

Product Overview

Setting The Pace In T8 Technology

Universal Lighting keeps pushing the frontier of T8 technology with innovative products that deliver dramatic energy savings, greater fixture design flexibility, longer lamp life and installation ease. You can count on Universal for some of the industry's highest efficiency and most hassle-free T8 ballasts.

Universal offers high efficiency T8 ballasts for Instant Start and Programmed Start applications. These ballasts deliver up to 6% additional energy savings over standard electronic ballasts, even more when used with the new F32T8/ES (25 Watt), F32T8/ES (30 Watt) or F28T8 (28 Watt) lamps.

TRIAD® and ULTim8 Instant Start Applications

Instant Start technology for continuous operation and installer friendly Universal input voltage.

Maximizes energy savings for long cycle operations.

- Some of the most efficient ballasts in the industry for maximum energy savings.
- Available in high efficiency HE normal (.88), EL low (.77), and HEH high (1.18) ballast factor versions.
- Independent lamp operation simplifies troubleshooting. Lamps stay lit if one lamp fails preventing fixtures from going dark and replacing lamps unnecessarily.
- Lamp will auto-restrike as a standard feature allowing replacement of lamps without recycling power.
- Anti-striation control for better light quality when using energy saving lamps.
- Universal input voltage, installer friendly.
- Backed by 5 year warranty when operated at 75° C max case temperature.

ULTim8® Programmed Start Applications

Features true parallel lamp operation and fast start time (<700ms) so that if one lamp fails, other lamps stay lit.

“Soft start” technology maintains lamp life, making these the perfect choice for high-cycling applications like occupancy sensors. Designed for use with 30, 28 and 25 Watt energy saving lamps for even more energy savings.

- Same benefits as Instant Start plus ...
- Available in high efficiency HE normal (.88) and EL low (.71), and HEH (1.18) ballast factor versions.
- Programmed Start ballasts are designed to quickly pre-heat lamp cathodes up to their optimum starting temperature and ignite the lamps quickly.
- Filament cut out on HE and HEH models for instant start level efficiency.
- The quick ignition results in long lamp life without the typical long delay during turn-on.
- Same 5 year warranty as instant start or 3-year warranty for HEH modules when operated at 90° C case temperature.

High Lumen and High Bay Applications

ULTim8® High Lumen ballasts are the high efficiency high ballast factor choice for high lumen T8 applications.

ULTim8® HB ballasts are designed to provide excellent performance in the high ambient temperature applications where high bay fluorescent fixtures are installed.

EL Ballasts: Used often when retrofitting existing T12 fixtures with T8 lamps to tune down lamp output.

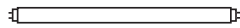
Application areas include stairwells, hallways, bathrooms and other areas that are lit partially during the day. They are good for using in low light level areas. Change light levels with ballast factor.

HE Ballasts: Used often in new construction, the high efficiency version of our standard HP product. Used for frequently switched applications including occupancy sensors and daylight harvesting. They are a good solution for education, commercial offices and retail.

HEH Ballasts: Used to overdrive lamps. Use these for areas with high light output. They are a great solution for high bay fixtures including applications for warehouses and manufacturing.

LED Linear T8 Tube Compatibility

Universal's LED linear T8 Tubes are ideal for T8 fluorescent replacement - installing directly into existing fixtures that have electronic T8 ballasts. Just look for the ▲ “LED Ready” symbol next to the catalog number.



- Instant Starting Options
- 1-2 Lamp Applications
- 4-8' T8 High Output

TRIAD® ELECTRONIC BALLASTS FOR (1) AND (2) F48T8HO, AND F96T8HO LAMPS

Lamp		Line Volts	Catalog Number	Line Current (Amps)	Input Power (Watts)	Power Factor (PF)	Ballast Factor (BF)	Ballast Efficacy Factor (BEF)	THD %	Min. F/C Start Temp	Wiring Diag.	Dim.
Qty.	Starting Method											
F48T8HO - One Lamp Applications												
1	PS	120 277	B286PUNVHE-S	0.75 0.34	93	> .98 > .95	0.98	1.05	< 10 < 12	-20/-29	4a	-S
F48T8HO - Two Lamp Applications												
2	SER-PS	120 277	B286PUNVHE-S	0.41 0.19	49	> .96 > .92	1.01	2.06	< 10 < 15	-20/-29	4	-S
F96T8HO - One Lamp Applications												
1	PS	120 277	B286PUNVHE-S	0.80 0.36	96	> .98 > .95	1.00	1.04	< 10 < 12	-20/-29	4a	-S
F96T8HO - Two Lamp Applications												
2	SER-PS	120 277	B286PUNVHE-S	1.57 0.67	187 184	> .98 > .96	0.95	0.51 0.52	< 10	-20/-29	4	-S

IS = Instant Start
PS = Programmed Start

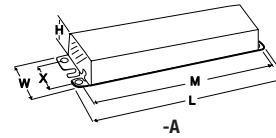
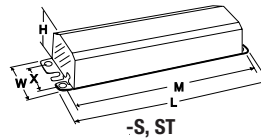
RS = Rapid Start
PAR-IS = Parallel Instant Start

