# Standard Electronic Ballast

**with End-of-Lamp Life circuit for 36W, 40W, 50W and 55W "Long Twin Tube" Lamps**

## PRODUCT PROFILE

### Function

The family of Advance Standard Electronic ballasts operates the most popular long twin tube lamps on the market—36W, 40W, 50W and 55W. All are rapid start designed and feature end- of-life circuitry.

### Design Highlights

- Lamp End-of-Life detection circuit that removes power from the lamp when the ballast senses lamp failure. This standard feature meets proposed ANSI/IEC regulations.
- Fully integrated, internally soldered copper leads for a safe, firm, and long-lasting electrical connection.
- Designed with a thermal potting compound to remove heat from the ballast components.
- Exceptional power quality with a power factor of >98%, THD <20%, and low inrush current.
- Rapid Start design maximizes lamp life by properly preheating the lamp cathodes.

| Features | Benefits |
|---|---|
| End-of-Life Circuitry, standard in all Advance CFL and Twin Tube electronic ballasts. | •Delivers safe operation by preventing potential lamp melting or cracking. |
| Thermal potting to remove heat from ballast components. 70°C maximum case temperature exceeds industry standards | •Prevents lamp cycling or premature failure |
| Fully integrated internally soldered copper leads | •Ensures years of trouble-free ballast operation |
| Rapid Start design for friendlier lamp starting. | •Extends lamp life up to 20% over Instant Start ballasts. |
| Operates below 30kHz | •Safe for areas using IR controls |

### Applications

- Conference and meeting rooms
- Boardrooms and executive offices
- Hotel and convention center ballrooms
- Retrofit installations and new construction
- Restaurants
- Reception areas
- General office lighting

Advance is an ISO 9002 certified manufacturer and offers a 5-year warranty on all of its electronic ballast products.

ADVANCE TRANSFORMER CO.
A DIVISION OF PHILIPS ELECTRONICS NORTH AMERICA CORPORATION

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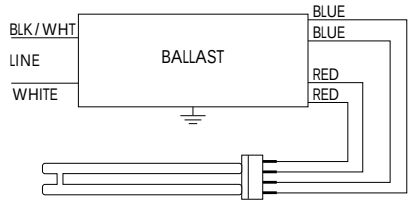
## Standard Electronic Ballast Specifications

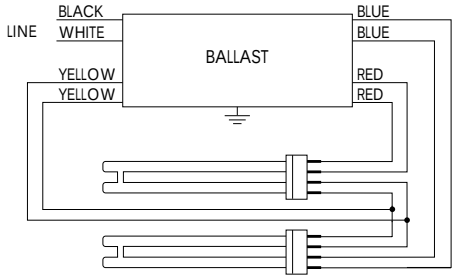
1. Ballast shall operate from a nominal line voltage of (120, 277) volts,+/- 10%, 60 Hz.
2. Ballast shall have a maximum warranty case temperature no less than 70°C.
3. Ballast shall meet ANSI C62.41 Category A transient voltage protection requirements.
4. Ballast shall be Rapid Start.
5. Ballast Power Factor shall be >98%.
6. Ballast THD shall be <20%.
7. Ballast shall meet FCC Class A (non-consumer) specifications for EMI/RFI.
8. Ballast shall start the lamp at a minimum temperature of 50°F.
9. Ballast shall have a lamp current crest factor <1.7.
10. Ballast shall be sound rated A.
11. Ballast shall be UL Listed Class P and CSA Approved.
12. Ballast shall contain potting to secure PC board, provide lead strain relief, provide a moisture barrier, and ensure proper thermal transmission.
13. Ballast shall contain no PCBs.
14. Ballast must have a lamp end-of-life detection and shut-down circuit that meets proposed ANSI/IEC standards.
15. Ballast shall have permanently connected, internally soldered 18 AWG leads to provide a safe firm electrical connection.
16. Ballast must be produced in a factory Certified to ISO 9002 Quality System Standards.
17. Ballast output frequency to the lamps shall be between 20kHz and 30kHz to minimize interference with infrared control systems.
18. Ballast shall be Advance part #_____, no equal. Proposed substitutes must be submitted 2 weeks prior to bid due date.

## Wiring Diagram

**1-LAMP BALLAST**

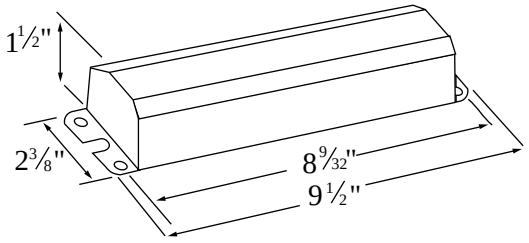



**2-LAMP BALLAST**




* No remote mounting.
* 36" maximum lead length in fixture.

## Dimensions




## Ballast Selection Guide

| Volts | Number of Lamps | Catalog | ANSI | Ballast Factor | Power Factor | LCCF | Ballast THD |
|---|---|---|---|---|---|---|---|
| 120 | (1) FT36W/2G11 | REL-1TTS39 | 39 | 1.0 | >.98 | <1.7 | <20% |
| 120 | (1) FT40W/2G11 | REL-1TTS40 | 44 | 1.0 | >.98 | <1.7 | <20% |
| 120 | (1) FT50W/2G11 | REL-1TTS50 | 54 | .98 | >.98 | <1.7 | <20% |
| 120 | (1) FT55DL/RS | REL-1TTS50 | 51 | .85 | >.98 | <1.7 | <20% |
| 120 | (2) FT36W/2G11 | REL-2TTS39 | 70 | .85 | >.98 | <1.7 | <20% |
| 120 | (2) FT40W/2G11 | REL-2TTS40 | 71 | .85 | >.98 | <1.7 | <20% |
| 120 | (2) FT50W/2G11 | REL-2TTS50 | 106 | .98 | >.98 | <1.7 | <20% |
| 120 | (2) FT55DL/RS | REL-2TTS50 | 100 | .84 | >.98 | <1.7 | <20% |
| 277 | (1) FT36W/2G11 | VEL-1TTS39 | 39 | 1.0 | >.98 | <1.7 | <20% |
| 277 | (1) FT40W/2G11 | VEL-1TTS40 | 44 | 1.0 | >.98 | <1.7 | <20% |
| 277 | (1) FT50W/2G11 | VEL-1TTS50 | 54 | .98 | >.98 | <1.7 | <20% |
| 277 | (1) FT55DL/RS | VEL-1TTS50 | 51 | .85 | >.98 | <1.7 | <20% |
| 277 | (2) FT36W/2G11 | VEL-2TTS39 | 70 | .85 | >.98 | <1.7 | <20% |
| 277 | (2) FT40W/2G11 | VEL-2TTS40 | 71 | .85 | >.98 | <1.7 | <20% |
| 277 | (2) FT50W/2G11 | VEL-2TTS50 | 106 | .98 | >.98 | <1.7 | <20% |
| 277 | (2) FT55DL/RS | VEL-2TTS50 | 100 | .84 | >.98 | <1.7 | <20% |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