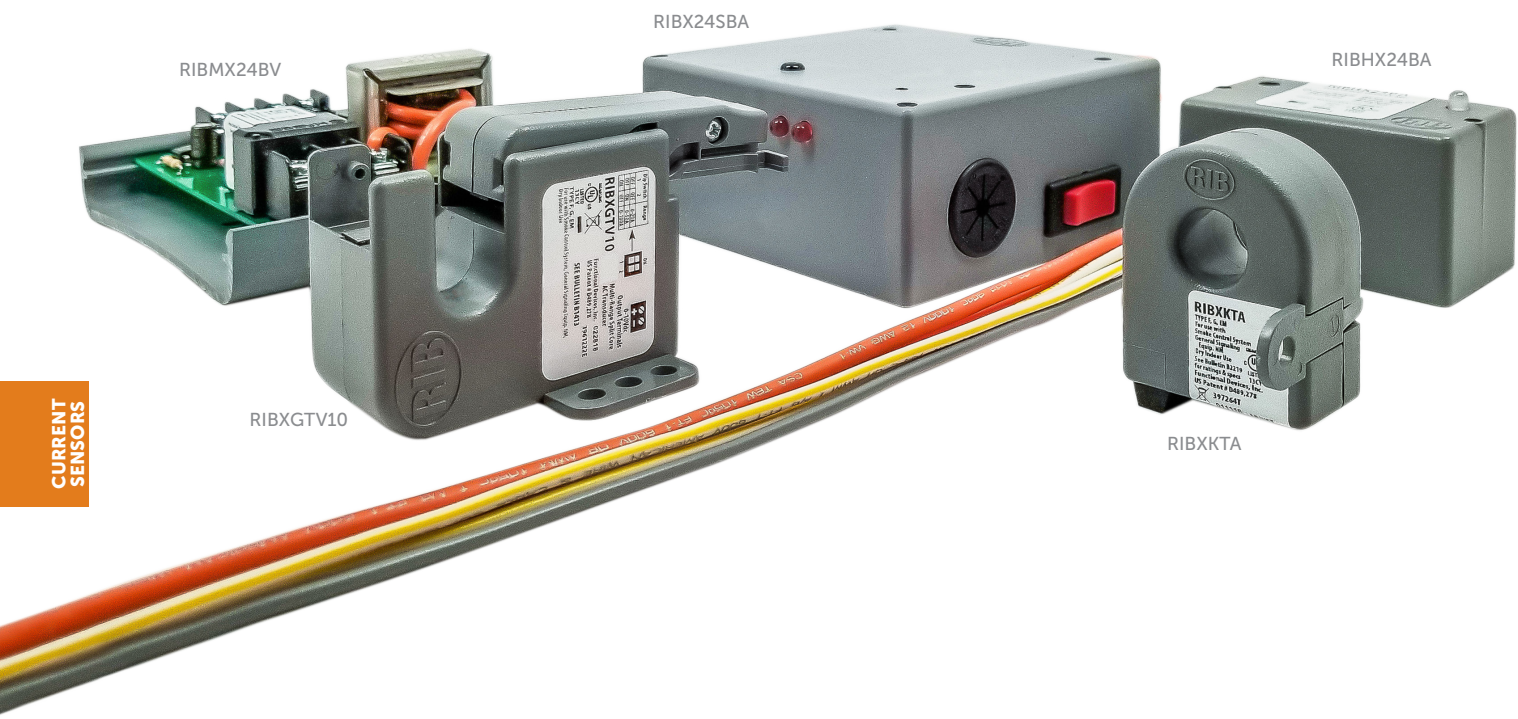
NOTES

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NETWORK  
COMPATIBLE

# CURRENT SENSORS





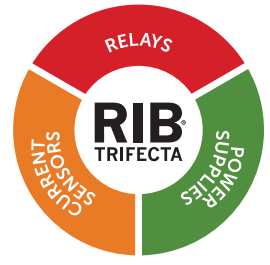
## RIB® CURRENT SENSORS, TRANSDUCERS, AND RELAY AND SENSOR COMBOS ARE PREPACKAGED TO MAKE INSTALLATION EASY

- Prepackaged: Sensor, LED indicators, and wires or terminals
- Some models available with 10 Amp or 20 Amp relay
- Sense up to 150 Amps
- Split and solid core models
- Fixed or adjustable thresholds
- Hi/Low voltage separation
- Transducers with voltage output or 4-20mA regulation available
- Enclosed or track mount
- HOA switches available
- UL Listed
- Made in the USA



### Functional Devices Certified for use with ECMs

- |           |                |            |             |             |              |
|-----------|----------------|------------|-------------|-------------|--------------|
| • RIBXKA  | • RIBXG21A     | • RIBXGHF  | • RIBXRA    | • RIBX24SBF | • RIBXLSF    |
| • RIBXKF  | • RIBXG21F     | • RIBXGHTA | • RIBXRF    | • RIBXLCA   | • RIBXLSJA   |
| • RIBXKTA | • RIBXG21TA    | • RIBXGHTF | • RIBHX24BF | • RIBXLCF   | • RIBXLSJF   |
| • RIBXKTF | • RIBXG21TF    | • RIBXGTF  | • RIBX243PA | • RIBXLCJA  | • RIBXLSRA   |
| • RIBXGA  | • RIBXGA-SCAL  | • RIBXA    | • RIBX243PF | • RIBXLCJF  | • RIBXLSRF   |
| • RIBXGF  | • RIBXGTA-SCAL | • RIBXF    | • RIBX24BA  | • RIBXLCRA  | • RIBMX24BA  |
| • RIBXGTA | • RIBXGFL      | • RIBXJA   | • RIBX24BF  | • RIBXLCRF  | • RIBMX24BF  |
| • RIBXGTF | • RIBXGHA      | • RIBXJF   | • RIBX24SBA | • RIBXLSA   | • RIBMX24SBA |
|           |                |            |             |             | • RIBMX24SBF |



# CURRENT SENSORS

## SOLID AND SPLIT CORE AC SENSORS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	SENSING RANGE	TYPE	THRESHOLD	SENSOR CONTACT TYPE	SWITCHING VOLTAGE RANGE	MAX. SWITCHING CURRENT	SENSOR CONTACT TERMINATION	SENSOR OUTPUT *	SHIPPING WEIGHT
RIBXKF	•	.25-150 A	Solid	Fixed, .25 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16" 18 AWG Wire Leads		0.175 lb.
RIBXKTF	•	.25-150 A	Solid	Fixed, .25 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.146 lb.
RIBXKA	•	.50-150 A	Solid	Adjustable	Solid State Switch SPST	30 Vac/dc	.8 Amps Max	Wht/Yel 16" 18 AWG Wire Leads		0.175 lb.
RIBXKTA	•	.50-150 A	Solid	Adjustable	Solid State Switch SPST	30 Vac/dc	.8 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.147 lb.
RIBXGHF	• <sup>1</sup>	.50-150 A	Split	Fixed, .50 Amp	Solid State Switch SPST	120 Vac only	1 Amp Max	Wht/Blk 16" 18 AWG Wire Leads		0.291 lb.
RIBXGHTF	• <sup>1</sup>	.50-150 A	Split	Fixed, .50 Amp	Solid State Switch SPST	120 Vac only	1 Amp Max	Terminal Strip, Accepts #14-22 AWG Wire		0.243 lb.
RIBXGHA	• <sup>1</sup>	.75-150 A	Split	Adjustable	Solid State Switch SPST	120 Vac only	1 Amp Max	Wht/Blk 16" 18 AWG Wire Leads		0.286 lb.
RIBXGHTA	• <sup>1</sup>	.75-150 A	Split	Adjustable	Solid State Switch SPST	120 Vac only	1 Amp Max	Terminal Strip, Accepts #14-22 AWG Wire		0.249 lb.
RIBXGF	•	.35-150 A	Split	Fixed, .35 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16" 18 AWG Wire Leads		0.273 lb.
RIBXGFL	•	.75-150 A	Split	Fixed, .75 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16" 18 AWG Wire Leads		0.280 lb.
RIBXGTF	•	.35-150 A	Split	Fixed, .35 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.235 lb.
RIBXGTF	•	.75-150 A	Split	Fixed, .75 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.240 lb.
RIBXGA	•	.75-150 A	Split	Adjustable	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16" 18 AWG Wire Leads		0.276 lb.
RIBXGTA	•	.75-150 A	Split	Adjustable	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.243 lb.
RIBXGA-SCAL	•	3-150 A	Split	Self-Calibrating	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16" 18 AWG Wire Leads		0.292 lb.
RIBXGTA-SCAL	•	3-150 A	Split	Self-Calibrating	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.248 lb.
RIBXG21F	• <sup>1</sup>	.50-150 A	Split	Fixed, .50 Amp	Solid State Switch SPST	120-277 Vac	1 Amp Max	Wht/Blk 16" 18 AWG Wire Leads		0.288 lb.
RIBXG21TF	• <sup>1</sup>	.50-150 A	Split	Fixed, .50 Amp	Solid State Switch SPST	120-277 Vac	1 Amp Max	Terminal Strip, Accepts #14-22 AWG Wire		0.243 lb.
RIBXG21A	• <sup>1</sup>	.75-150 A	Split	Adjustable	Solid State Switch SPST	120-277 Vac	1 Amp Max	Wht/Blk 16" 18 AWG Wire Leads		0.290 lb.
RIBXG21TA	• <sup>1</sup>	.75-150 A	Split	Adjustable	Solid State Switch SPST	120-277 Vac	1 Amp Max	Terminal Strip, Accepts #14-22 AWG Wire		0.244 lb.
RIBXKTV5-10	•	0-10 A	Solid	Analog				Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc	0.148 lb.
RIBXKTV5-20	•	0-20 A	Solid	Analog				Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc	0.150 lb.
RIBXKTV5-50	•	0-50 A	Solid	Analog				Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc	0.151 lb.
RIBXKTV5-100	•	0-100 A	Solid	Analog				Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc	0.149 lb.
RIBXK420-20	•	0-20 A	Solid	Analog				Red & Blk 16" 18 AWG Wire Leads	4-20 mA	0.178 lb.
RIBXK420-50	•	0-50 A	Solid	Analog				Red & Blk 16" 18 AWG Wire Leads	4-20 mA	0.180 lb.
RIBXK420-100	•	0-100 A	Solid	Analog				Red & Blk 16" 18 AWG Wire Leads	4-20 mA	0.180 lb.
RIBXGTV5	•	0-20 A, 0-50 A, 0-100 A	Split	Analog				Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc	0.246 lb.
RIBXGTV10	•	0-20 A, 0-50 A, 0-100 A	Split	Analog				Terminal Strip, Accepts #14-22 AWG Wire	0-10 Vdc	0.246 lb.
RIBXG420-20	• <sup>2</sup>	0-20 A	Split	Analog				Red & Blk 16" 18 AWG Wire Leads	4-20 mA	0.284 lb.
RIBXG420-50	• <sup>2</sup>	0-50 A	Split	Analog				Red & Blk 16" 18 AWG Wire Leads	4-20 mA	0.276 lb.
RIBXG420-100	• <sup>2</sup>	0-100 A	Split	Analog				Red & Blk 16" 18 AWG Wire Leads	4-20 mA	0.284 lb.

CURRENT SENSORS

## T STYLE AC SENSORS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	SENSING RANGE	TYPE	THRESHOLD	SENSOR CONTACT TYPE	SWITCHING VOLTAGE RANGE	MAX. SWITCHING CURRENT	SENSOR CONTACT TERMINATION	SENSOR OUTPUT	SHIPPING WEIGHT
RIBXF	•	.50-30 A	Internal	Fixed, .50 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.828 lb.
RIBXA	•	.50-30 A	Internal	Adjustable	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.835 lb.
RIBXV	•	0-30 A	Internal	Analog				Terminal Strip, Accepts #14-22 AWG Wire	0-5 Vdc / 0-10 Vdc	0.833 lb.
RIBXRF	•	1.25-150 A	Solid	Fixed, 1.25 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.684 lb.
RIBXRA	•	1.25-150 A	Solid	Adjustable	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.676 lb.
RIBXJF	•	3-150 A	Split	Fixed, 3 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.759 lb.
RIBXJA	•	3-150 A	Split	Adjustable	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		0.759 lb.

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

UL<sup>1</sup> = UL Listed : UL916 Energy Management ; USA & Canada

UL<sup>2</sup> = UL Listed : UL864 Fire, UL508 Industrial Control ; USA & Canada

\* = 4-20 mA is Loop Powered

Refer to Housing Guide on pages 86-87 or product data sheet for housing information.

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.



# CURRENT SENSOR & RELAY COMBINATIONS

## ENCLOSED AC SENSORS WITH RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE	RELAY CONTACTS	OVER-RIDE SWITCH	RESISTIVE	SENSING RANGE	TYPE *	THRESHOLD	SENSOR CONTACT TYPE	SWITCHING VOLTAGE RANGE	MAX. SWITCHING CURRENT	SENSOR OUTPUT	SHIPPING WEIGHT
RIBHX24BF	• 1	24 Vac	1 SPST-N/O		20 A @ 277 Vac	.25-20 A	Internal	Fixed, .25 Amp	Solid State Switch Contact	30 Vac/dc	.1 Amps Max		0.407 lb.
RIBHX24BA	• 1	24 Vac	1 SPST-N/O		20 A @ 277 Vac	.25-20 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.1 Amps Max		0.407 lb.
RIBXLCF	•	10-30 Vac/dc	1 SPDT		10 A @ 120-277 Vac	.50-10 A	Internal	Fixed, .50 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.758 lb.
RIBXLCA	•	10-30 Vac/dc	1 SPDT		10 A @ 120-277 Vac	.50-10 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.770 lb.
RIBXLCV	•	10-30 Vac/dc	1 SPDT		10 A @ 120-277 Vac	0-10 A	Internal	Analog				0-5 Vdc / 0-10 Vdc	0.780 lb.
RIBXLCRF	•	10-30 Vac/dc	1 SPDT		10 A @ 120-277 Vac	1.25-150 A	External	Fixed, 1.25 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.820 lb.
RIBXLCRA	•	10-30 Vac/dc	1 SPDT		10 A @ 120-277 Vac	1.25-150 A	External	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.768 lb.
RIBXLCJF	•	10-30 Vac/dc	1 SPDT		10 A @ 120-277 Vac	3-150 A	External	Fixed, 3 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.913 lb.
RIBXLCJA	•	10-30 Vac/dc	1 SPDT		10 A @ 120-277 Vac	3-150 A	External	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.867 lb.
RIBXLCEA	•	10-30 Vac/dc	1 SPDT		5 A @ 277 Vac	.125 - 5 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.787 lb.
RIBXLCEV	•	10-30 Vac/dc	1 SPDT		5 A @ 277 Vac	0 - 5 A	Internal	Analog				0-5 Vdc / 0-10 Vdc	0.777 lb.
RIBXLSF	•	10-30 Vac/dc	1 SPST	1	10 A @ 277 Vac	.50-10 A	Internal	Fixed, .50 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.786 lb.
RIBXLSA	•	10-30 Vac/dc	1 SPST	1	10 A @ 277 Vac	.50-10 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.792 lb.
RIBXLSV	•	10-30 Vac/dc	1 SPST	1	10 A @ 277 Vac	0 - 10 A	Internal	Analog				0-5 Vdc / 0-10 Vdc	0.795 lb.
RIBXLSRF	•	10-30 Vac/dc	1 SPST	1	10 A @ 277 Vac	1.25-150 A	External	Fixed, 1.25 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.852 lb.
RIBXLSRA	•	10-30 Vac/dc	1 SPST	1	10 A @ 277 Vac	1.25-150 A	External	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.768 lb.
RIBXLSJF	•	10-30 Vac/dc	1 SPST	1	10 A @ 277 Vac	3-150 A	External	Fixed, 3 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.942 lb.
RIBXLSJA	•	10-30 Vac/dc	1 SPST	1	10 A @ 277 Vac	3-150 A	External	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.898 lb.
RIBXLSSEA	•	10-30 Vac/dc	1 SPST	1	5 A @ 277 Vac	.125 - 5 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.856 lb.
RIBXLSSEV	•	10-30 Vac/dc	1 SPST	1	5 A @ 277 Vac	0 - 5 A	Internal	Analog				0-5 Vdc / 0-10 Vdc	0.840 lb.
RIBX24BF	•	24 Vac/dc	1 SPDT		20 A @ 277 Vac	.50-20 A	Internal	Fixed, .50 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.880 lb.
RIBX24BA	•	24 Vac/dc	1 SPDT		20 A @ 277 Vac	.50-20 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.890 lb.
RIBX24BV	•	24 Vac/dc	1 SPDT		20 A @ 277 Vac	0-20 A	Internal	Analog				0-5 Vdc / 0-10 Vdc	0.887 lb.
RIBX24SBF	•	24 Vac/dc	1 SPST	1	20 A @ 277 Vac	.50-20 A	Internal	Fixed, .50 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.877 lb.
RIBX24SBA	•	24 Vac/dc	1 SPST	1	20 A @ 277 Vac	.50-20 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		0.882 lb.
RIBX24SBV	•	24 Vac/dc	1 SPST	1	20 A @ 277 Vac	0-20 A	Internal	Analog				0-5 Vdc / 0-10 Vdc	0.906 lb.
RIBX243PF	• 1	24 Vac/dc	1 3PST		20 A @ 300 Vac	.50-20 A	Internal	Fixed, .50 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		1.190 lb.
RIBX243PA	• 1	24 Vac/dc	1 3PST		20 A @ 300 Vac	.50-20 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		1.190 lb.
RIBX243PV	• 1	24 Vac/dc	1 3PST		20 A @ 300 Vac	0-20 A	Internal	Analog				0-10 Vdc	1.207 lb.

