# ETL Listed to UL1008/UL924
## UL1008 AUTOMATIC TRANSFER SWITCH


# PBESR-1008

UL1008/UL924 Branch Circuit Emergency Lighting Transfer Switch
120-277 Vac, 50/60 Hz

### SPECIFICATIONS

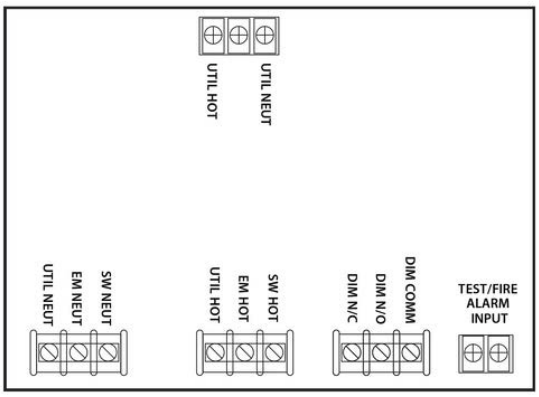
Expected Relay Life: 1 million cycles minimum mechanical
Operating Temperature: -30° to 140° F (-35° to 60° C)
Humidity Range: 5-95% (noncondensing)
LED: Green = Normal Power
Red = Emergency Power
Yellow = Load Power Available
Blue = Fault
Dimensions: 8.30" H x 7.70" W x 3.90"D
Terminals: Torque to 10 in-lb (1.1 Nm) Max.
Weight: 4.6 lbs
Origin: Made of US & non-US parts
Approvals: ETL Listed to UL1008 & UL924, CE, RoHS
Housing Rating: Plenum Rated, NEMA 1
Gold Flash: No
Test Switch: Yes
Test Input: For Fire Alarm Panel, or Remote Test Button (PBESRTB)

Contact Ratings:
16 Amp @ 120-277 Vac Electronic Ballast
16 Amp @ 120-277 Vac Magnesium Ballast
16 Amp @ 120-277 Vac Tungsten

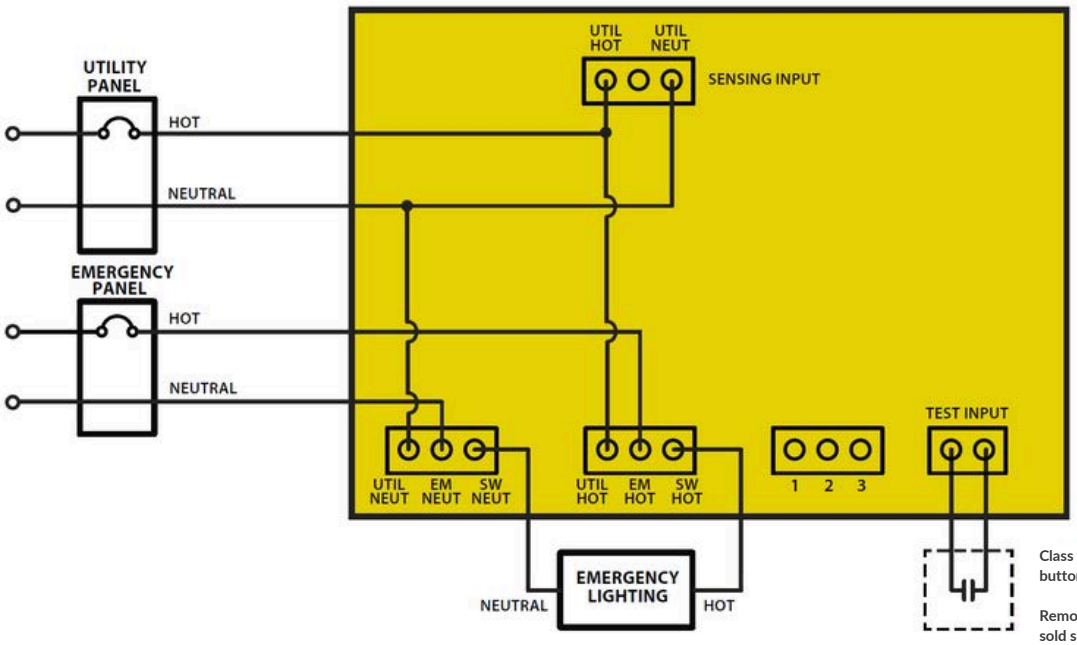
Power Input:
Powered from EM HOT & EM NEUT
15mA @ 120 Vac
11mA @ 208 Vac
10mA @ 240 Vac
9mA @ 277 Vac

