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# ETS-DR

SERIES 924  
EMERGENCY LIGHTING  
CONTROL DEVICE

## INSTRUCTION MANUAL

### IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed, including the following:

#### READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. **CAUTION** – This fixture provides more than one power supply output source. To reduce the risk of electrical shock, disconnect both normal and emergency sources by turning off the AC branch circuit.
2. **CAUTION** – This is a sealed unit. Replace the entire unit when necessary.
3. **DO NOT USE OUTDOORS.** The **ETS-DR** is for use with grounded, UL Listed, indoor fixtures. Not for use in heated air outlets or hazardous locations.
4. Do not mount near gas or electric heaters.
5. The **ETS-DR** should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
6. The **ETS-DR** is compatible with all AC magnetic and electronic ballasts and drivers.
7. The **ETS-DR** is for use in 0-10 volt dimming applications only, and not designed for use with 3-wire dimming or step dimming ballasts. The maximum current of the dimming circuit must not exceed 100 mA.
8. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
9. Do not use this equipment for other than intended use.
10. Install in accordance with the National Electrical Code and local regulations.
11. Installation and servicing should be performed by qualified personnel.
12. Lighting fixture manufacturers, electricians, and end-users need to ensure product system compatibility before final installation.



# INSTALLATION INSTRUCTIONS

**CAUTION:** Before installing, make certain the AC power is off.

## 1. MOUNTING THE ETS-DR

**Integral (No Flex)** – Remove the driver channel cover. Mount the **ETS-DR** in the ballast/driver channel at least  $\frac{1}{2}$ " away from the AC driver(s).

**Flex (ETS-DR-A)** – Mount the **ETS-DR-A** on or adjacent to the fixture in a position that does not interfere with the existing AC ballast/driver or any other hardware. Extend the flex conduit to the junction box or wireway channel and punch a  $\frac{7}{8}$ " hole. Feed the wires and flex connector down through the hole in the fixture and secure in place with the flex connector nut.

## 2. WIRING

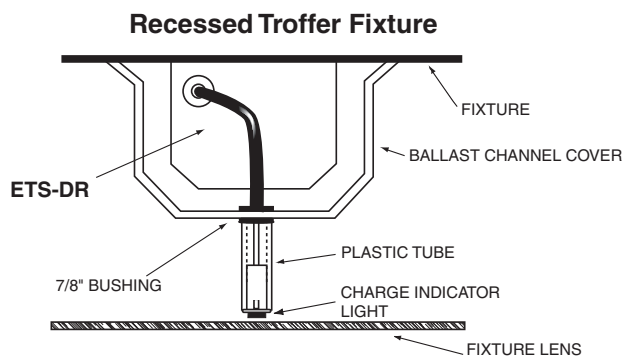
Refer to the wiring diagram on the back page for the appropriate wiring of the **ETS-DR**. Install in accordance with the National Electrical Code and local regulations. For additional wiring diagrams consult Customer Service.

## 3. INSTALLING THE AC INDICATOR

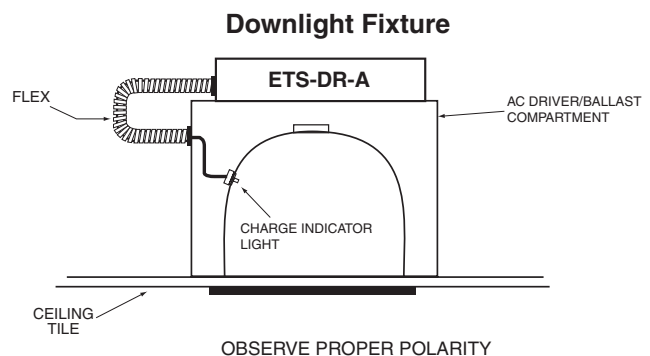
**Integral (No Flex)** – Select a convenient location with proper clearance in the ballast/driver channel cover and drill or punch a  $\frac{7}{8}$ " hole ( $\frac{1}{2}$ " knockout). Insert the  $\frac{7}{8}$ " bushing into the hole. Push the plastic tube through the bushing. Disconnect the leads from the **AC Indicator** housing and route the leads down the plastic tube. Reconnect the leads to the housing, observing the proper polarity (Yellow lead to red marked or positive (+) red tab). Push the entire assembly back into the tube until the lens collar rests against the plastic tube. The plastic tube should be adjusted so that the **AC Indicator** is within  $\frac{1}{4}$ " of the fixture lens. The **AC Indicator** must be visible after installation. Refer to *Illustration 1* for an example of integral mounting in a recessed troffer fixture.

**Flex (ETS-DR-A)** – Select a convenient location on the fixture so the **AC Indicator** can be seen after installation. Allow for proper clearance inside the fixture and drill or punch a  $\frac{1}{2}$ " hole. Disconnect the leads from the **AC Indicator** housing. Push the **AC Indicator** housing into the  $\frac{1}{2}$ " hole until it is firmly locked in place. Reconnect the leads, observing the proper polarity (Yellow lead to red marked or positive (+) red tab). Refer to *Illustration 2* for an example of mounting on a downlight fixture.