## TRACK MOUNT AC SENSORS WITH RELAYS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE	RELAY CONTACTS	OVER-RIDE SWITCH	RESISTIVE	SENSING RANGE	TYPE *	THRESHOLD	SENSOR CONTACT TYPE	SWITCHING VOLTAGE RANGE	MAX. SWITCHING CURRENT	SENSOR OUTPUT	TRACK MOUNT <sup>▲</sup>	SHIPPING WEIGHT
RIBRXLCF	• 1	10-30 Vac/dc	1 SPST		10 A @ 277 Vac	.25-10 A	Internal	Fixed, .25 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		DIN Rail	0.285 lb.
RIBRXLCA	• 1	10-30 Vac/dc	1 SPST		10 A @ 277 Vac	.25-10 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		DIN Rail	0.285 lb.
RIBRXLSA	• 1	10-30 Vac/dc	1 SPST	1	10 A @ 277 Vac	.25-10 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		DIN Rail	0.285 lb.
RIBMX24BF	•	24 Vac/dc	1 SPDT		20 A @ 277 Vac	.50-20 A	Internal	Fixed, .50 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		MT4 Series	0.410 lb.
RIBMX24BA	•	24 Vac/dc	1 SPDT		20 A @ 277 Vac	.50-20 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		MT4 Series	0.410 lb.
RIBMX24SBF	•	24 Vac/dc	1 SPST	1	20 A @ 277 Vac	.50-20 A	Internal	Fixed, .50 Amp	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		MT4 Series	0.438 lb.
RIBMX24SBA	•	24 Vac/dc	1 SPST	1	20 A @ 277 Vac	.50-20 A	Internal	Adjustable	Solid State Switch Contact	30 Vac/dc	.4 Amps Max		MT4 Series	0.446 lb.
RIBMX24SBV	•	24 Vac/dc	1 SPST	1	20 A @ 277 Vac	0-20 A	Internal	Analog				0-5 Vdc / 0-10 Vdc	MT4 Series	0.408 lb.

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

UL<sup>1</sup> = UL Listed : UL916 Energy Management ; USA & Canada

\* = Internal current sensor monitors current through common contact of relay ▲ = Track mount sold separately Refer to Housing Guide on pages 86-87 or product data sheet for housing information.

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

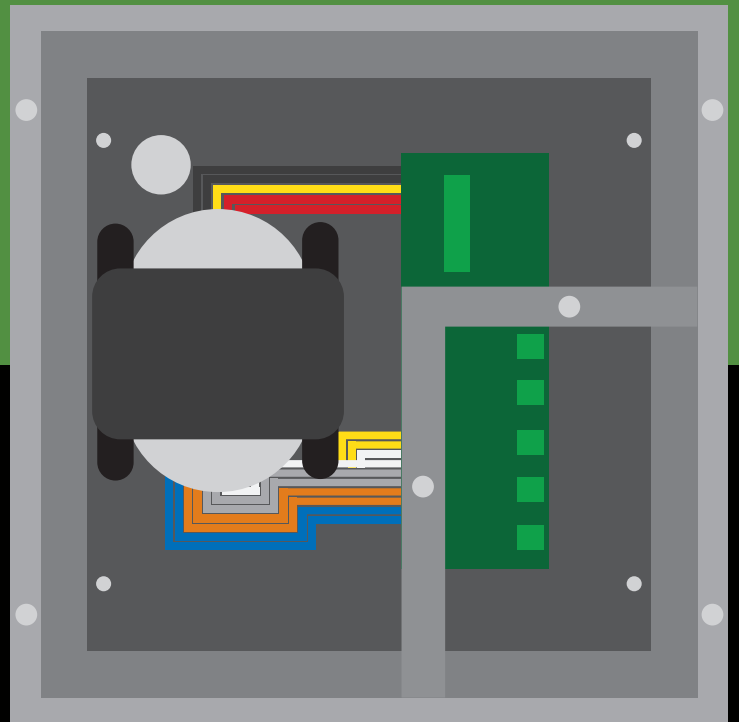
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# POWER SUPPLIES





MADE IN THE U.S.A.



## AC & DC POWER SUPPLIES

- 40 - 500 VA AC models
- Single & dual transformers
- Prepackaged power supply kits
- Class 2 models
- On/off control
- Overcurrent protection
- LED power indicator
- High/low voltage separation
- 120 Vac convenience outlets

### 500, 300 & 200 VA Power Supplies are Perfect for VAV & Zone and Network Controller Applications

- 5 or 3 isolated 100 VA or 5 isolated 40 VA outputs
- On/Off circuit breaker switch for each output
- UL Listed Class 2
- Enclosed or sub-panel mount
- Low voltage compartment models available
- 120 Vac convenience outlet available

### Mounting Your Controller and Peripheral Devices is Easy and Convenient in our Prepackaged Power Supply Solutions

**Metal Enclosure, Power Supply, and Sub-Panel with Several Options to Fit Your Needs**

If you plan to install a controller and other peripheral devices, an important consideration is where the items will be placed within an enclosure and how they will be powered. We have a line of products that can address both of those needs: the MHP Series. These products include a metal enclosure, power supply and a sub-panel with several prepackaged options to meet your specific needs.



# AC POWER SUPPLIES

## AC POWER SUPPLIES: 40-100 VA

Product Selection Guide. For full product information, see our website.

MODEL #	UL	TRANSFORMER(S)	INPUT POWER	HEIGHT	WIDTH	DEPTH	120 VAC OUTLETS	AUX OUTPUT WIRE	MAIN BREAKER ON INPUT POWER *	SECONDARY CONFIGURATION	EXTENSION CORD	HOUSING STYLE / TRACK MOUNT	SHIPPING WEIGHT
PSB40AB10	• 1	40 VA	120 Vac	5.200"	5.250"	3.750"	•	•	10 A Switch/Breaker	Ext. Terminal Strip		Panel Mount	3.340 lb.
PSB100AB10	• 1	100 VA	120 Vac	5.200"	5.250"	3.750"	•	•	10 A Switch/Breaker	Ext. Terminal Strip		Panel Mount	4.710 lb.
PSC40AB10	• 1	40 VA	120 Vac	6.250"	5.620"	4.250"	•	•	10 A Switch/Breaker	Ext. Terminal Strip		Enclosed	5.727 lb.
PSC100AB10	• 1	100 VA	120 Vac	6.250"	5.620"	4.250"	•	•	10 A Switch/Breaker	Ext. Terminal Strip		Enclosed	7.075 lb.
PSMN40A	•	40 VA	120 Vac	3.250"	2.750"	2.000"				Terminal Strip		MT212-4 included	1.636 lb.
PSMN40AS	•	40 VA	120 Vac	3.250"	2.750"	2.000"				Terminal Strip		MT212-4 included	1.790 lb.
PSH40A	• 1	40 VA	120 Vac	4.500"	5.438"	4.500"	•			Ext. Terminal Strip		Enclosed	4.013 lb.
PSH40AW	• 1	40 VA	120 Vac	4.500"	5.438"	4.500"	•			Internal Wires		Enclosed	4.020 lb.
PSH40AB10	• 1	40 VA	120 Vac	4.500"	5.438"	4.500"	•	•	10 A Switch/Breaker	Ext. Terminal Strip		Enclosed	4.195 lb.
PSH40AB10-EXT2	•	40 VA	120 Vac	4.500"	5.438"	4.500"	•	•	10 A Switch/Breaker	Ext. Terminal Strip	•	Enclosed	4.513 lb.
PSH40AWB10	• 1	40 VA	120 Vac	4.500"	5.438"	4.500"	•	•	10 A Switch/Breaker	Internal Wires		Enclosed	4.140 lb.
PSH75A	•	75 VA	480/277/240/208/120 Vac	4.500"	5.438"	4.500"	•			Ext. Terminal Strip		Enclosed	5.386 lb.
PSH75AW	•	75 VA	480/277/240/208/120 Vac	4.500"	5.438"	4.500"	•			Internal Wires		Enclosed	5.160 lb.
PSH75AB10	•	75 VA	480/277/240/208/120 Vac	4.500"	5.438"	4.500"	•	•	10 A Switch/Breaker	Ext. Terminal Strip		Enclosed	5.433 lb.
PSH75AWB10	•	75 VA	480/277/240/208/120 Vac	4.500"	5.438"	4.500"	•	•	10 A Switch/Breaker	Internal Wires		Enclosed	5.473 lb.
PSH100A	• 1	100 VA	120 Vac	4.500"	5.438"	4.500"	•			Ext. Terminal Strip		Enclosed	5.352 lb.
PSH100AW	• 1	100 VA	120 Vac	4.500"	5.438"	4.500"	•			Internal Wires		Enclosed	5.120 lb.
PSH100AB10	• 1	100 VA	120 Vac	4.500"	5.438"	4.500"	•	•	10 A Switch/Breaker	Ext. Terminal Strip		Enclosed	5.480 lb.
PSH100AB10-EXT2	•	100 VA	120 Vac	4.500"	5.438"	4.500"	•	•	10 A Switch/Breaker	Ext. Terminal Strip	•	Enclosed	5.240 lb.
PSH100AWB10	• 1	100 VA	120 Vac	4.500"	5.438"	4.500"	•	•	10 A Switch/Breaker	Internal Wires		Enclosed	5.487 lb.
PSH75A75A	•	75 VA, 75 VA	480/277/240/208/120 Vac	4.500"	8.625"	4.500"	•			Ext. Terminal Strip		Enclosed	9.376 lb.
PSH75A75AW	•	75 VA, 75 VA	480/277/240/208/120 Vac	4.500"	8.625"	4.500"	•			Internal Wires		Enclosed	9.440 lb.
PSH75A75AB10	•	75 VA, 75 VA	480/277/240/208/120 Vac	4.500"	8.625"	4.500"	•	•	10 A Switch/Breaker	Ext. Terminal Strip		Enclosed	9.280 lb.
PSH75A75AWB10	•	75 VA, 75 VA	480/277/240/208/120 Vac	4.500"	8.625"	4.500"	•	•	10 A Switch/Breaker	Internal Wires		Enclosed	9.330 lb.
PSH100A100A	• 1	100 VA, 100 VA	120 Vac	4.500"	8.625"	4.500"	•			Ext. Terminal Strip		Enclosed	9.227 lb.
PSH100A100AW	• 1	100 VA, 100 VA	120 Vac	4.500"	8.625"	4.500"	•			Internal Wires		Enclosed	9.395 lb.
PSH100A100AB10	• 1	100 VA, 100 VA	120 Vac	4.500"	8.625"	4.500"	•	•	10 A Switch/Breaker	Ext. Terminal Strip		Enclosed	9.320 lb.
PSH100A100AWB10	• 1	100 VA, 100 VA	120 Vac	4.500"	8.625"	4.500"	•	•	10 A Switch/Breaker	Internal Wires		Enclosed	9.440 lb.

POWER SUPPLIES

## AC POWER SUPPLIES: 200-500 VA

Product Selection Guide. For full product information, see our website.

MODEL #	UL	TRANSFORMER	INPUT POWER	HEIGHT	WIDTH	DEPTH	120 VAC OUTLET #	BREAKER PER OUTPUT	SECONDARY CONFIGURATION	HOUSING STYLE / SUB-PANEL	SHIPPING WEIGHT
PSH500A	•	500 VA (five 100 VA Outputs)	480/277/240/120 Vac	12.125"	12.125"	6.000"		5 x 4 Amp	Terminals	Enclosed	32.368 lb.
PSH300A	•	300 VA (three 100 VA Outputs)	480/277/240/120 Vac	12.125"	12.125"	6.000"		3 x 4 Amp	Terminals	Enclosed	20.922 lb.
PSH200A	•	200 VA (five 40 VA Outputs)	480/347/277/240/120 Vac	12.125"	12.125"	6.000"		5 x 2 Amp	Terminals	Enclosed	19.440 lb.
PSMN500A	•	500 VA (five 100 VA Outputs)	480/277/240/120 Vac	11.330"	11.400"	5.000"		5 x 4 Amp	Terminals	Sub-panel Mount	21.126 lb.
PSMN300A	•	300 VA (three 100 VA Outputs)	480/277/240/120 Vac	11.330"	11.400"	4.500"		3 x 4 Amp	Terminals	Sub-panel Mount	11.300 lb.
PSMN200A	•	200 VA (five 40 VA Outputs)	480/347/277/240/120 Vac	11.330"	11.400"	5.000"		5 x 2 Amp	Terminals	Sub-panel Mount	10.540 lb.
PSH500A-LVC	•	500 VA (five 100 VA Outputs)	480/277/240/120 Vac	12.125"	12.125"	6.000"		5 x 4 Amp	Terminals	Enclosed with Low Voltage Compartment	33.080 lb.
PSH300A-LVC	•	300 VA (three 100 VA Outputs)	480/277/240/120 Vac	12.125"	12.125"	6.000"		3 x 4 Amp	Terminals	Enclosed with Low Voltage Compartment	21.500 lb.
PSH200A-LVC	•	200 VA (five 40 VA Outputs)	480/347/277/240/120 Vac	12.125"	12.125"	6.000"		5 x 2 Amp	Terminals	Enclosed with Low Voltage Compartment	20.300 lb.
PSH500AB10-LVC	•	500 VA (five 100 VA Outputs)	120 Vac	12.125"	12.125"	6.000"	•	5 x 4 Amp	Terminals	Enclosed with Low Voltage Compartment	33.280 lb.
PSH300AB10-LVC	•	300 VA (three 100 VA Outputs)	120 Vac	12.125"	12.125"	6.000"	•	3 x 4 Amp	Terminals	Enclosed with Low Voltage Compartment	21.620 lb.
PSH200AB10-LVC	•	200 VA (five 40 VA Outputs)	120 Vac	12.125"	12.125"	6.000"	•	5 x 2 Amp	Terminals	Enclosed with Low Voltage Compartment	20.916 lb.

