

UL924 Emergency Lighting Bypass/Shunt Load-Dimming

Overview

- UL924 Bypass Relay
- For Dimmed Loads
- Mounts on JBOX
- Local Test Button
- Dry Contact Input for Override
- Green LED Normal Power
- Yellow LED Load Power
- Red LED Emergency Power
- Remote Test Input
- 20 Amp Automatic Load Control



Suitable for Indoor only



Applications

The ESRN is a UL924 Emergency Bypass Shunt Load Relay. Under normal power conditions the load is controlled by McWong International fixture controllers, occupant sensors or wall controls. This allows operation of dimming, energy saving strategies and automatic shutoff for normal operation. When normal power is not present, emergency lights automatically turn on to full power output.

Shunt Load Relay Operation

Automatically Turns on Emergency Egress Lighting on Loss of Normal Power: The control circuit in the ESRN UL924 Emergency Bypass Relay constantly monitors normal power. On loss of normal power the Normally Closed contact in the ESRN (Normal/Emergency Power) will close and the 0-10v control power contact will open. On loss of the 0-10v signal the driver or ballast will automatically go to full power/light output, until normal power is restored.

Test button: There is a test button on the ESRN to simulate loss of normal power.

Contact Closure Input: Contact closure input allows for allows for a button (not included), switch, controller, or fire alarm panel, to trigger the emergency lights from a remote location.

Accessories

Remote Test Button: ESRTB (sold separately).

Summary

Relay Type:
UL924 Bypass Shunt Load SPST

Input Voltage Normal:
120-277VAC

Input Voltage Normal/Emergency
120-277VAC

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

Load:
@120/277VAC Max. 20 Amp, Mag Ballast
@120/277VAC Max. 16 Amp E. Ballast, LED
@120/277VAC Max. 10 Amp Tungsten

Operating Temperature:
-30° to 140°F
-34° to 60°C

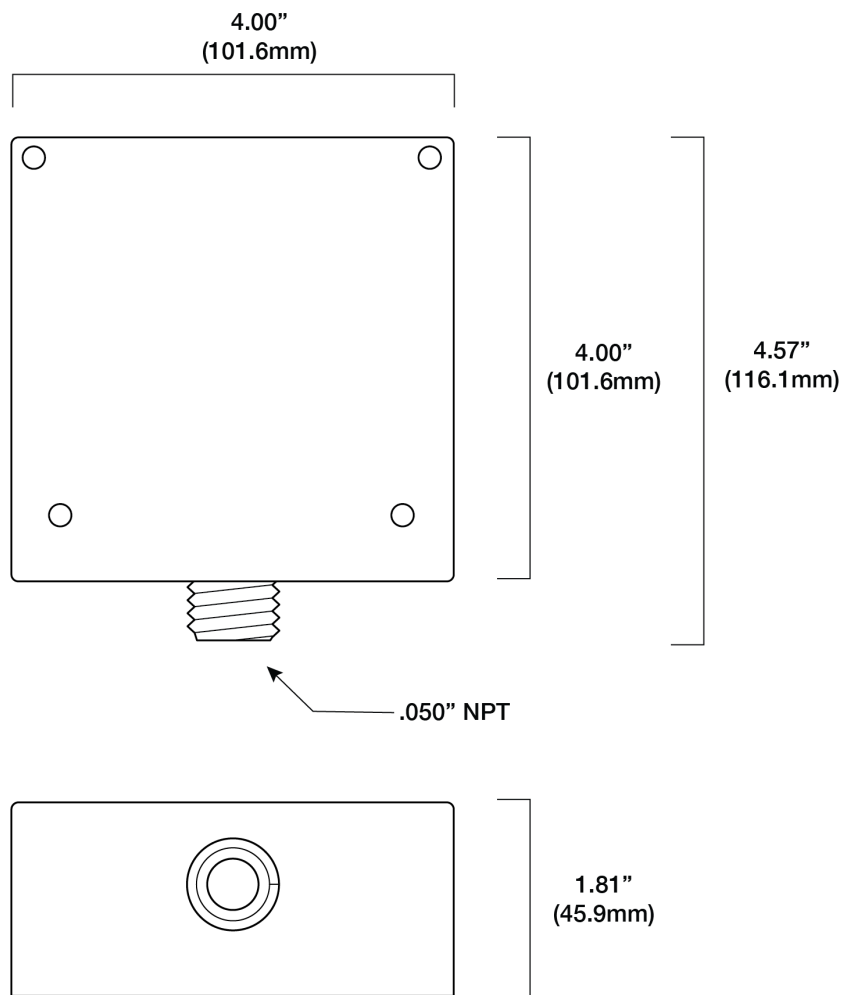
Relative Humidity:
5-95% (noncondensing)