### TYPICAL APPLICATION

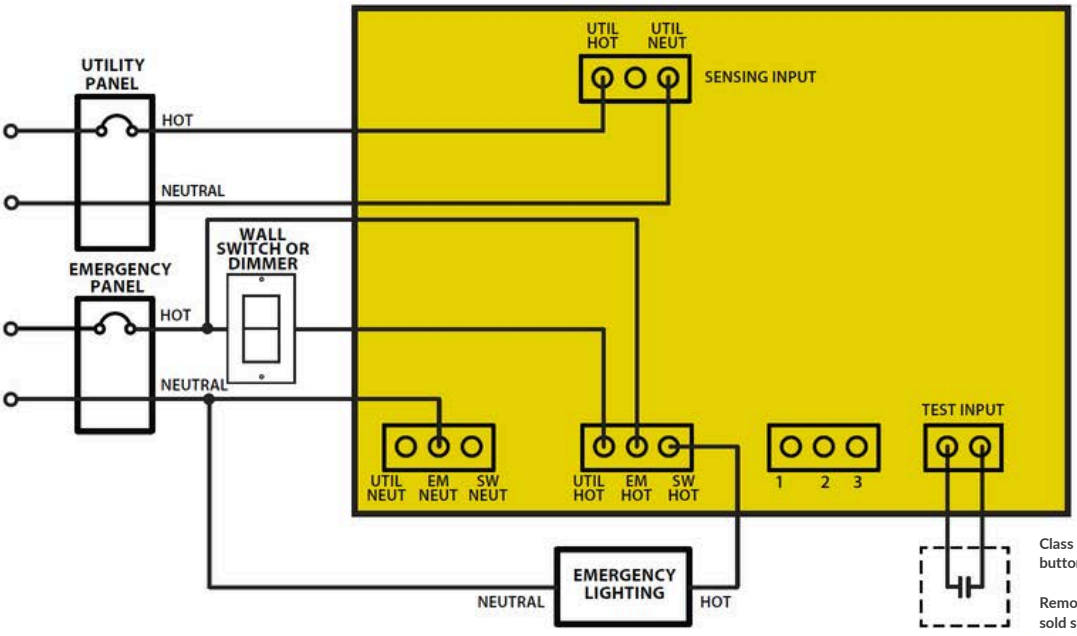
The PBESR-1008 is a Branch Circuit Emergency Lighting Transfer Switch. It is typically used to transfer a lighting load from Normal power to Emergency power during a loss of Normal power. It can also be used to override dimming controls or bypass a switch. This will turn the emergency lighting on at full brightness to meet requirements for egress lighting.



## UL1008 - BASIC TRANSFER APPLICATION




## UL924- BYBASS APPLICATION



# Application Testing

**Testing - Basic Transfer Application**
Make connections per Basic Transfer Application diagram.
Make sure Normal and Emergency sources are on.
1. The Red LED should be ON.
2. The Green LED should be ON.
3. The Yellow LED should be ON.
4. The Load should be ON.

**Local Test Button or Remote Test Button**
**(PBESRTB Sold Separately)**
1. Press and hold Test Button on the enclosure lid.
2. The Green LED should be OFF.
3. The Yellow LED and Load will turn OFF while transfer happens.
4. After transfer, the Yellow LED and Load will turn back ON.
5. Release the “Test” button.
6. The Green LED should turn back ON.
7. The Yellow LED and Load will turn OFF while transfer happens.
8. After transfer, the Yellow LED and Load should turn back ON.

**Testing - 2, 3, or 4-Wire Dimming**
Make connections per 2, 3, or 4-Wire Dimming Application diagram. Make sure Normal and Emergency sources are ON. Keep the switch or dimmer control OFF.
1. The Red LED should be ON.
2. The Green LED should be ON.
3. The Yellow LED should be ON.
4. The Load should be OFF.
5. The Dimmer Contacts should be :
* #2 and #3 - Closed
* #1 and #3 -Open

**Local Test Button or Remote Test Button**
**(PBESRTB Sold Separately)**
1. Press and hold Test Button on the enclosure lid.
2. The Green LED should be OFF.
3. The Dimmer Contacts should be :
* #2 and #3 - Open
* #1 and #3 -Closed
4. The Yellow LED and Load will turn OFF while transfer happens.
5. After transfer, the Yellow LED and Load should turn back ON.
6. Release the “Test” button.
7. The Green LED should be ON.
8. The Yellow LED and Load will turn OFF while transfer happens.
9. After transfer, the Yellow LED should turn back ON.
10. The Dimmer Contacts should be :
* #2 and #3 - Closed
* #1 and #3 -Open

**Wall Switch or Controller Contact**
1. Turn ON the Switch or Dimmer Control.
2. The connected Load should turn ON.
3. Turn OFF the Switch or Dimmer Control.
4. Emergency light should turn OFF.