UL = Class 2 (UL Approved UL5085-3) : UL916 Energy Management USA & Canada

UL<sup>1</sup> = Class 2 (UL Approved UL5085-3) : UL916 Energy Management USA & Canada : UL508 Industrial Control Equipment

\* = Kills power to entire unit: Outlets, Aux. Output, & Transformer; Total Combined Output 9A

# = Convenience outlet has 4 Amp Breaker

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

# AC & DC POWER SUPPLIES

## PREPACKAGED AC POWER SUPPLY KITS

Product Selection Guide. For full product information, see our website.

MODEL #	TRANS-FORMER(S)	INPUT POWER	HEIGHT	WIDTH	DEPTH	120 VAC OUTLETS	AUX OUTPUT WIRE	ON/OFF SWITCH	MAIN BREAKER ON INPUT POWER *	SECONDARY CONFIGURATION	METAL HOUSING	SUB-PANEL / TRACK MOUNT	SHIPPING WEIGHT
CTRL-PS	40 VA	120 Vac	14.500"	7.700"	3.900"			•			MH1000	MT212-4 included	9.220 lb.
MHP3903100AB10	100 VA	120 Vac	12.500"	24.500"	6.500"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH3900	SP3803S (Polymetal)	31.000 lb.
MHP3904100AB10	100 VA	120 Vac	12.500"	24.500"	6.500"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH3900	SP3804S (Perforated)	31.000 lb.
MHP4604100AB10	100 VA	120 Vac	16.150"	20.000"	6.720"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH4600	SP4604 (Perforated)	31.000 lb.
MHP3903100A100AB10	100 VA, 100 VA	120 Vac	12.500"	24.500"	6.500"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH3900	SP3803S (Polymetal)	33.000 lb.
MHP3904100A100AB10	100 VA, 100 VA	120 Vac	12.500"	24.500"	6.500"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH3900	SP3804S (Perforated)	33.000 lb.
MHP4604100A100AB10	100 VA, 100 VA	120 Vac	16.150"	20.000"	6.720"	•	•	•	10 A Switch/Breaker	Ext. Terminal Strip	MH4600	SP4604 (Perforated)	33.000 lb.

## DC POWER SUPPLIES

Product Selection Guide. For full product information, see our website.

MODEL #	UL	VOLTAGE INPUT	VOLTAGE OUTPUT	OUTPUT CURRENT	ON/OFF SWITCH	HEIGHT	WIDTH	DEPTH	HOUSING STYLE / TRACK MOUNT	SHIPPING WEIGHT
PSP24DA	•	24 Vac	Adjustable 1.5-28 Vdc ; Non-Isolated	300 mA		2.300"	3.200"	1.800"	Enclosed	0.363 lb.
PSH24DWB10		120 Vac	Fixed 24 Vdc ; Isolated	2.5 Amp	•	4.500"	5.438"	4.500"	Enclosed	3.000 lb.
PSH100A24DWB10		120 Vac	Fixed 24 Vdc ; Isolated 100 VA, 24 Vac	2.5 Amp	•	4.500"	8.625"	4.500"	Enclosed	6.987 lb.
PSMN24DA	•	24 Vac	Adjustable 1.5-28 Vdc ; Non-Isolated	300 mA		1.750"	2.750"	1.500"	MT212-2 included	0.169 lb.
PSMN24DAS	•	24 Vac	Adjustable 1.5-28 Vdc ; Non-Isolated	300 mA	•	1.750"	2.750"	1.500"	MT212-2 included	0.187 lb.
PSM20A12DAS	•	24 Vac	Adjustable 1.5-14 Vdc ; Isolated	300 mA	•	4.000"	2.750"	1.625"	MT212-4 included	1.169 lb.
PSM24A24DAS	•	24 Vac	Adjustable 1.5-28 Vdc ; Isolated	300 mA	•	4.000"	2.750"	1.625"	MT212-4 included	1.198 lb.
PSM19A24DAS	•	120 Vac	Adjustable 1.5-28 Vdc ; Isolated	300 mA	•	4.000"	2.750"	1.625"	MT212-4 included	1.162 lb.
PSMN40A24DS	•	120 Vac	Fixed 24 Vdc ; Isolated	1 Amp	•	5.000"	2.750"	2.500"	MT212-6 included	1.890 lb.

UL = Class 2 (UL Approved UL5085-3) : UL916 Energy Management USA & Canada

\* = Kills power to entire unit: Outlets, Aux. Output, & Transformer; Total Combined Output 9A

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

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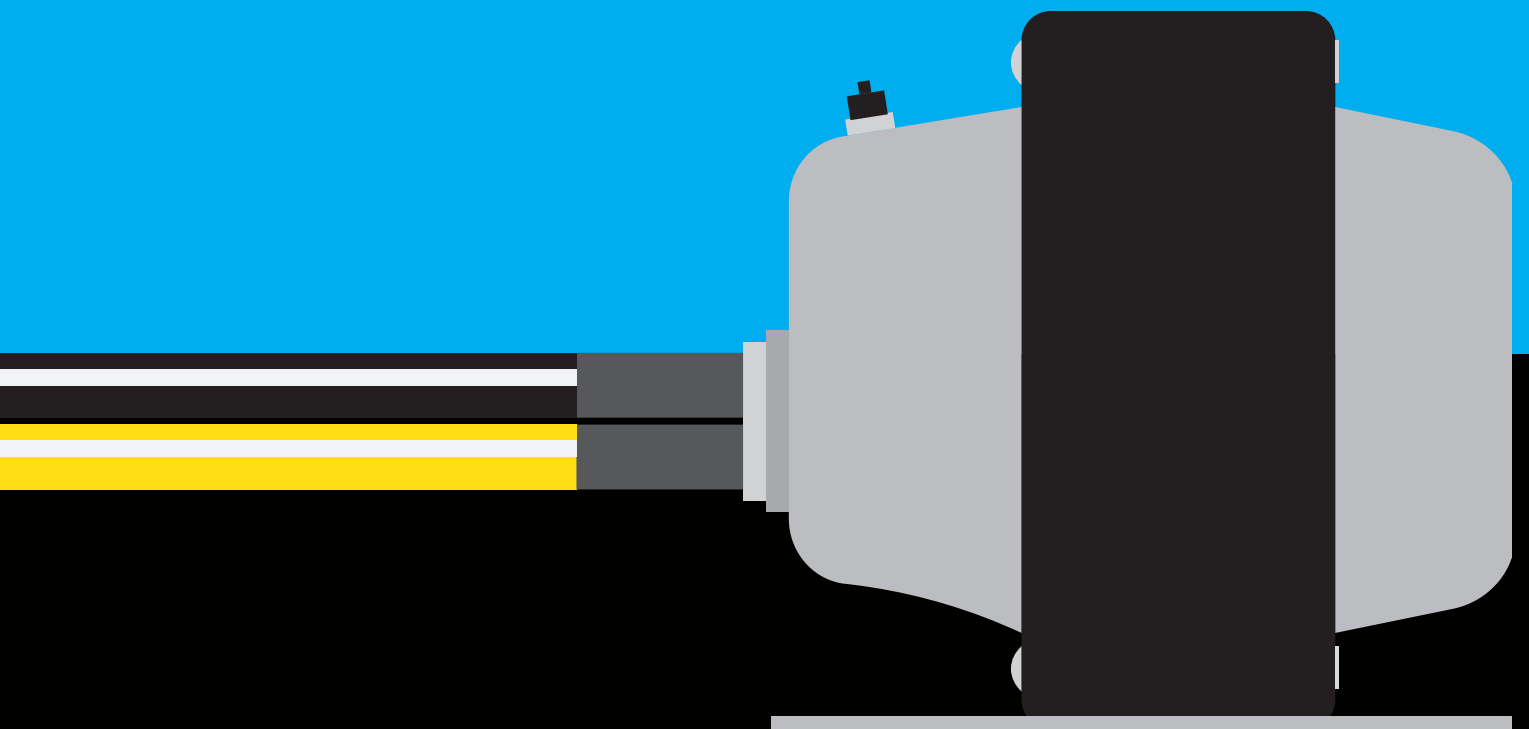
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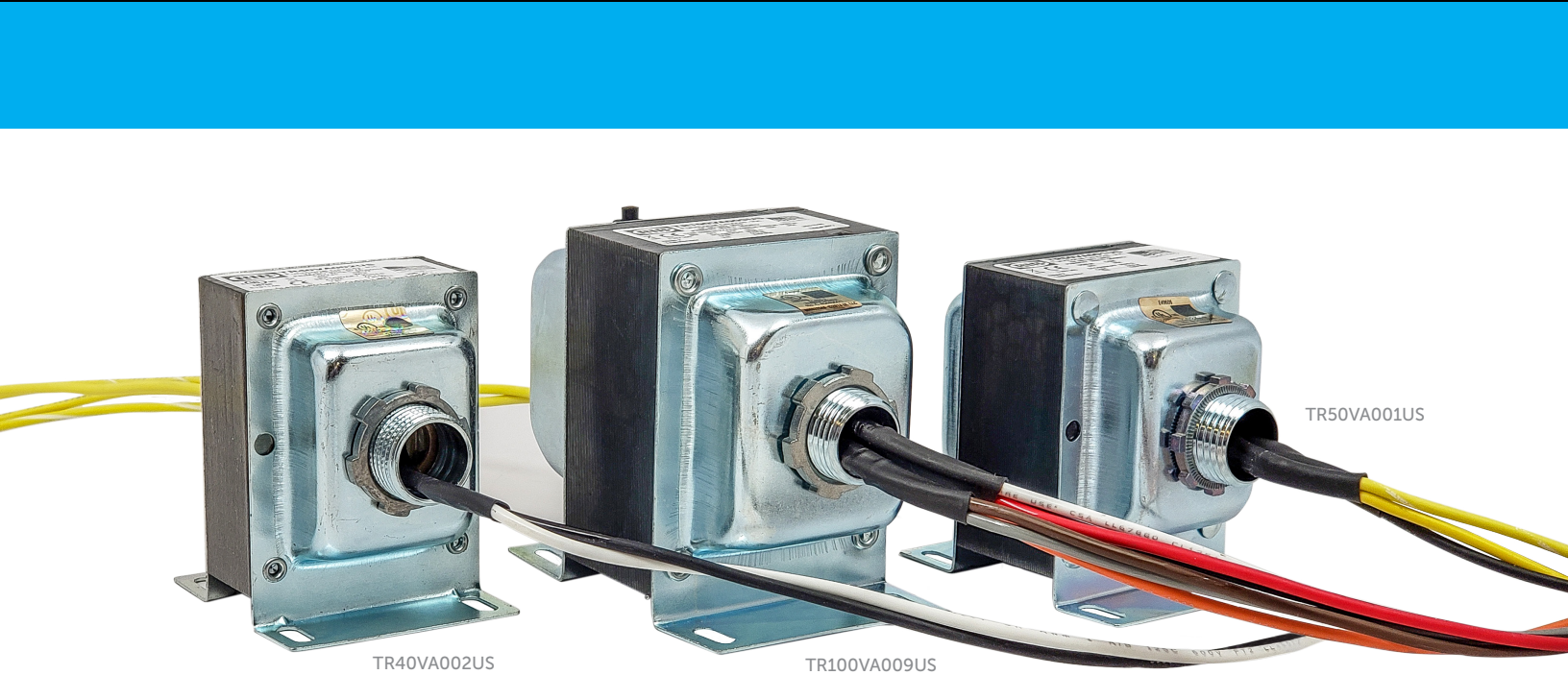
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POWER  
SUPPLIES

# TRANSFORMERS







TR40VA002US

TR100VA009US

TR50VA001US

TRANSFORMERS

# US MANUFACTURED TRANSFORMERS

- 40 VA through 96 VA
- Single and dual hub
- Foot or hub mountable
- Circuit breaker models
- Class 2 UL Listed
- 24 Vac secondary
- Single and multi-tap primaries



MADE IN THE U.S.A.

## US MANUFACTURED TRANSFORMERS: 40-96 VA

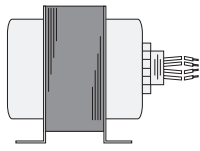
MODEL #	MADE IN USA	UL	VA RATING	STYLE	OVER CURRENT PROTECTION	CLASS 2	PRIMARY VOLTAGE (VAC)	SEC. VOLTAGE (VAC)	FOOT MOUNT	HUBS	L	W	H	A	B	C	SHIPPING WEIGHT
TR40VA001US	•	•	40VA	1	Inherent	•	120	24	•	1 Threaded	2.380"	2.200"	2.930"	1.720"	1.750"	.980"	1.770 lb.
TR40VA002US	•	•	40VA	4	Inherent	•	120	24	•	2 Threaded	2.380"	2.200"	2.920"	1.720"	1.750"	.980"	1.780 lb.
TR50VA001US	•	•	50VA	1	Fuse	•	120	24	•	1 Threaded	2.750"	2.200"	2.910"	2.060"	1.750"	1.330"	2.200 lb.
TR50VA005US	•	•	50VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	3.270"	2.525"	3.250"	2.210"	2.000"	1.130"	2.668 lb.
TR50VA022US	•	•	50VA	5	Circuit Brkr.	•	480/277/240/208/120	24	•	2 Threaded	3.260"	2.525"	3.290"	2.190"	2.000"	1.120"	2.760 lb.
TR100VA001US	•	•	96VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	3.780"	2.500"	3.290"	2.740"	2.000"	1.630"	3.570 lb.
TR100VA002US	•	•	96VA	5	Circuit Brkr.	•	120	24	•	2 Threaded	3.750"	2.500"	3.290"	2.690"	2.000"	1.600"	3.600 lb.
TR100VA009US	•	•	96VA	5	Circuit Brkr.	•	480/277/240/208/120	24	•	2 Threaded	3.500"	2.500"	3.250"	2.720"	2.000"	1.630"	3.732 lb.

For more transformers, see page 64.

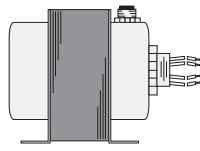
UL = UL Listed : UL5085-2 or UL5085-3 ; USA & Canada

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

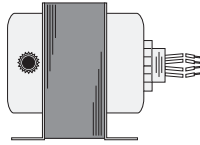
# TRANSFORMERS



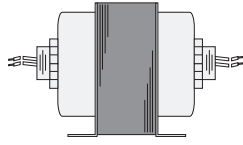
**STYLE 1**  
Single Hub  
& Foot Mount



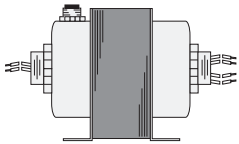
**STYLE 2**  
Single Hub  
& Foot Mount  
with Circuit Breaker



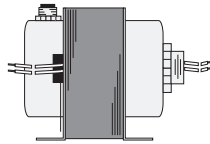
**STYLE 3**  
Single Hub  
& Foot Mount  
with Circuit Breaker



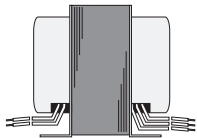
**STYLE 4**  
Dual Hub  
& Foot Mount



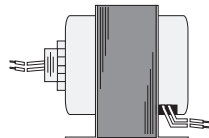
**STYLE 5**  
Dual Hub  
& Foot Mount  
with Circuit Breaker



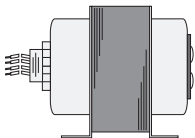
**STYLE 6**  
Single Hub  
& Side Opening  
with Circuit Breaker



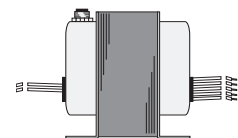
**STYLE 7**  
Two Bottom Openings  
& Foot Mount



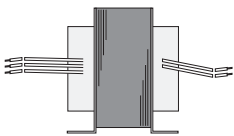
**STYLE 8**  
Single Hub,  
Side Opening  
& Foot Mount



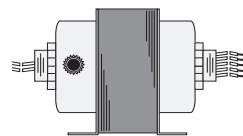
**STYLE 9**  
Single Hub  
& Dual Terminal  
Secondary



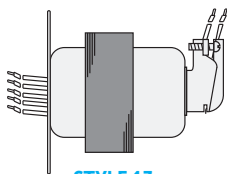
**STYLE 10**  
Two End-Bell Openings,  
& Foot Mount  
with Circuit Breaker



**STYLE 11**  
Two Side Openings  
& Foot Mount



**STYLE 12**  
Dual Hub  
& Foot Mount  
with Circuit Breaker



**STYLE 13**  
90° Conduit Connector  
& Mounting Plate  
Opening

Transformers may be foot mount, hub mount, or both. Transformers with the hub mount option will have either a single threaded hub or dual threaded hubs. Several transformers are provided with a circuit breaker and many are Class 2. Pigtail wires are standard on most models and are typically 8.00" in length.<sup>1</sup>

All transformers utilize split-bobbin construction, making them inherently isolated. Custom transformers are also available (contact factory).

