

# ELECTRONIC SIGN BALLASTS RAPID START - SERIES WIRED



## Features & Benefits:

- Rapid Start Operation
- Active Power Factor Correction
- Series Lamp Operation
- Universal Input Voltage: 120 to 277VAC
- Direct replacement for T8HO & T12HO magnetic sign ballasts (no rewiring required)
- Light-weight design
- 4 Year Warranty
- UL Listed for Class P, Type HL, Type 2 Outdoor

The ESR Series Sign Ballast is a Rapid Start electronic sign ballast designed to be a direct replacement for upgrading magnetic sign ballasts.

Universal's ESR Series contractor friendly, light weight design features universal input voltage and active power factor correction making it the ideal magnetic ballast replacement solution. The ESR Ballasts are wired for 4' to 8' of one-to-six lamps and provides superior lamp life even in cold temperature environments. These key features enable installers to carry less inventory on their trucks and offers the fastest, easiest installation method for sign maintenance companies to upgrade an existing magnetic ballast.

| Catalog Number   | Total Lamp Footage | Start Temp                      | Input Volts | Input Watts (max) (T12HO/T8HO) | Max Line Current (T12HO/T8HO) | Case Dimensions (Inches) |        |       | Weight (lbs.) |      |
|--|--------------------|---------------------------------|-------------|--------------------------------|-------------------------------|--------------------------|--------|-------|---------------|------|
|  |                    |                                 |             |                                |                               | Case Length              | Height | Width |               |      |
| <b>T12HO up to 8' long or T8HO up to 6' in length: 120 - 277Volts - 50/60 Hz</b> |                    |                                 |             |                                |                               |                          |        |       |               |      |
| ESR1232-240011   | 12' min.           | T12HO: 32' max 2, 3, or 4 Lamps | -20°F       | 120                            | 282/256                       | 2.35/2.13                | 14.3   | 1.2   | 3.15          | 3.75 |
|  |                    | T8HO: 24' max 2, 3, or 4 lamps  | (-29°C)     | 277                            | 275/252                       | 0.99/0.90                |        |       |               |      |
| ESR416-120011  | 4' min.            | T12HO: 16' max 1 or 2 lamps     | -20°F       | 120                            | 142/129                       | 1.18/1.07                | 11.75  | 1.2   | 1.7           | 2    |
|  |                    | T8HO: 12' max 1 or 2 lamps      | (-29°C)     | 277                            | 139/128                       | 0.5/0.46                 |        |       |               |      |
| ESR2048-460011   | 20' min.           | T12HO: 48' max 4, 5, or 6 lamps | -20°F       | 120                            | 435/354                       | 3.63/3.00                | 16.7   | 1.2   | 3.15          | 4.85 |
|  |                    | T8HO: 32' max 4, 5, or 6 lamps  | (-29°C)     | 277                            | 420/348                       | 1.52/1.28                |        |       |               |      |

## Performance:

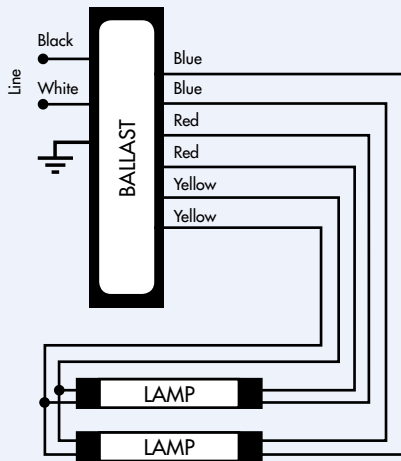
- Meets ANSI Standard C82.11
- Meets ANSI Standard C62.41
- Meets FCC Part 18 (Class A) for EMI and RFI non-consumer limits

## Safety:

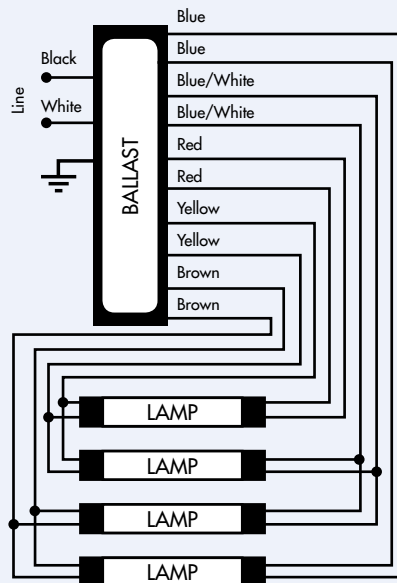
- No PCB's
- $c_{UL}_{US}$  Listed (Class P, Type HL, Type 2 Outdoor)
- $c_{CSA}_{US}$  Listed

## Application:

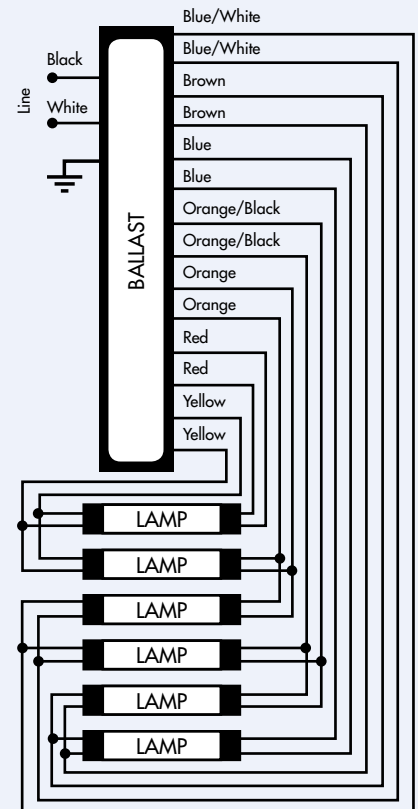
- Minimum Starting Temperature: -20° F, -29° C
- Energy Saving Lamps: 60° F, 16° C
- Maximum Case Temperature: 176° F, 80° C
- Sound Rated: A



**WIRING DIAGRAM  
FOR 2 LAMP OPERATION  
ESR416**



**WIRING DIAGRAM  
FOR 4 LAMP OPERATION  
ESR1232**



**WIRING DIAGRAM  
FOR 6 LAMP OPERATION  
ESR2048**