**Testing - Bypass Application**
Make connections per Bypass Application diagram.
Make sure Normal and Emergency sources are ON.
Make sure the Control Input(wall switch, dimmer, etc.) being bypassed is ON.
1. The Red LED should be ON.
2. The Green LED should be ON.
3. The Yellow LED should be ON.
4. The Load should be ON.
5. Turn the Control Input OFF.
6. Load should be OFF.
7. Remove the Normal Sources of Power from the unit.
8. The Load should turn ON after the unit completes the transfer.
9. Apply the Normal source of power back to the unit.

**Local Test Button or Remote Test Button**
**(PBESRTB Sold Separately)**
1. Press and hold Test Button on the enclosure lid.
2. The Green LED should be OFF.
3. The Yellow LED will turn OFF while transfer happens.
4. After transfer, the Yellow LED and Load will turn back ON.
5. Release the “Test” button.
6. The Green LED should turn back ON.
7. The Yellow LED and Load will turn OFF while transfer happens.
8. After transfer, the Yellow LED should turn back ON and the Load should be OFF.

**Testing - Bypass and Dimming Applications**
Make connections per Bypass and Diming Application diagram. Make sure Normal and Emergency sources are on.
Make sure the Control Input(wall switch, dimmer, etc.) being bypassed is ON.
1. The Red LED should be ON.
2. The Green LED should be ON.
3. The Yellow LED should be ON.
4. The Load should be ON and Dimmed to the level set by the control.
5. Turn the Control Input OFF.
6. Load should be OFF.
7. Remove the Normal Sources of Power from the unit.
8. The Load should turn ON at full brightness after the unit completes the transfer.
9. Apply the Normal source of power back to the unit.

**Local Test Button or Remote Test Button**
**(PBESRTB Sold Separately)**
1. Press and hold Test Button on the enclosure lid.
2. The Green LED should be OFF.
3. The Yellow LED will turn OFF while transfer happens.
4. After transfer. the Yellow LED and Load will turn back ON.
5. Release the “Test” button.
6. The Green LED should turn back ON.
7. The Yellow LED and Load will turn OFF while transfer happens.
8. After transfer, the Yellow LED should turn back ON and the Load should be OFF.

# LED Definitions

**Blue LED (Fault Indicator)**
This LED will flash when a fault is detected. To return the device to normal operation, the fault must be resolved and power to the unit must be cycled.

**Yellow LED (Load Power Indicator)**
This LED indicates that there is power available for the connected Emergency lighting load. If the device is wired per one of the Application diagrams that utilizes a switching means, the Load may still be OFF. This LED will always be ON during normal operation. The only time this LED will turn OFF is during a transfer. Whether the transfer is initiated by a remote test input, pressing the integral test switch on the lid, or when Normal power is lost or returns, the Yellow LED will be OFF until the transfer completes.

**Red LED (Emergency Power Indicator)**
This LED will be ON as long as Emergency power is connected to the unit.

**Green LED (Normal Power Indicator)**
This LED will be ON as long as Normal power is connected to the unit.

## Troubleshooting

| Condition | Action |
|---|---|
| Red LED is OFF | • Check Emergency Power Input wiring and voltage. |
| Green LED is OFF | • Check Normal Power Input wiring and voltage. |
| Yellow LED is ON but Load is OFF | • If using a Switch or Dimmer Control, make sure it is ON.<br>• Check Load wiring.<br>• Verify Load's operation voltage is the same as the Emergency Power Input Voltage.<br>• Check bulbs and ballast.<br>• Replace Unit. |
| Load is ON but Yellow LED is OFF | • Replace Unit. |
| Load does not turn on when being testing | • Check bulbs and ballast.<br>• Check wiring connections if using a remote test option.<br>• If using a Switch or Dimmer Control, make sure it is ON.<br>• Replace Unit. |
| Load will not turn OFF when Switch or Dimmer Control is turned OFF | • Verify status of Utility Power Input.<br>• Verify no test inputs are stuck closed. |
| Blue LED is flashing | • Cycle Emergency Power Input to the unit to reset the fault. |