Frequency: 50/60 Hz

Hub Style: .5" NPT Hub

Wire Length: 8" Typical with .5" Strip<sup>1</sup>

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 charts for UL approvals.

<sup>1</sup> = TR40VA022 = 8" Primary, 30" Secondary, with .5" Strip

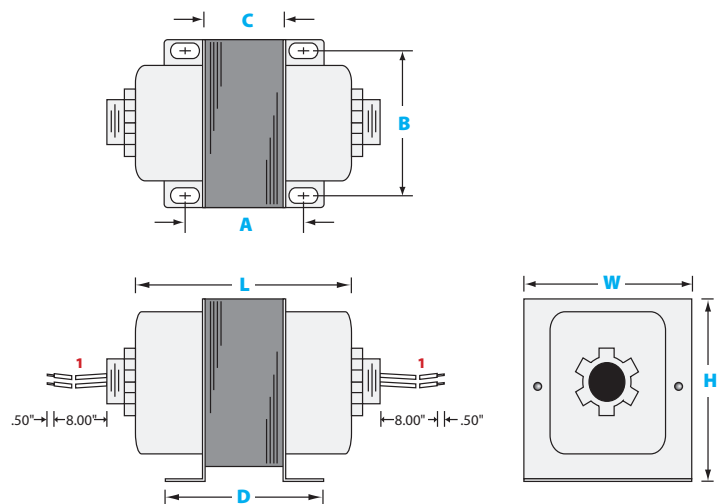
TR50VA019 = 28" Typical with .5" Strip

TR100VA002-20 = 8" Primary, 20" Secondary, with .5" Strip

Instructions inside product box include wire colors/voltages.

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

Dimensions: See charts.



# TRANSFORMERS

## TRANSFORMERS: 20-375 VA

MODEL #	UL	VA RATING	STYLE	OVER CURRENT PROTECTION	CLASS 2	PRIMARY VOLTAGE (VAC)	SEC. VOLTAGE (VAC)	FOOT MOUNT	HUBS	L	W	H	A	B	C	D	SHIPPING WEIGHT
TR20VA001	•	20VA	1	Inherent	•	120	24	•	1 Threaded	2.226"	1.877"	2.595"	1.612"	1.619"	1.013"	2.125"	1.331 lb.
TR20VA002	•	20VA	4	Inherent	•	208	24	•	2 Threaded	2.296"	1.902"	2.616"	1.604"	1.665"	1.020"	2.114"	1.363 lb.
TR20VA003	•	20VA	1	Inherent	•	24	24	•	1 Threaded	2.272"	1.900"	2.628"	1.635"	1.686"	1.023"	2.153"	1.370 lb.
TR20VA004	•	20VA	4	Inherent	•	277/240/208/120	24	•	2 Threaded	2.310"	1.890"	2.625"	1.540"	1.625"	1.000"	2.100"	1.422 lb.
TR20VA007	•	20VA	1	Inherent	•	277	24	•	1 Threaded	2.302"	1.895"	2.607"	1.608"	1.685"	1.019"	2.107"	1.337 lb.
TR40VA001	•	40VA	1	Inherent	•	120	24	•	1 Threaded	2.607"	2.169"	2.906"	2.020"	1.786"	1.204"	2.545"	1.952 lb.
TR40VA002	•	40VA	4	Inherent	•	120	24	•	2 Threaded	2.634"	2.177"	2.886"	2.007"	1.775"	1.206"	2.564"	1.980 lb.
TR40VA003	•	40VA	1	Inherent	•	24	24	•	1 Threaded	2.653"	2.171"	2.882"	2.033"	1.779"	1.185"	2.580"	2.018 lb.
TR40VA004	•	40VA	4	Inherent	•	277/240/208/120	24	•	2 Threaded	2.631"	2.177"	2.882"	1.998"	1.774"	1.189"	2.553"	2.127 lb.
TR40VA013	•	40VA	2	Circuit Brkr.	•	480/277/240/208	120	•	1 Threaded	3.267"	2.505"	3.000"	1.699"	1.986"	1.114"	2.325"	2.588 lb.
TR40VA015	•	40VA	1	Internal Thermal	•	240/208/120	24	•	1 Threaded	2.628"	2.175"	2.907"	2.040"	1.780"	1.188"	2.590"	2.331 lb.
TR40VA022 #	•	40VA	4	Inherent	•	120	24	•	2 Threaded	2.660"	2.172"	2.891"	1.980"	1.786"	1.201"	2.526"	2.070 lb.
TR40VA040 ^	•	40VA	9	Internal Thermal	•	240/208/120	24	•	1 Threaded	2.728"	2.171"	2.890"	1.995"	1.792"	1.215"	2.550"	2.315 lb.
TR50VA001	•	50VA	1	Fuse	•	120	24	•	1 Threaded	2.677"	2.178"	2.879"	2.109"	1.793"	1.253"	2.664"	2.132 lb.
TR50VA002	•	50VA	4	Fuse	•	120	24	•	2 Threaded	2.696"	2.181"	2.908"	2.053"	1.788"	1.278"	2.614"	2.186 lb.
TR50VA003	•	50VA	4	Fuse	•	240/208	24	•	2 Threaded	2.695"	2.181"	2.899"	2.082"	1.778"	1.294"	2.646"	2.219 lb.
TR50VA004	•	50VA	5	Circuit Brkr.	•	480/277/240/120	24	•	2 Threaded	3.475"	2.513"	3.014"	1.858"	1.970"	1.291"	2.490"	2.840 lb.
TR50VA005	•	50VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	3.489"	2.515"	3.008"	1.870"	1.971"	1.294"	2.463"	2.730 lb.
TR50VA006	•	50VA	1	Fuse	•	277	24	•	1 Threaded	2.763"	2.182"	2.898"	2.135"	1.790"	1.322"	2.698"	2.164 lb.
TR50VA007	•	50VA	4	Fuse	•	277	24	•	2 Threaded	2.715"	2.173"	2.886"	2.148"	1.784"	1.276"	2.661"	2.227 lb.
TR50VA008	•	50VA	5	Circuit Brkr.	•	480/277/240/208	120	•	2 Threaded	3.440"	2.510"	3.012"	1.932"	1.945"	1.346"	2.523"	2.866 lb.
TR50VA009	•	50VA	5	Circuit Brkr.	•	240/208/120	24	•	2 Threaded	3.412"	2.504"	3.014"	1.864"	1.961"	1.313"	2.485"	2.842 lb.
TR50VA014	•	50VA	2	Circuit Brkr.	•	277	24	•	1 Threaded	3.479"	2.509"	3.009"	1.873"	1.965"	1.285"	2.480"	2.743 lb.
TR50VA015	•	50VA	2	Circuit Brkr.	•	480/277/240/208/120	24	•	1 Threaded	3.405"	2.517"	3.013"	1.875"	1.985"	1.316"	2.484"	2.844 lb.
TR50VA016	•	50VA	2	Circuit Brkr.	•	240/208/120	24	•	1 Threaded	3.345"	2.510"	3.028"	1.842"	1.978"	1.325"	2.454"	2.804 lb.
TR50VA017	•	50VA	2	Circuit Brkr.	•	480/277/208	24	•	1 Threaded	3.470"	2.520"	3.031"	1.880"	1.872"	1.292"	2.460"	2.812 lb.
TR50VA018	•	50VA	13		•	480/277/240/208	120		1, 90° Conduit Connector, 1 Mounting Plate Opening								Refer to data sheet on website. 3.276 lb.
TR50VA019 #	•	50VA	11	Inherent	•	277/120	24	•	2 Side Openings	2.470"	2.170"	2.896"	1.850"	1.740"	1.130"	2.512"	2.026 lb.
TR75VA001	•	75VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	3.743"	2.506"	3.016"	2.256"	1.974"	1.711"	2.873"	3.558 lb.
TR75VA002	•	75VA	5	Circuit Brkr.	•	120	24	•	2 Threaded	3.890"	2.508"	3.013"	2.290"	1.952"	1.701"	2.882"	3.567 lb.
TR75VA003	•	75VA	2	Circuit Brkr.	•	277	24	•	1 Threaded	3.875"	2.507"	3.037"	2.269"	1.978"	1.684"	2.860"	3.576 lb.
TR75VA004	•	75VA	6	Circuit Brkr.	•	480/240/208/120	24	•	1 Threaded 1 Side Opening	3.802"	2.515"	3.050"	2.244"	1.990"	1.665"	2.850"	3.726 lb.
TR75VA005	•	75VA	2	Circuit Brkr.	•	480/240/208/120	24	•	1 Threaded	3.880"	2.515"	3.030"	2.270"	1.975"	1.700"	2.854"	3.724 lb.
TR75VA007	•	75VA	5	Circuit Brkr.	•	480/240/208/120	24	•	2 Threaded	3.883"	2.504"	3.034"	2.287"	1.981"	1.708"	2.887"	3.727 lb.
TR100VA001	•	100VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	4.085"	2.515"	3.030"	2.486"	1.975"	1.900"	3.082"	3.984 lb.
TR100VA002	•	100VA	5	Circuit Brkr.	•	120	24	•	2 Threaded	4.077"	2.504"	3.023"	2.470"	1.975"	1.888"	3.095"	4.010 lb.
TR100VA002-20 #	•	100VA	5	Circuit Brkr.	•	120	24	•	2 Threaded	3.973"	2.518"	3.033"	2.486"	1.865"	1.924"	3.060"	4.082 lb.
TR100VA004	•	100VA	5	Circuit Brkr.	•	480/277/240/120	24	•	2 Threaded	4.173"	2.523"	3.041"	2.647"	1.976"	2.086"	3.268"	4.524 lb.
TR100VA005	•	100VA	2	Circuit Brkr.	•	480/277/240/120	24	•	1 Threaded	4.258"	2.510"	3.030"	2.670"	1.968"	2.065"	3.260"	4.496 lb.
TR100VA008	•	100VA	5	Circuit Brkr.	•	480/277/240/208	120	•	2 Threaded	4.220"	2.525"	3.022"	2.690"	1.970"	2.082"	3.272"	4.313 lb.
TR100VA009	•	100VA	5	Circuit Brkr.	•	480/277/240/208/120	24	•	2 Threaded	4.270"	2.500"	4.060"	2.750"	1.975"	2.000"	2.252"	4.524 lb.
TR100VA015	•	100VA	2	Circuit Brkr.	•	480/277/240/208/120	24	•	1 Threaded	4.270"	2.500"	4.060"	2.699"	2.030"	2.065"	2.252"	4.524 lb.
TR150VA001	•	150VA	3	Circuit Brkr.	•	120	24	•	1 Threaded	3.650"	3.800"	3.183"	2.560"	3.150"	1.438"	3.514"	5.073 lb.
TR150VA002	•	150VA	5	Circuit Brkr.	•	120	24	•	2 Threaded	3.620"	3.785"	3.160"	2.568"	3.147"	1.456"	3.511"	5.157 lb.
TR150VA008	•	150VA	12	Circuit Brkr.	•	480/277/240/208	120	•	2 Threaded	4.283"	3.786"	3.161"	3.211"	3.260"	2.116"	4.177"	7.158 lb.
TR175VA001	•	175VA	7		•	240/208	24	•	2 Bottom Openings	3.801"	3.790"	3.163"	3.264"	3.141"	2.151"	4.197"	6.980 lb.
TR175VA002	•	175VA	4		•	120	24	•	2 Threaded	3.800"	3.790"	3.189"	3.220"	3.150"	2.100"	4.180"	7.047 lb.
TR175VA003	•	175VA	1	Thermal Fuse on Primary	•	120	24	•	1 Threaded	4.030"	3.786"	3.161"	3.189"	3.155"	2.127"	4.153"	6.935 lb.
TR240VA001	•	240VA	8		•	120	24	•	1 Threaded 1 Bottom Opening	3.957"	3.750"	4.530"	3.350"	3.180"	1.932"	4.025"	8.470 lb.
TR300VA002	•	300VA	10	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"	11.568 lb.
TR375VA001	•	375VA	7		•	120	24	•	2 Bottom Openings	4.592"	3.747"	4.504"	3.933"	3.181"	2.516"	4.630"	11.120 lb.

UL = UL Listed : UL5085-2 or UL5085-3 ; USA & Canada    UL = UL Component Recognized : UL5085-2 or UL5085-3 ; USA & Canada    # = Refer to website for more wire length information    ^ = Dual Terminal Secondary