**Illustration 1: Integral (No Flex) Mounting**



**Illustration 2: Flex (ETS-DR-A) Mounting**



## 4. WIRING THE AC INPUT

Refer to wiring diagram on Page 4 for the proper wiring configuration of the **ETS**. For wiring diagrams not shown, consult Customer Service.

## OPERATION

**Normal Mode** – AC power is present. The AC driver or ballast operates the lamp(s) as intended. The closed dimming relay of the ETS-DR allows operation of the luminaire at the desired setting of the connected dimming signal.

**Emergency Mode** – Failure of normal AC (utility) power. The **ETS-DR** senses the AC power failure and automatically bypasses the wall switch with an internal relay controlling the AC Driver/Ballast, ensuring the flow of emergency power to the controlled emergency lighting load regardless of the wall switch's "on" / "off" state. The **ETS-DR** Dimming Relay contacts electrically open the 0-10 volt dimming signal, forcing the emergency lighting load to operate at full lumen output regardless of the dimmer setting. The emergency lighting load is illuminated at full light output for as long as auxiliary power is available. When the AC power is restored, the **ETS-DR** returns to the *Normal Mode of operation*. See page 1 of the Instruction Manual.

## TESTING & MAINTENANCE

The **ETS-DR** is a maintenance free unit, however, periodic inspection and testing is required. NFPA 101, Life Safety Code, outlines the following schedule:

Insure that the **AC Indicator** light is illuminated monthly.

“Written records of testing shall be kept by the owner for inspection by the authority having jurisdiction.”

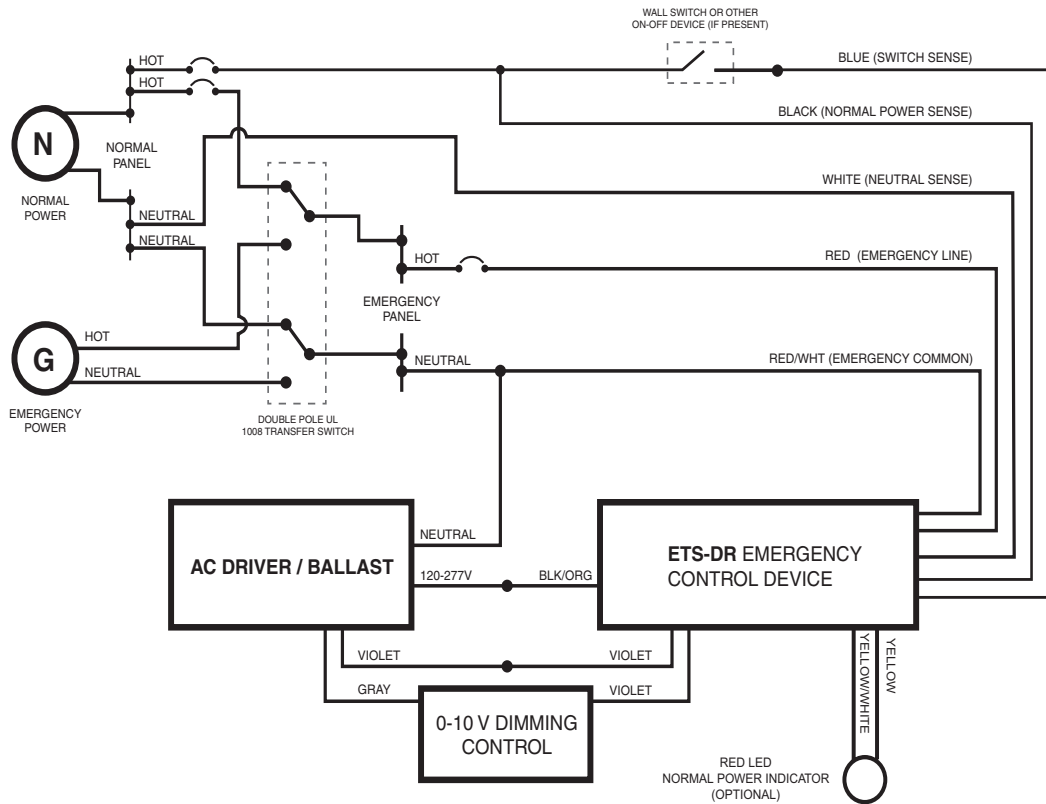
**SERVICING SHOULD BE PERFORMED BY QUALIFIED PERSONNEL.**

**Consult Customer Service or visit [www.iotaengineering.com](http://www.iotaengineering.com) for current warranty information.**

# TYPICAL WIRING DIAGRAM

For wiring diagrams of ballast/drivers not shown, consult our Customer Service.

## TYPICAL CIRCUIT DIAGRAM - SEPARATELY DERIVED SYSTEM (SWITCHED NEUTRAL)



## TYPICAL CIRCUIT DIAGRAM 2 - NON SEPARATELY DERIVED SYSTEM