Color: Yellow

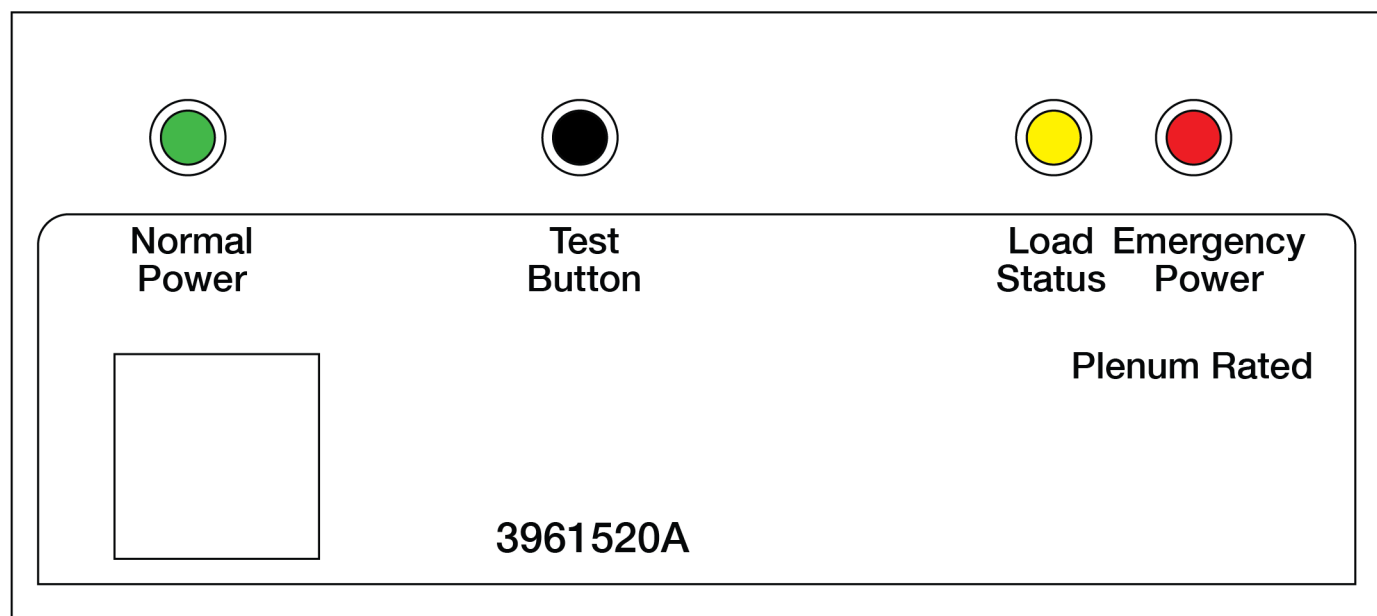
Warranty: 5 years

Project

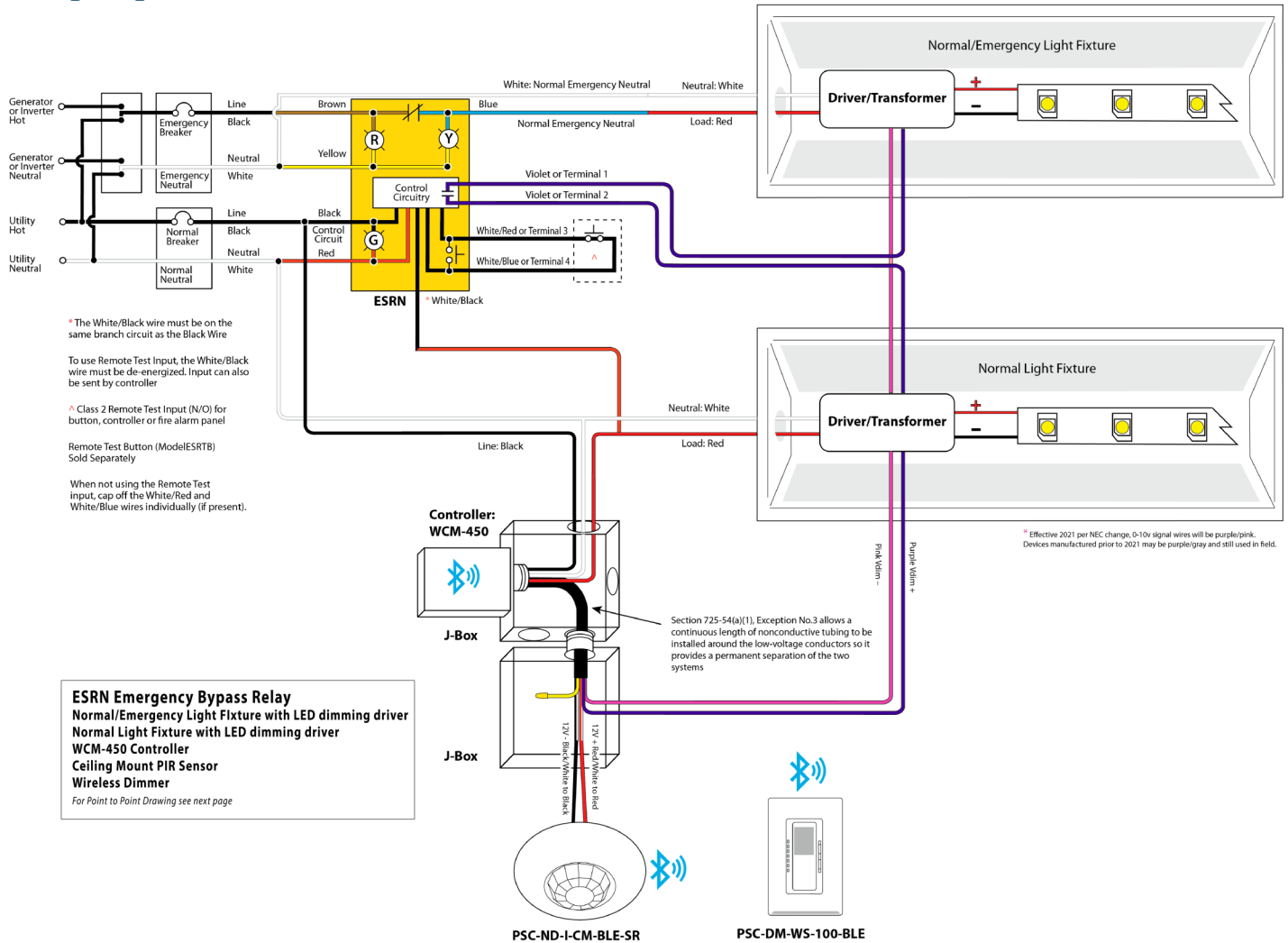
Location/Type

Physical Dimensions


Drawings are Not to Scale

LED and Test Button


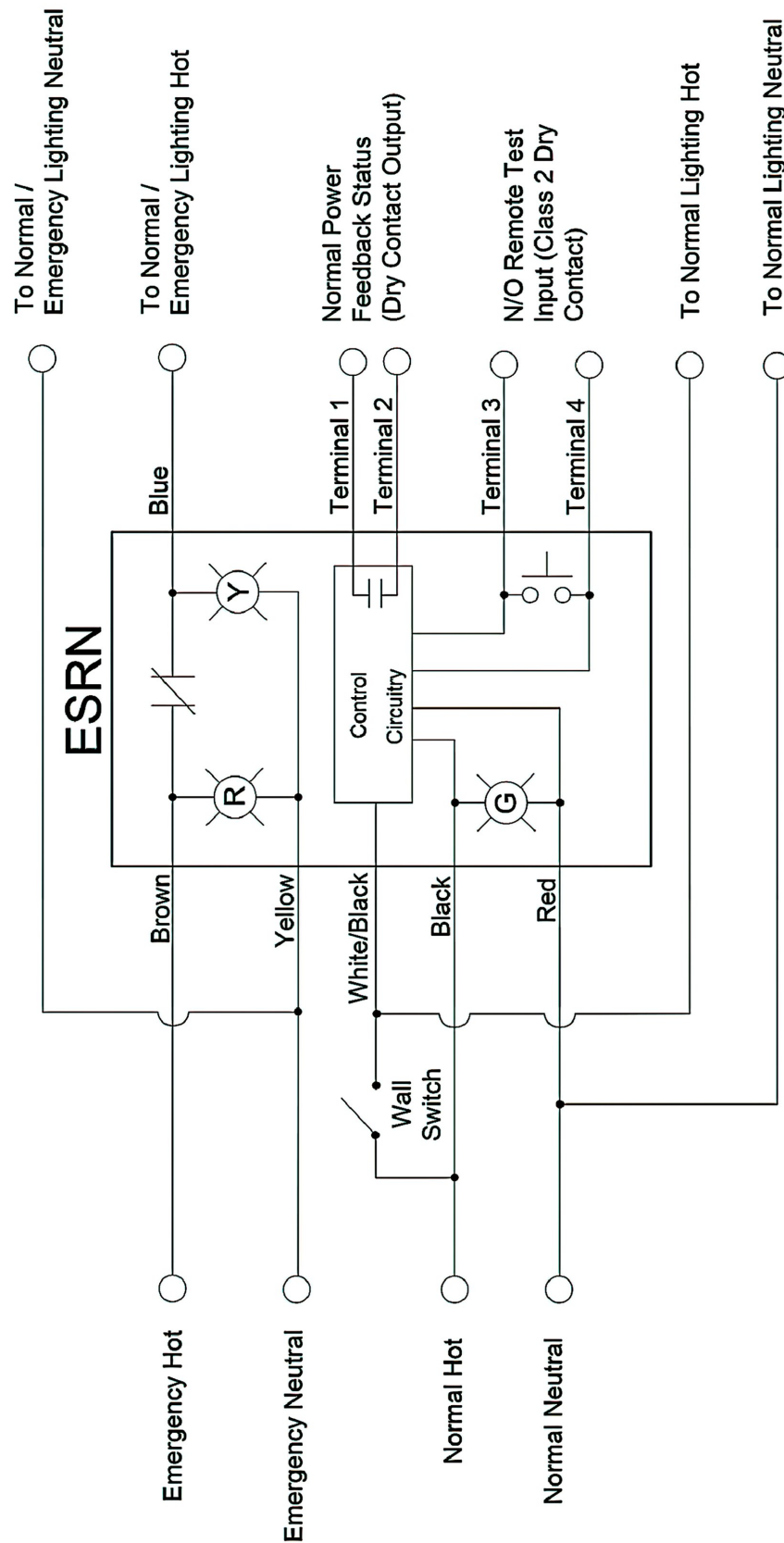
Wiring Diagram



Wiring: 16" leads, 600V rated

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

Point to Point



Testing**Initial Test for Correct Wiring**

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

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

Local Test Button

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

Remote Test Button (Model ESRTB - sold separately)

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

Wall Switch or Controller Contact

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

How to Order

Model No.	Description	Input Voltage
ESRN	UL924 Automatic Bypass Shunt Load Relay	120-277 VAC
ESRTB	Remote Test Button	

Design and specifications are subject to change without notice.