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

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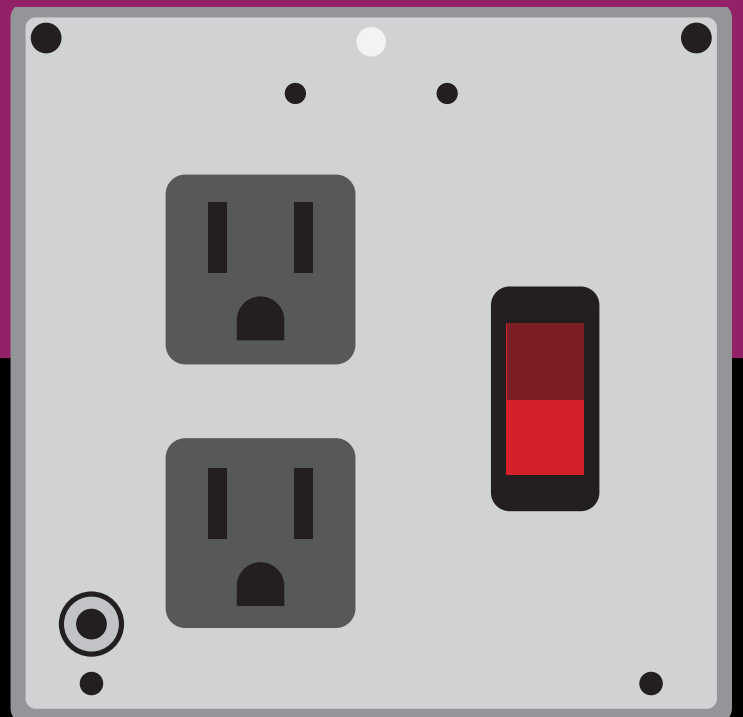
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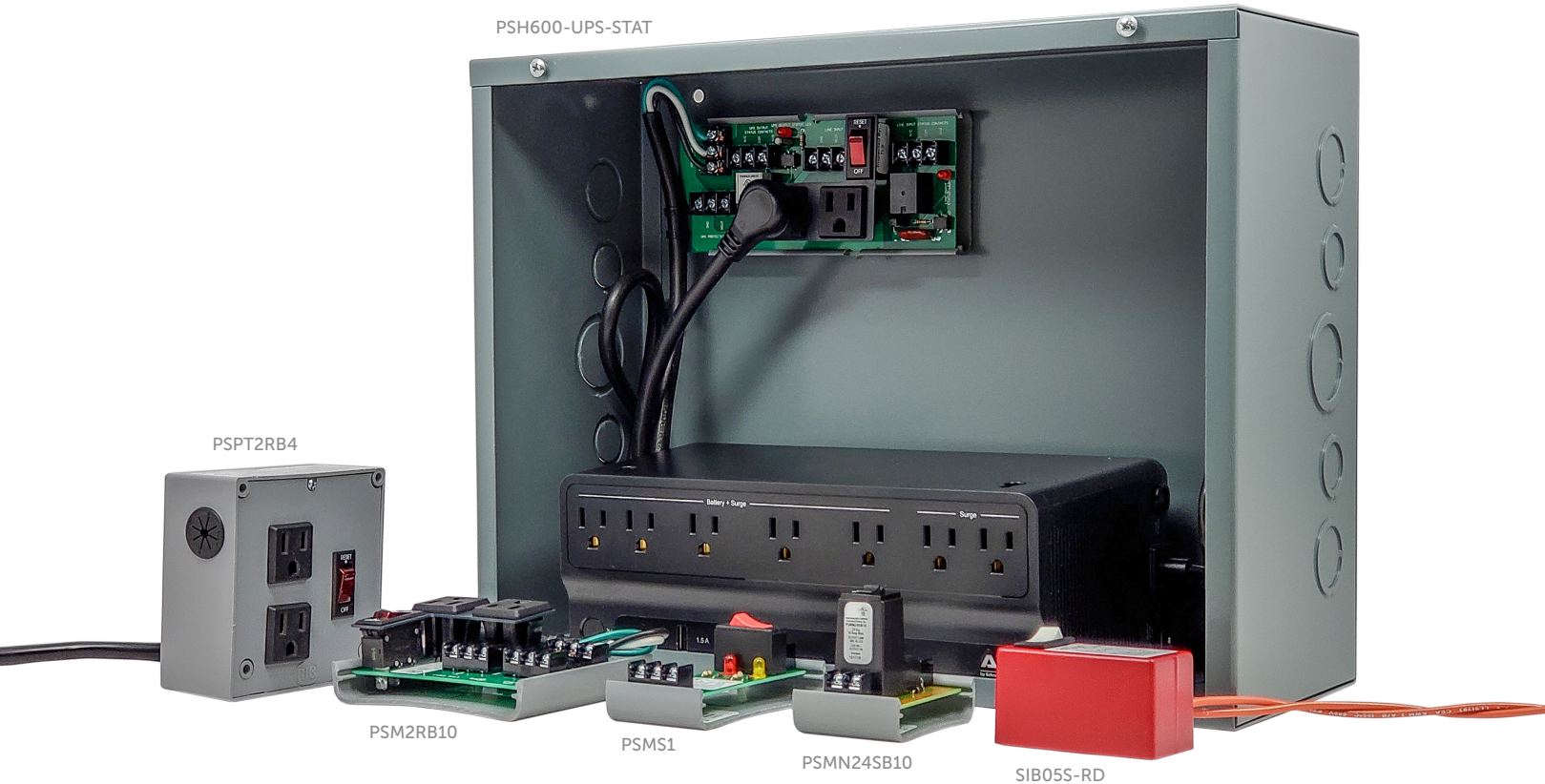
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TRANSFORMERS



# POWER CONTROL





# POWER CONTROL

## 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.

## Track Mount Circuit Breaker Switches

- Track mount circuit breaker switches provide a convenient addition to control panels.
- Circuits can be low voltage (24 Vac) or line voltage (120 Vac).

## Prepackaged Switches

- Standard configurations to provide simple switching schemes.
- Labels can be ordered with custom content to fit your project.

## UPS Power Supplies

- Perfect for applications in hospitals, laboratories and research & surgery centers
- Keep your critical controller powered on during a loss of normal utility power with the ability to hardwire line voltage to the provided UPS, in addition to hardwiring the UPS to the final load.
- Kits include: 600 or 850 VA commercial UPS, NEMA 1 metal enclosure, and interface board
- BACnet® compatible model is BTL Certified and includes six objects: Line or UPS power, UPS percent load, VA load, UPS battery capacity, USB connection, and remaining battery time.
- Cords tuck inside enclosure for clean & neat use of a UPS.
- 600 VA UPS is hot-swappable.
- 120 Vac convenience outlet(s) provided
- 10 Amp circuit breaker / switch can be used to test functionality of UPS.
- Switch controls line voltage

# POWER CONTROL

## ENCLOSED POWER CONTROL CENTERS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	120 VAC OUTLETS	SWITCH	CIRCUIT BREAKER	HEIGHT	WIDTH	DEPTH	WIRES	TERMINALS	SHIPPING WEIGHT
PSPT2RB4	•	2	On / Off	4 Amp	4.000"	4.000"	1.800"		•	0.608 lb.
PSPW2RB4	•	2	On / Off	4 Amp	4.000"	4.000"	1.800"	•		0.641 lb.
PSPT2RB10	•	2	On / Off	10 Amp	4.000"	4.000"	1.800"		•	0.616 lb.
PSPW2RB10	•	2	On / Off	10 Amp	4.000"	4.000"	1.800"	•		0.660 lb.

## TRACK MOUNT CIRCUIT BREAKER SWITCHES

Product Selection Guide. For full product information, see our website.

MODEL #	UL	POWER INPUT	SWITCH	LED	CIRCUIT BREAKER	HEIGHT	WIDTH	DEPTH	TRACK MOUNT	SHIPPING WEIGHT
PSMN01SB4	•	120 Vac	On / Off	•	4 Amp	2.750"	1.350"	2.061"	MT212-2 included	0.166 lb.
PSMN01SB10	•	120 Vac	On / Off	•	10 Amp	2.750"	1.350"	2.061"	MT212-2 included	0.180 lb.
PSMN24SB4	•	24 Vac	On / Off	•	4 Amp	2.750"	1.350"	2.061"	MT212-2 included	0.168 lb.
PSMN24SB10	•	24 Vac	On / Off	•	10 Amp	2.750"	1.350"	2.061"	MT212-2 included	0.162 lb.

## PREPACKAGED SWITCHES

Product Selection Guide. For full product information, see our website.

MODEL #	UL	RELAY CONTACTS	SWITCH	SWITCH RATING	HEIGHT	WIDTH	DEPTH	ENCLOSED	TRACK MOUNT	SHIPPING WEIGHT
PSMS1	•	1 SPST	Maintained 3 Position	5 Amp @ 30 Vac/dc	1.275"	4.000"	1.750"		MT4 Series sold separately	0.107 lb.
SIB02S	•	1 SPDT	Maintained 3 Position	20 Amp @ 277 Vac	1.700"	2.800"	1.500"	•		0.290 lb.
SIB04S	•	1 SPDT	Maintained 2 Position (On / On)	20 Amp @ 277 Vac	1.700"	2.800"	1.500"	•		0.292 lb.
SIB05S	•	1 SPST	Maintained 2 Position (On / Off)	20 Amp @ 277 Vac	1.700"	2.800"	1.500"	•		0.253 lb.
SIBLS	•	1 SPDT	Maintained 3 Position	5 Amp @ 30 Vac/dc	1.700"	2.800"	1.500"	•		0.273 lb.

## UPS POWER SUPPLIES

Product Selection Guide. For full product information, see our website.

MODEL #	UL	STATUS	UPS	CIRCUIT BREAKER	120 VAC OUTLET(S)	BACnet COMPATIBLE	KIT	ENCLOSED	TRACK MOUNT	HEIGHT	WIDTH	DEPTH	SHIPPING WEIGHT
PSH600-UPS (Kit)			600 VA	•	•		N/A	•		12.000"	14.000"	6.000"	23.180 lb.
PSH2RB10	•			•	•		PSH600-UPS	•		12.000"	14.000"	6.000"	12.560 lb.
PSM2RB10	•			•	•		PSH600-UPS		MT4-4N included	4.000"	3.250"	1.750"	0.880 lb.
PSH600-UPS-STAT (Kit)		•	600 VA	•	•		N/A	•		12.000"	16.000"	6.000"	24.100 lb.
PSH2C2RB10	•	•		•	•		PSH600-UPS-STAT	•		12.000"	16.000"	6.000"	14.060 lb.
PSMN2C2RB10	•	•		•	•		PSH600-UPS-STAT		MT212-6N included	2.750"	6.655"	1.750"	0.984 lb.
PSH850-UPS-STAT (Kit)		•	850 VA	•	•		N/A	•		14.000"	16.000"	6.000"	34.800 lb.
PSH2C2RB10-L	•	•		•	•		PSH850-UPS-STAT	•		14.000"	16.000"	6.000"	16.290 lb.
PSH600-UPS-BC (Kit)		•	600 VA	•	•	•	N/A	•		12.000"	16.000"	6.000"	24.262 lb.

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

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

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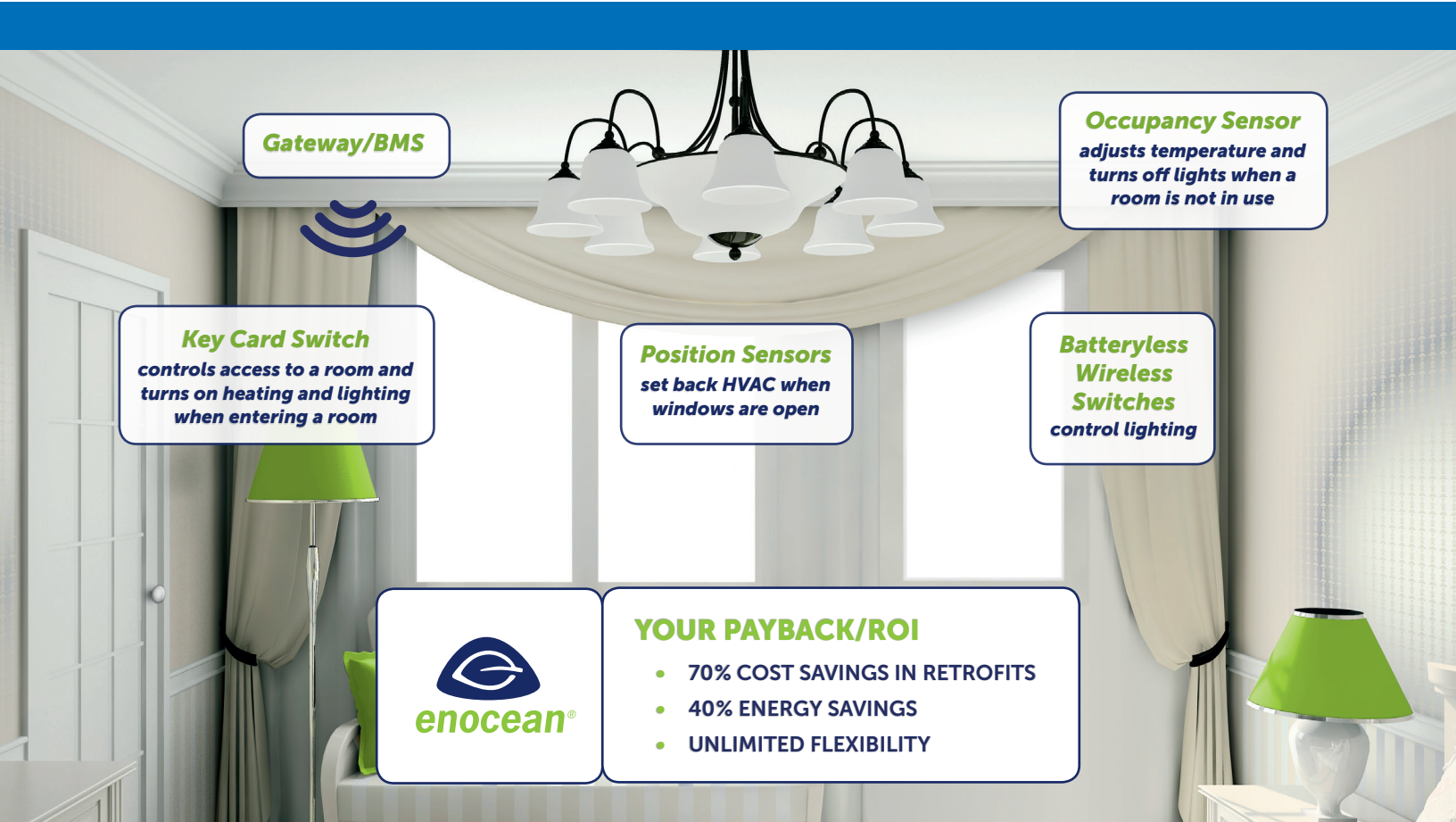
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POWER  
CONTROL

# WIRELESS DEVICES



# HVAC & Lighting Energy Management



**902 MHz • Maintenance-free**  
**Flexibility of applications • Time saving**  
**Cost savings in installation, renovation, and energy usage**

Many hotels keep their rooms at a comfortable temperature for the duration of their guests' stays – whether the guests are in or out of their room. With guest comfort as a priority, hotels and motels typically use almost 40 percent of their electricity on heating and cooling rooms, even though studies show that most sold rooms are unoccupied for 12 or more hours a day. Used correctly, the right controls could offer significant energy savings without compromising the comfort of guests.

Information from: EnOcean® Alliance & ENERGY STAR Building Upgrade Manual



# ENOCEAN® ENABLED WIRELESS DEVICES



**enocean® alliance**  
Member



RIBW01B-EN3

RIBW01C-EN3



WDWS-EN3



WWS2-EN3



WKC-EN3



WVSCM-EN3



WVSWM-EN3

## EnOcean® Enabled Wireless RIB® Relay Receivers & Transceivers work in conjunction with many 902 MHz EnOcean® enabled transmitters.

Wireless wall switches, occupancy sensors, thermostats, key card switches, and patio & 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

Product Selection Guide. For full product information, see our website.

MODEL #	UL	COIL VOLTAGE		CONTACT RATINGS				REPEAT FUNCTION	DRY CONTACT INPUT	DIMMER FUNCTION	HOUSING STYLE *	FREQUENCY	SHIPPING WEIGHT
		AC/DC	AC	RELAY CONTACTS	RESISTIVE	MOTOR	PILOT DUTY						
RIBW01B-EN3	•		120	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	•		B	902 MHz	0.660 lb.
RIBW208B-EN3	•		208	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	•		B	902 MHz	0.658 lb.
RIBW240B-EN3	•		240	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	•		B	902 MHz	0.660 lb.
RIBW277B-EN3	•		277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	•		B	902 MHz	0.657 lb.
RIBW24B-EN3	•	24		1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•	•		B	902 MHz	0.648 lb.
RIBW21BAO-EN3	•		120-277	1 SPDT	20 A @ 277 Vac	2 HP @ 277 Vac	1,110 VA @ 277 Vac	•		•	B	902 MHz	0.660 lb.
RIBW01C-EN3	•		120	1 SPST	5 A Ballast @ 120/277 Vac; 5 A Elec. Ballast @ 120 Vac			•			Ballast size	902 MHz	0.318 lb.
RIBW02C-EN3	•		208-277	1 SPST	5 A Ballast @ 120/277 Vac; 5 A Elec. Ballast @ 120 Vac			•			Ballast size	902 MHz	0.280 lb.

### WIRELESS TRANSMITTERS

Product Selection Guide. For full product information, see our website.

MODEL #	DESCRIPTION	POWER INPUT	ENOCEAN® ENERGY HARVESTING	FREQUENCY	COLOR	SHIPPING WEIGHT
WWS2-EN3	Wall switch with barrier & cover plate	Self-Powered	•	902 MHz	White	0.288 lb.
WDWS-EN3	Door and window switch	Light-Powered	•	902 MHz	White	0.217 lb.
WKC-EN3	Keycard switch	Self-Powered	•	902 MHz	White	0.360 lb.
WVSCM-EN3	Occupancy / vacancy sensor, ceiling mount	Light-Powered	•	902 MHz	White	0.288 lb.
WVSWM-EN3	Occupancy / vacancy sensor, wall mount	Light-Powered	•	902 MHz	White	0.288 lb.

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

\* = See Housing Guide on pages 86-87

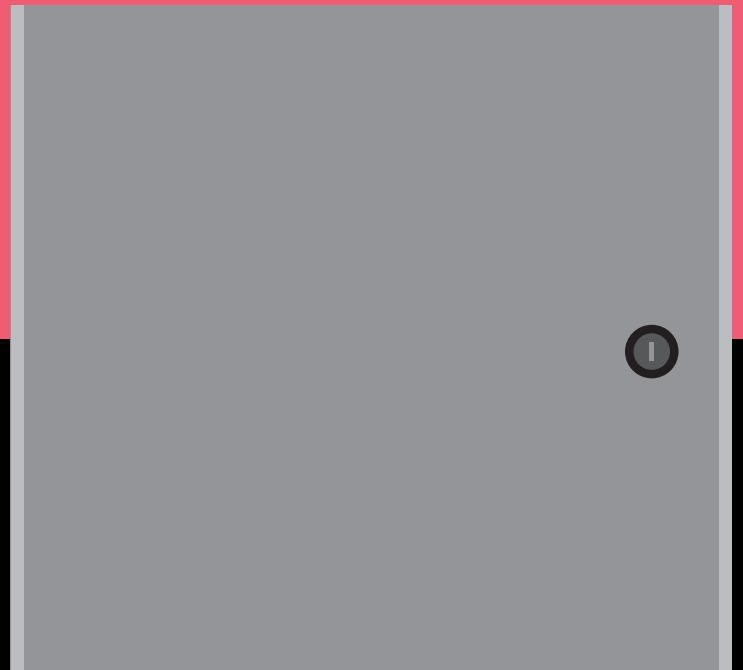
For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

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WIRELESS  
DEVICES

# ENCLOSURES





MH5503L



MH3803L



MH4404L



MH3300

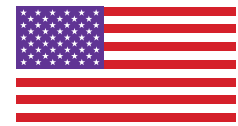
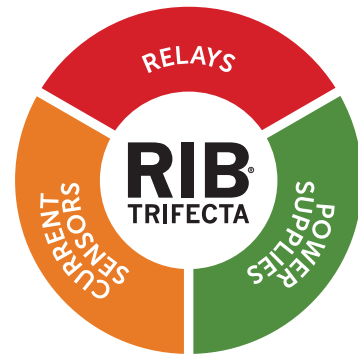


MH1210

# ENCLOSURES

## Metal & Plastic Enclosures

- NEMA 1 or NEMA 4/4X rated
- Various sizes available
- Multiple knockouts on many models
- Vertically and horizontally stackable
- Available with perforated steel or polymetal sub-panels or track mount
- Several cover and door configurations
- Grey finish
- Blue housings available (consult factory)
- Made in the USA
- UL Listed



MADE IN THE U.S.A.

# ENCLOSURES

## ENCLOSURES

Product Selection Guide. For full product information, see our website.

MODEL #	UL	ENCLOSURE	HOUSING MATERIAL	SUB-PANEL	TRACK MOUNT	NEMA RATING	COVER / DOOR	HEIGHT	WIDTH	DEPTH	GAUGE	SHIPPING WEIGHT
PE6000	•	PE6000	Plastic			NEMA 1	Screw Down Cover	4.28"	7.00"	2.00"		0.645 lb.
PE6010	•	PE6000	Plastic		MT4-4	NEMA 1	Screw Down Cover	4.28"	7.00"	2.00"		0.743 lb.
PE6020	•	PE6000	Plastic		MT212-6	NEMA 1	Screw Down Cover	4.28"	7.00"	2.00"		0.769 lb.
PE6000-N4	•	PE6000-N4	Plastic			NEMA 4/4X	Screw Down Cover	4.28"	7.00"	2.00"		0.656 lb.
PE6010-N4	•	PE6000-N4	Plastic		MT4-4	NEMA 4/4X	Screw Down Cover	4.28"	7.00"	2.00"		0.717 lb.
PE6020-N4	•	PE6000-N4	Plastic		MT212-6	NEMA 4/4X	Screw Down Cover	4.28"	7.00"	2.00"		0.769 lb.
MH1000	•	MH1000	Metal			NEMA 1	Screw Down Cover	14.50"	7.70"	3.90"	18	5.940 lb.
MH1010	•	MH1000	Metal		MT4-12	NEMA 1	Screw Down Cover	14.50"	7.70"	3.90"	18	6.460 lb.
MH1020	•	MH1000	Metal		MT212-12	NEMA 1	Screw Down Cover	14.50"	7.70"	3.90"	18	6.000 lb.
MH1200	•	MH1200	Metal			NEMA 1	Screw Down Cover	8.30"	7.70"	3.90"	18	3.914 lb.
MH1210	•	MH1200	Metal		MT4-8	NEMA 1	Screw Down Cover	8.30"	7.70"	3.90"	18	4.060 lb.
MH1220	•	MH1200	Metal		MT212-8	NEMA 1	Screw Down Cover	8.30"	7.70"	3.90"	18	4.000 lb.
MH2204-N4	•		Metal	14 Gauge Steel		NEMA 4/4X	Hinge Key Latch Door	9.84"	7.87"	3.98"	16	7.300 lb.
MH3100-M1	•		Metal		6 Threaded Studs	NEMA 1	Screw Down Cover	12.00"	12.00"	6.00"	16	12.120 lb.
MH3204-N4	•		Metal	14 Gauge Steel		NEMA 4/4X	Hinge Key Latch Door	15.75"	11.81"	5.91"	16	17.070 lb.
MH3300	•	MH3300	Metal			NEMA 1	Vertical Lift Screw Down Cover	12.50"	12.50"	7.00"	18	10.540 lb.
MH3300K	•	MH3300K	Metal			NEMA 1	Vertical Lift Key Latch	12.50"	12.50"	7.00"	18	10.680 lb.
MH3303	•	MH3300	Metal	SP3303 #		NEMA 1	Vertical Lift Screw Down Cover	12.50"	12.50"	7.00"	18	11.740 lb.
MH3304	•	MH3300	Metal	SP3304 ^		NEMA 1	Vertical Lift Screw Down Cover	12.50"	12.50"	7.00"	18	12.100 lb.
MH3303K	•	MH3300K	Metal	SP3303 #		NEMA 1	Vertical Lift Key Latch	12.50"	12.50"	7.00"	18	11.920 lb.
MH3304K	•	MH3300K	Metal	SP3304 ^		NEMA 1	Vertical Lift Key Latch	12.50"	12.50"	7.00"	18	12.520 lb.
MH3500	•	MH3500	Metal			NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	10.25"	3.90"	18	11.100 lb.
MH3510	•	MH3500	Metal		MT4-24	NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	10.25"	3.90"	18	11.700 lb.
MH3520	•	MH3500	Metal		MT212-24	NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	10.25"	3.90"	18	11.540 lb.
MH3800	•	MH3800	Metal			NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	12.50"	6.50"	18	16.580 lb.
MH3810	•	MH3800	Metal		MT4-18	NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	12.50"	6.50"	18	16.860 lb.
MH3820	•	MH3800	Metal		MT212-18	NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	12.50"	6.50"	18	16.800 lb.
MH3803S	•	MH3800	Metal	SP3803S #		NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	12.50"	6.50"	18	18.190 lb.
MH3803L	•	MH3800	Metal	SP3803L #		NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	12.50"	6.50"	18	18.510 lb.
MH3804S	•	MH3800	Metal	SP3804S ^		NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	12.50"	6.50"	18	19.630 lb.
MH3804L	•	MH3800	Metal	SP3804L ^		NEMA 1	Reversible Hook Hinge Key Latch Door	24.50"	12.50"	6.50"	18	19.890 lb.
MH4400	•	MH4400	Metal			NEMA 1	Full Hinge Key Latch Door	18.00"	18.00"	7.00"	16	22.760 lb.
MH4403L	•	MH4400	Metal	SP4403L #		NEMA 1	Full Hinge Key Latch Door	18.00"	18.00"	7.00"	16	24.866 lb.
MH4404L	•	MH4400	Metal	SP4404L ^		NEMA 1	Full Hinge Key Latch Door	18.00"	18.00"	7.00"	16	26.260 lb.
MH4604S	•	MH4600	Metal	Perforated Steel		NEMA 1	Hinge Key Latch Door	20.00"	16.15"	6.72"	14	31.000 lb.
MH5500	•	MH5500	Metal			NEMA 1	Full Hinge Key Latch Door	25.00"	25.00"	9.50"	14	50.700 lb.
MH5503L	•	MH5500	Metal	SP5503L #		NEMA 1	Full Hinge Key Latch Door	25.00"	25.00"	9.50"	14	55.780 lb.
MH5504L	•	MH5500	Metal	SP5504L ^		NEMA 1	Full Hinge Key Latch Door	25.00"	25.00"	9.50"	14	59.960 lb.
MH5800	•	MH5800	Metal			NEMA 1	Full Hinge Key Latch Door	36.00"	25.00"	9.50"	14	68.480 lb.
MH5803L	•	MH5800	Metal	SP5803L #		NEMA 1	Full Hinge Key Latch Door	36.00"	25.00"	9.50"	14	74.200 lb.
MH5804L	•	MH5800	Metal	SP5804L ^		NEMA 1	Full Hinge Key Latch Door	36.00"	25.00"	9.50"	14	79.530 lb.

### MH3300 SERIES

# Polymetal  
11.33" H x 11.40" W

^ Perforated Steel  
11.33" H x 11.40" W

### MH3800 SERIES

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

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

### MH4400 SERIES

# Polymetal  
16.875" H x 15.75" W

^ Perforated Steel  
16.875" H x 15.75" W

### MH5500 SERIES

# Polymetal  
23.00" H x 22.50" W

^ Perforated Steel  
23.00" H x 22.50" W

### MH5800 SERIES

# Polymetal  
34.125" H x 22.50" W

^ Perforated Steel  
34.125" H x 22.50" W

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

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

NOTES

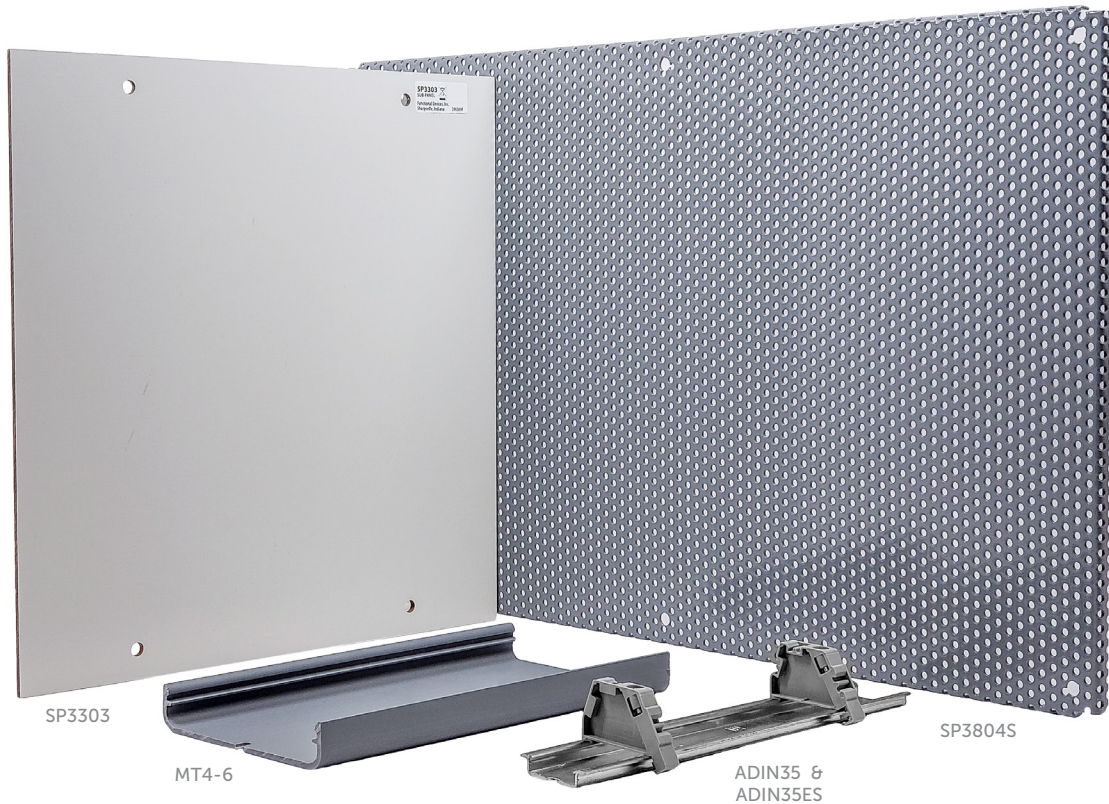
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ENCLOSURES



# ACCESSORIES





# ACCESSORIES

## Sub-Panels

Two types of sub-panel material are available: polymetal and perforated steel. Both the polymetal and perforated steel sub-panels are Plenum Rated and designed to mount in "MH" metal housing models. The mounting holes are pre-drilled and ready to install. Sub-panels can be ordered pre-installed in your choice of "MH" enclosure. See general specifications of pre-assembled enclosure models on page 77.

## Replacement Parts

Replacement parts are available for several products including remote sensors, socket relays, and more.

## Mounting Supplies

Mounting options include plastic track for snap-mounting circuit boards. One style of track can be mounted to the back surface of any cabinet and is available in 4.00" or 2.75" widths. Another style of track, AdapTrack®, snaps onto any of the three most popular DIN rails. In turn, it can accommodate a 4.00" wide circuit board. Perforated DIN rail and end stops are also available.

# ACCESSORIES

## SUB-PANELS

Product Selection Guide. For full product information, see our website.

MODEL #	USE WITH ENCLOSURE	MATERIAL	HEIGHT	WIDTH	THICKNESS	MOUNTING AREA	SHIPPING WEIGHT
SP3303	MH3300 or MH3300K	Polymetal	11.330"	11.400"	.130"	129.16 square inches	0.847 lb.
SP3304	MH3300 or MH3300K	Perforated Steel	11.330"	11.400"	.250"	129.16 square inches	1.662 lb.
SP3803S	MH3800	Polymetal	19.000"	11.750"	.130"	223.25 square inches	1.705 lb.
SP3803L	MH3800	Polymetal	23.000"	11.750"	.130"	270.25 square inches	2.140 lb.
SP3804S	MH3800	Perforated Steel	19.000"	11.750"	.250"	223.25 square inches	2.940 lb.
SP3804L	MH3800	Perforated Steel	23.000"	11.750"	.250"	270.25 square inches	3.520 lb.
SP4403L	MH4400	Polymetal	16.875"	15.750"	.130"	265.78 square inches	2.100 lb.
SP4404L	MH4400	Perforated Steel	16.875"	15.750"	.250"	265.78 square inches	3.415 lb.
SP5503L	MH5500	Polymetal	23.000"	22.500"	.130"	517.50 square inches	3.940 lb.
SP5504L	MH5500	Perforated Steel	23.000"	22.500"	.250"	517.50 square inches	6.560 lb.
SP5803L	MH5800	Polymetal	34.125"	22.500"	.130"	767.81 square inches	5.875 lb.
SP5804L	MH5800	Perforated Steel	34.125"	22.500"	.250"	767.81 square inches	9.720 lb.

## MOUNTING SUPPLIES

Product Selection Guide. For full product information, see our website.

MODEL #	UL	WIDTH	LENGTH	TRACK TYPE	DISTANCE BETWEEN HOLE CENTERS
MT212-2	•	2.75"	2.00"	Screw mounted snap-in track	2.00" Center to Center
MT212-4	•	2.75"	4.00"	Screw mounted snap-in track	2.00" Center to Center
MT212-6	•	2.75"	6.00"	Screw mounted snap-in track	2.00" Center to Center
MT212-8	•	2.75"	8.00"	Screw mounted snap-in track	2.00" Center to Center
MT212-12	•	2.75"	12.00"	Screw mounted snap-in track	2.00" Center to Center
MT212-18	•	2.75"	18.00"	Screw mounted snap-in track	2.00" Center to Center
MT212-24	•	2.75"	24.00"	Screw mounted snap-in track	2.00" Center to Center
MT212-48	•	2.75"	48.00"	Screw mounted snap-in track	2.00" Center to Center
MT4-2	•	4.00"	2.00"	Screw mounted snap-in track	2.00" Center to Center
MT4-4	•	4.00"	4.00"	Screw mounted snap-in track	2.00" Center to Center
MT4-6	•	4.00"	6.00"	Screw mounted snap-in track	2.00" Center to Center
MT4-8	•	4.00"	8.00"	Screw mounted snap-in track	2.00" Center to Center
MT4-10	•	4.00"	10.00"	Screw mounted snap-in track	2.00" Center to Center
MT4-12	•	4.00"	12.00"	Screw mounted snap-in track	2.00" Center to Center
MT4-18	•	4.00"	18.00"	Screw mounted snap-in track	2.00" Center to Center
MT4-24	•	4.00"	24.00"	Screw mounted snap-in track	2.00" Center to Center
MT4-48	•	4.00"	48.00"	Screw mounted snap-in track	2.00" Center to Center
AT4-2	•	4.00"	2.00"	AdapTrack® for DIN rail	3 Most Common for AT4 Series #
AT4-6	•	4.00"	6.00"	AdapTrack® for DIN rail	3 Most Common for AT4 Series #
AT4-12	•	4.00"	12.00"	AdapTrack® for DIN rail	3 Most Common for AT4 Series #
AT4-24	•	4.00"	24.00"	AdapTrack® for DIN rail	3 Most Common for AT4 Series #
AT4-48	•	4.00"	48.00"	AdapTrack® for DIN rail	3 Most Common for AT4 Series #
ADIN35		35 mm	7.5 mm	Perforated DIN rail	25 mm Center to Center

## REPLACEMENT & MISCELLANEOUS PARTS

Product Selection Guide. For full product information, see our website.

MODEL #	DESCRIPTION	FOR USE WITH MODEL(S)
ADIN35ES	Pair of End Stops for 35mm DIN Rail	ADIN35
APS53-TC	Primary voltage terminal cover	Functional Devices 300 VA and 500 VA power supplies
AR24D	Replacement relays (3-pack)	RIBR24D, RIBR24SD
ARL1C	Replacement relays (3-pack)	RIBRL1C, RIBRL1S, RIBRXLCA, RIBRXLCF, RIBRXLSA
AWSTFM	Flush surface mount backplate kit	WWS2-EN3
AXG	Split ring remote current sensor assembly (Wire Output)	RIBXJA, RIBXJF, RIBXLCJA, RIBXLCJF, RIBXLSJA, RIBXLSJF
AXGT	Split ring remote current sensor assembly (Terminal Output)	RIBXJA, RIBXJF, RIBXLCJA, RIBXLCJF, RIBXLSJA, RIBXLSJF
AXK	Remote mini current sensor assembly (Wire Output)	RIBXLCRA, RIBXLCRF, RIBXLSRA, RIBXLSRF, RIBXRA, RIBXRF
AXKT	Remote mini current sensor assembly (Terminal Output)	RIBXLCRA, RIBXLCRF, RIBXLSRA, RIBXLSRF, RIBXRA, RIBXRF
DS80625	No. 8 x 5/8" Self-Tapping Drill Screws	Functional Devices polymetal sub-panels
KEYSET	One set of 2 keys	Functional Devices key latch metal enclosures
MKL-1	Locking key latch assembly	Functional Devices metal enclosures except MH3300K
MKL-2	Locking key-hook latch assembly	Functional Devices MH3300K metal enclosures
MKL-3	Metal locking key latch assembly	Functional Devices metal enclosures except MH3300K
MKL-4	Coin locking key latch assembly	Functional Devices metal enclosures except MH3300K
TS-AN	Pluggable terminal strips	RIBAN12C, RIBAN24C

UL = UL Component Recognized ; USA & Canada

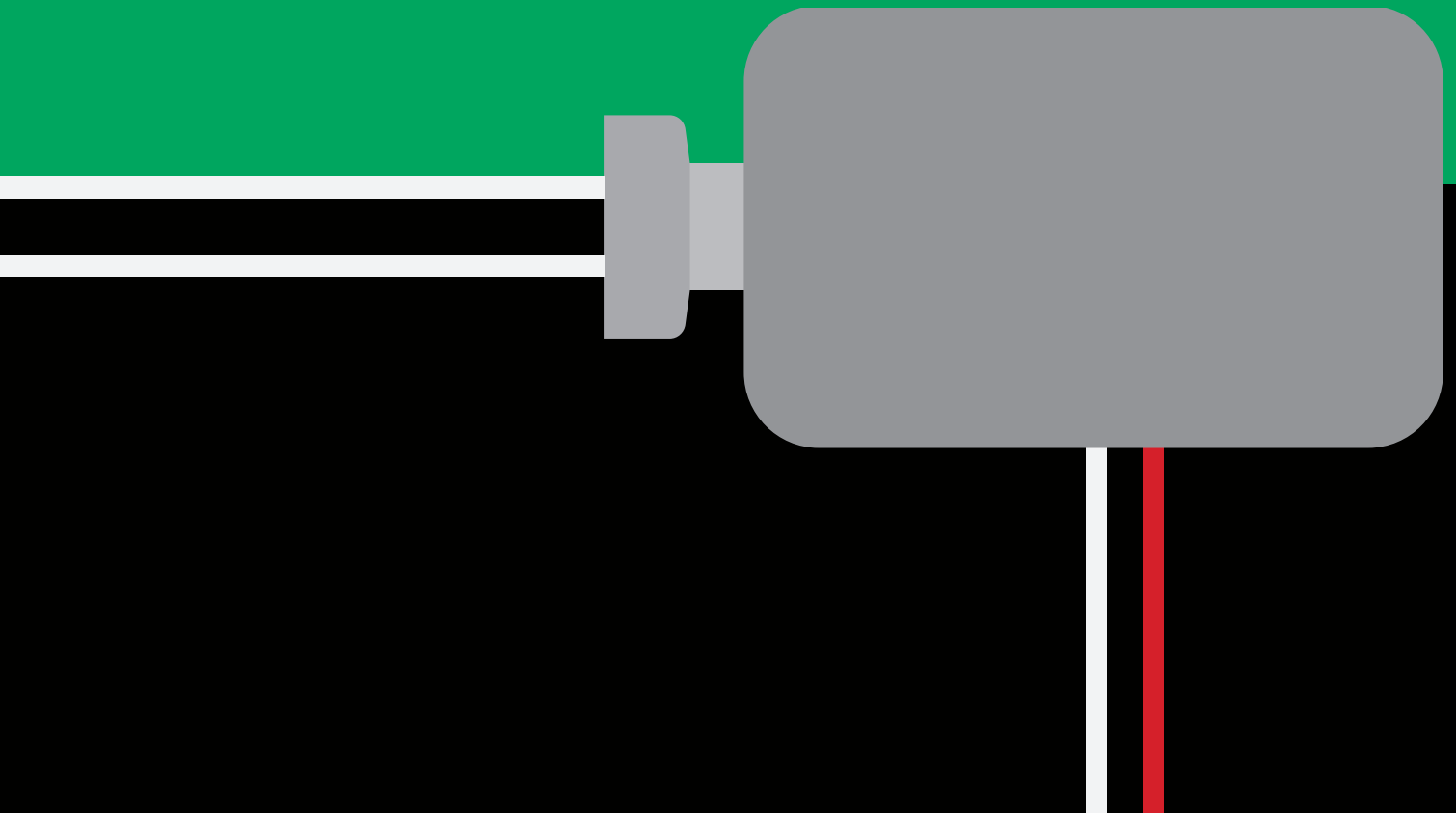
# = 32 mm x 15 mm asymmetrical DIN rail EN50035; 35 mm x 7.5 mm symmetrical DIN rail EN50022; 22.4 mm x 6.9 mm symmetrical NEMA A Series rail

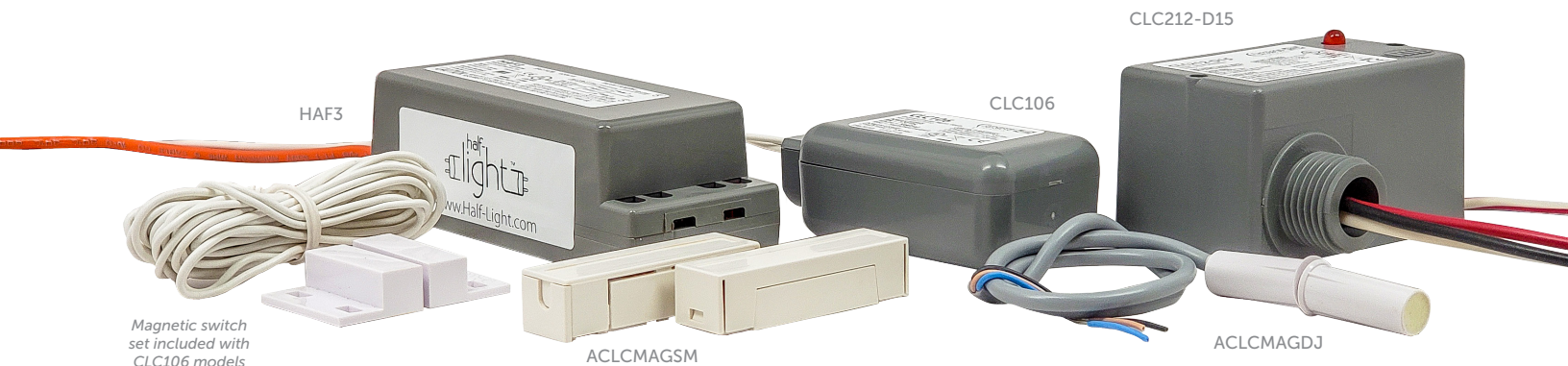
For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

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# ENERGY SAVING DEVICES





# ENERGY SAVING DEVICES

## Half-Light® Ballast Controllers

### For Multiple Ballast Fixtures, Step Dimming Control & Alternate Fixture Control Applications

Providing independent control for multiple ballast light fixtures from a single existing wall switch or from a lighting controller output, Half-Light® Ballast Controllers can significantly reduce a building's light output. This enables professional lighting users to enjoy the cost-effective benefits of lighting control with just a simple toggle of their wall-based light switch. Easy to use and install, Half-Light® Ballast Controllers from Functional Devices are fully compatible with the market's range of popular fluorescent and HID lamps. Half-Light® Ballast Controllers are a simple and affordable alternative to the industry's costlier and more complicated dimming systems and components.

#### HALF-LIGHT® BALLAST CONTROLLERS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	POWER INPUT	RELAY CONTACTS	BALLAST SIZE ENCLOSURE	TWO OR THREE STAGE	4 BULB FIXTURES	6 BULB FIXTURES	MULTIPLE BALLAST FIXTURES	STEP DIMMING CONTROL	ALTERNATE FIXTURE CONTROL	SHIPPING WEIGHT
HAF2	•	120 / 208-277 Vac	1 SPST	•	2	•		•	•	•	0.250 lb.
HAF3	•	120 / 208-277 Vac	2 SPST	•	3		•	•	•	•	0.277 lb.

SEE DATA SHEETS FOR MORE INFORMATION ON APPLICATIONS.

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

For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

ENERGY SAVING



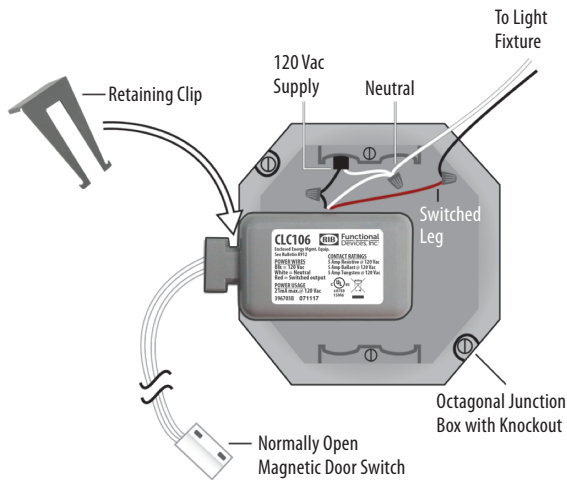
# ENERGY SAVING DEVICES

## Closet Light Controllers

For Use in Closets, Pantries, Walk-ins, and Cabinets

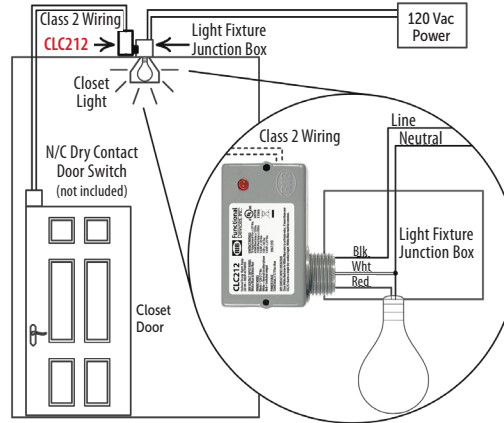
Our Light Controllers are designed to switch lighting loads on and off by the closing or opening of a variety of switches, including door jamb, magnetic, and ball switches. Models are available for retrofit and new construction jobs, with or without an energy-saving time out setting.

### Retrofits



- 5 Amp relay
- 120 Vac power
- Fits easily inside junction box
- Includes retaining clip
- No transformer needed (dry contact input)
- Model CLC106, CLC106-NC
- Includes magnetic door jamb switch

### New Construction



- 10 Amp N/O relay
- 120-277 Vac power
- No transformer needed (dry contact input)
- Light 18 AWG wire used to control relay, instead of armored cable
- Models CLC212, CLC212-D15, CLC212-D60
- Switch sold separately (ACLCMAGSM, ACLCMAGDJ)

15 Minute Time Out



60 Minute Time Out



### CLOSET LIGHT CONTROLLERS

Product Selection Guide. For full product information, see our website.

MODEL #	UL	POWER INPUT	RELAY CONTACTS	ACCESSORY SWITCH REQUIRED <sup>^</sup>	TIME OUT	OUTPUT WHEN SWITCH OPENS	HOUSING STYLE *	SHIPPING WEIGHT
CLC106	•	120 Vac	1 SPST-N/O	N/O #	N/A	On	See data sheet	0.271 lb.
CLC106-NC	•	120 Vac	1 SPST-N/C	N/C #	N/A	Off	See data sheet	0.266 lb.
CLC212	•	120-277 Vac	1 SPST-N/O	N/C	N/A	Off	A	0.301 lb.
CLC212-D15	•	120-277 Vac	1 SPST-N/O	N/O	15 min.	On	A	0.310 lb.
CLC212-D60	•	120-277 Vac	1 SPST-N/O	N/O	60 min.	On	A	0.301 lb.

### MAGNETIC SWITCHES

Product Selection Guide. For full product information, see our website.

MODEL #	VOLTAGE MAX.	CURRENT MAX.	RELAY CONTACTS	MOUNT	OPERATING GAP (MIN.)	SHIPPING WEIGHT
ACLCMAGSM	30 Vac/dc	0.2 Amp	1 SPDT (Form C)	Surface	1.125"	0.240 lb.
ACLCMAGDJ	200 Vdc	0.5 Amp	1 SPDT (Form C)	Recessed	0.375"	0.033 lb.

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

<sup>^</sup> = Normal state is when no outside forces (like a magnet) are acting on it.

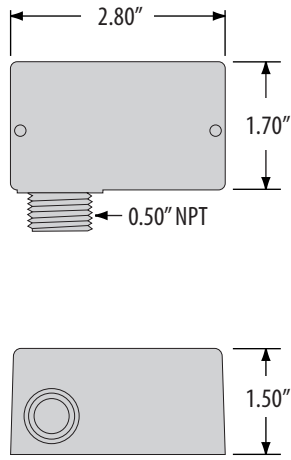
# = Integral switch included

\* = See Housing Guide on pages 86-87

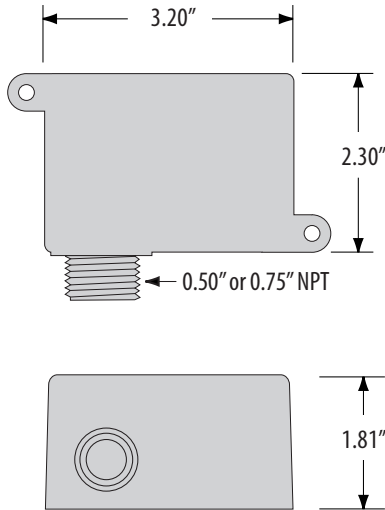
For full product information, see data sheets on website. Shipping weights are approximate and may change due to packaging options.

# HOUSING GUIDE

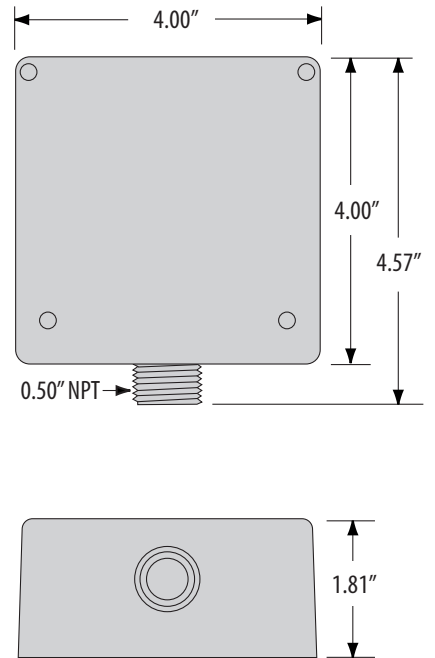
## HOUSING A



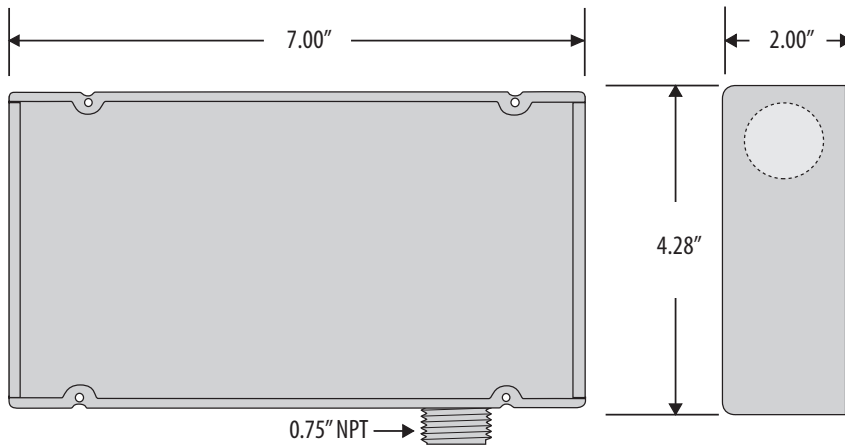
## HOUSING B



## HOUSING C



## HOUSING D

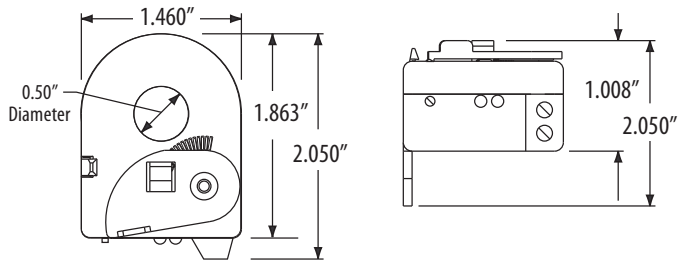


**RED ("-RD") and NEMA 4 ("-N4") HOUSINGS AVAILABLE.**

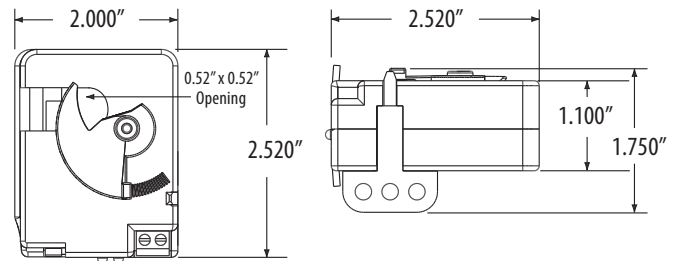
See our website for details.

# HOUSING GUIDE

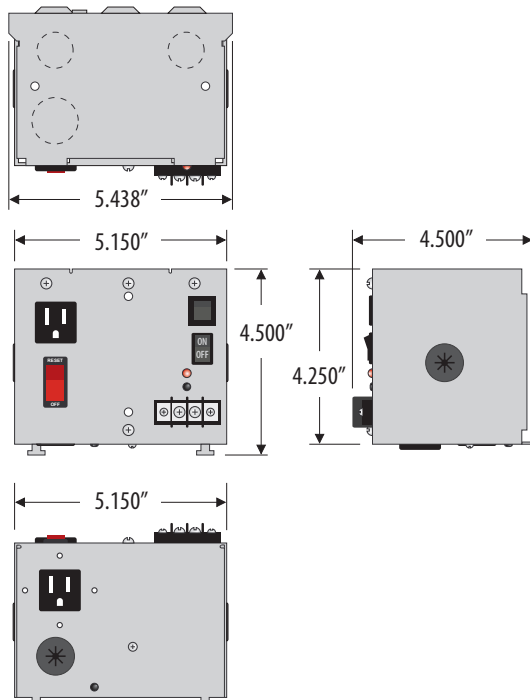
## SOLID CORE CURRENT SENSOR



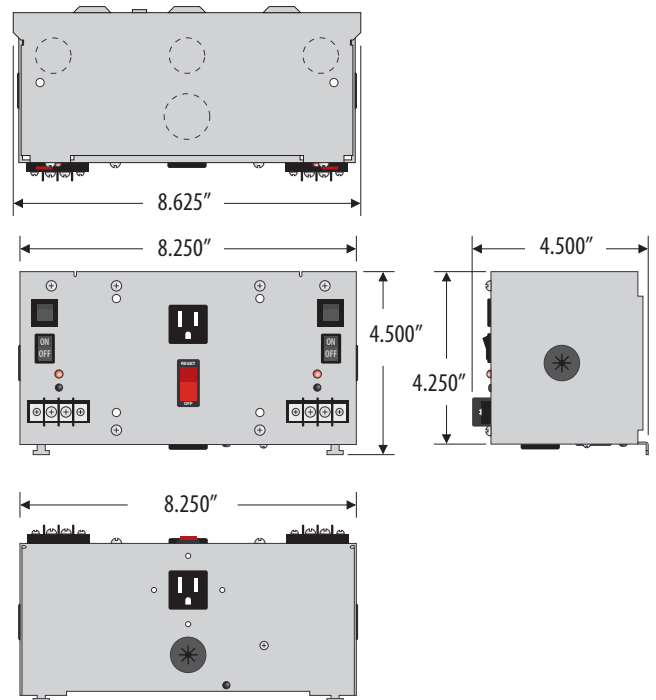
## SPLIT CORE CURRENT SENSOR



## SINGLE POWER SUPPLY



## DUAL POWER SUPPLY



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ACLCMAGDJ	85	MH5500	77	PSH24DWB10	58	RIB01SBDC	41	RIBL24SBM	38
ACLCMAGSM	85	MH5503L	77	PSH2C2RB10	69	RIB023P	36	RIBL3C	34
ADIN35	81	MH5504L	77	PSH2C2RB10-L	69	RIB02BDC	41	RIBL4C	34
ADIN35ES	81	MH5800	77	PSH2RB10	69	RIB02P	36	RIBLB	42
APSS3-TC	81	MH5803L	77	PSH300A	57	RIB02P30	36	RIBLB-2	42
ARL1C	81	MH5804L	77	PSH300A-LVC	57	RIB02SBCDC	41	RIBLB-4	42
AR24D	81	MHP3903100A100AB10	58	PSH300AB10-LVC	57	RIB02SBDC	41	RIBLB-6	42
AT4-12	81	MHP3903100AB10	58	PSH40A	57	RIB043P	36	RIBM013PN	37
AT4-2	81	MHP3904100A100AB10	58	PSH40AB10	57	RIB04P	36	RIBM013PNDC	41
AT4-24	81	MHP3904100AB10	58	PSH40AB10-EXT2	57	RIB12C-FA	40	RIBM01ZND	41
AT4-48	81	MHP4604100A100AB10	58	PSH40AW	57	RIB12P	36	RIBM023PN	37
AT4-6	81	MHP4604100AB10	58	PSH40AWB10	57	RIB12P30	36	RIBM02ZND	41
AWSTFM	81	MKL-1	81	PSH500A	57	RIB12S-FA	40	RIBM043PN	37
AXG	81	MKL-2	81	PSH500A-LVC	57	RIB21CDC	41	RIBM043PN-HD	37
AXGT	81	MKL-3	81	PSH500AB10-LVC	57	RIB2401B	36	RIBM12C	35
AXK	81	MKL-4	81	PSH600-UPS	69	RIB2401D	34	RIBM12S	35
AXKT	81	MT212-12	81	PSH600-UPS-BC	69	RIB2401SB	36	RIBM2401B	37
CLC106	85	MT212-18	81	PSH600-UPS-STAT	69	RIB2401SBC	36	RIBM2401D	35
CLC106-NC	85	MT212-2	81	PSH75A	57	RIB2402B	36	RIBM2401SB	37
CLC212	85	MT212-24	81	PSH75A75A	57	RIB2402D	34	RIBM2401SBC	37
CLC212-D15	85	MT212-4	81	PSH75A75AB10	57	RIB2402SB	36	RIBM2402B	37
CLC212-D60	85	MT212-48	81	PSH75A75AW	57	RIB2402SBC	36	RIBM2402D	35
CTRL-PS	58	MT212-6	81	PSH75A75AWB10	57	RIB2421B	36	RIBM2402SB	37
DS80625	81	MT212-8	81	PSH75AB10	57	RIB2421C	34	RIBM2402SBC	37
HAF2	84	MT4-10	81	PSH75AW	57	RIB2421SB	36	RIBM243PN	37
HAF3	84	MT4-12	81	PSH75AWB10	57	RIB243P	36	RIBM24C	35
KEYSET	81	MT4-18	81	PSH850-UPS-STAT	69	RIB24C-FA	40	RIBM24S	35
MH1000	77	MT4-2	81	PSM19A24DAS	58	RIB24P	36	RIBM24ZL	37
MH1010	77	MT4-24	81	PSM20A12DAS	58	RIB24P-FA	40	RIBM24ZN	37
MH1020	77	MT4-4	81	PSM24A24DAS	58	RIB24P30	36	RIBME2401B	39
MH1200	77	MT4-48	81	PSM2RB10	69	RIB24S-FA	40	RIBME2402B	39
MH1210	77	MT4-6	81	PSMN01SB10	69	RIB24Z	36	RIBM11C	35
MH1220	77	MT4-8	81	PSMN01SB4	69	RIB347P	36	RIBM11S	35
MH2204-N4	77	PE6000	77	PSMN200A	57	RIBAN12C	35	RIBM11SC	35
MH3100-M1	77	PE6000-N4	77	PSMN24DA	58	RIBAN24C	35	RIBM11SM-250	35
MH3204-N4	77	PE6010	77	PSMN24DAS	58	RIBD01BDC	41	RIBM12C	35
MH3300	77	PE6010-N4	77	PSMN24SB10	69	RIBD01BDC-DOB	41	RIBM12C-FA	40
MH3300K	77	PE6020	77	PSMN24SB4	69	RIBD02BDC	41	RIBM12S	35
MH3303	77	PE6020-N4	77	PSMN2C2RB10	69	RIBD02BDC-DOB	41	RIBM12S-FA	40
MH3303K	77	PSB100AB10	57	PSMN300A	57	RIBD2421C	34	RIBM2401D	35
MH3304	77	PSB40AB10	57	PSMN40A	57	RIBH1C	34	RIBM24C	35
MH3304K	77	PSC100AB10	57	PSMN40A24DS	58	RIBH1CW	35	RIBM24C-4T	35
MH3500	77	PSC40AB10	57	PSMN40AS	57	RIBH1S	34	RIBM24C-FA	40
MH3510	77	PSH100A	57	PSMN500A	57	RIBH1SC	34	RIBM24Q2C	42
MH3520	77	PSH100A100A	57	PSMS1	69	RIBH1SM-250	34	RIBM24Q3C	42
MH3800	77	PSH100A100AB10	57	PSP24DA	58	RIBH2C	34	RIBM24Q4C	42
MH3803L	77	PSH100A100AW	57	PSPT2RB10	69	RIBHX24BA	52	RIBM24Q4C-PX	42
MH3803S	77	PSH100A100AWB10	57	PSPT2RB4	69	RIBHX24BF	52	RIBM24S	35
MH3804L	77	PSH100A24DWB10	58	PSPW2RB10	69	RIBL12B	38	RIBM24S-4T	35
MH3804S	77	PSH100AB10	57	PSPW2RB4	69	RIBL12BM	38	RIBM24S-FA	40
MH3810	77	PSH100AB10-EXT2	57	RIB013P	36	RIBL12SB	38	RIBM24S-J	35
MH3820	77	PSH100AW	57	RIB01BDC	41	RIBL12SBM	38	RIBM24ZL	37
MH4400	77	PSH100AWB10	57	RIB01P	36	RIBL1C-DC	34	RIBMNA1D0	42
MH4403L	77	PSH200A	57	RIB01P30	36	RIBL24B	38	RIBMNH1C	35
MH4404L	77	PSH200A-LVC	57	RIB01P30-S	36	RIBL24BM	38	RIBMNH1S	35
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RIBMNLB-1	42	RIBTE01B	39	RIBX243PF	52	RIBXLSF	52	TR40VA013	64
RIBMNLB-2	42	RIBTE01P	39	RIBX243PV	52	RIBXLSJA	52	TR40VA015	64
RIBMNLB-2NO	42	RIBTE01P-S	39	RIBX244A	52	RIBXLSJF	52	TR40VA022	64
RIBMNLB-4	42	RIBTE01SB	39	RIBX244B	52	RIBXLSRA	52	TR40VA040	64
RIBMNLB-4NO	42	RIBTE02B	39	RIBX244V	52	RIBXLSRF	52	TR50VA001	64
RIBMNLB-6	42	RIBTE02P	39	RIBX245A	52	RIBXLSV	52	TR50VA001US	62
RIBMNLB-6NO	42	RIBTE02P-S	39	RIBX245BA	52	RIBXRA	51	TR50VA002	64
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RIBMNU1S	35	RIBTE24B	39	RIBX245BV	52	RIBXV	51	TR50VA004	64
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RIBRXLCA	52	RIBTWX2401SB-LN	47	RIBXKA	51	TR150VA002	64		
RIBRXLCF	52	RIBTWX2402B-BC	47	RIBXKF	51	TR150VA008	64		
RIBRXLSA	52	RIBTWX2402SB-LN	47	RIBXKTA	51	TR175VA001	64		
RIBT2401B	37	RIBU1C	34	RIBXKTF	51	TR175VA002	64		
RIBT2401D	35	RIBU1CW	35	RIBXKT5-10	51	TR175VA003	64		
RIBT2401SB	37	RIBU1S	34	RIBXKT5-100	51	TR20VA001	64		
RIBT2401SBC	37	RIBU1SC	34	RIBXKT5-20	51	TR20VA002	64		
RIBT2402B	37	RIBU1SM-250	34	RIBXKT5-50	51	TR20VA003	64		
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RIBT243P	37	RIBW01C-EN3	73	RIBXLCJA	52	TR375VA001	64		
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