STARTING METHOD LEGEND
PAR-PS = Parallel Programmed Start
SER-PS = Series Programmed Start

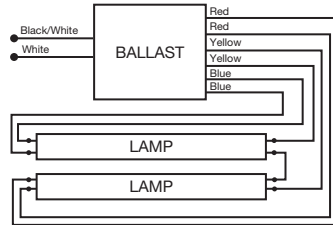
PAR-RS = Parallel Rapid Start
SER-RS = Series Rapid Start

SER-IS = Series Instant Start

Overall Dimensions			Mounting Dimensions		
Draw #	L	W	H	M	X
-S	11.75"	1.70"	1.18"	11.19"	1.05"
ST	9.50"	2.40"	1.55"	8.89"	1.69"
-A	9.50"	1.70"	1.18"	8.89"	1.06"

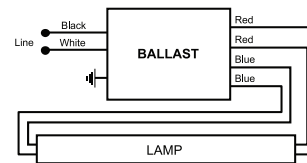


WIRING DIAGRAMS



Yellow leads must be connected to plunger end of fixture

DIAGRAM 4



For One Lamp Applications, individually cap yellow leads, Insulate to 600V

DIAGRAM 4a

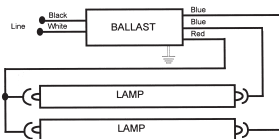
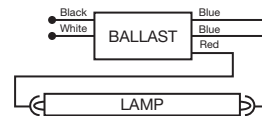


DIAGRAM 14



Cap any blue lead, insulate to 600 volts

DIAGRAM 15

Specifications

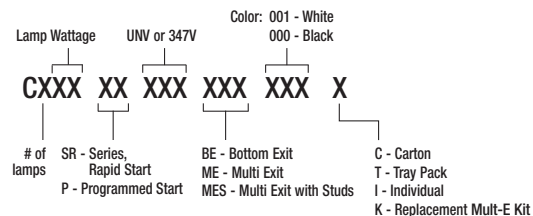
TYPICAL SPECIFICATIONS FOR ELECTRONIC COMPACT FLUORESCENT BALLASTS:

- Ballasts shall be constructed of metal housing to meet plenum and construction code requirements while providing maximum heat transfer without extra grounding wires for extended ballast life.
- Ballasts shall be constructed using dual entry color coded wire trap terminals for wiring accuracy and ease of installation.
- Ballasts shall be Programmed Start.
- Ballasts shall have a minimum Rh/Rc of 4.25 each time the lamps are started.
- Ballasts shall have a maximum ionization current (Glow Current) of 25 milliamps during preheating interval.
- Ballasts shall operate from 50/60 Hz input source of 120 through 277 Volts, and sustained variations of $\pm 10\%$ (Voltage & Frequency) with no damage to the ballasts.
- Ballasts shall be a high frequency electronic type, and operate lamps at a frequency above 50 kHz to minimize interference with infrared control systems.
- Ballasts shall have a minimum starting temperature of 0°F (-18°C) for the primary lamp application.
- Ballasts shall tolerate operation in ambient temperatures up to 140°F (55°C) without damage.
- Ballasts shall have a maximum case temperature test point of 75°C printed on the label for easy fixture testing and trouble shooting.
- Ballasts shall support 12' lead length remote mounting for the primary lamp.
- Ballasts shall comply with FCC Part 18 Non-Consumer Equipment for EMI (power line conducted) and RFI (radiated).
- Ballasts shall provide transient immunity as recommended by ANSI C82.11.
- Ballasts shall incorporate end of lamp life shutdown circuitry for end of lamp life protection.
- Ballasts shall allow for re-lamping without the need to cycle power.
- Ballasts shall operate lamps with no visible flicker (<3% flicker index).
- Ballasts shall tolerate sustained open and short circuit output conditions without damage.
- Ballasts shall be Underwriters Laboratory (UL 935) listed, Class P, Type 1 Outdoor and/or CSA certified for both US and Canadian application.
- Ballasts shall be UL 935 Type CC rated to reduce arcing caused by loose connections or improper lamp-pin to lampholder contact.
- Ballasts shall be UL 2043 certified for use in plenums and marked on label as "Suitable for Air Handling Spaces".
- Ballasts shall be quiet Class A sound rating.
- Ballasts shall have a Ballast Factor for primary lamp application greater than .95 per ANSI C82.11.
- Input current Total Harmonic Distortion shall not exceed 10% for the primary lamp.
- Ballasts shall have a Power Factor greater than .98 for the primary lamp application.
- Lamp Current Crest Factor (ratio of peak to RMS current) shall be 1.7 or less in accordance with lamp manufacturer recommendation and ANSI C82.11.
- The ballasts shall not have any PCB's.
- The manufacturer shall provide written warranty against defects in material or workmanship, including replacement, for five years from date of manufacture.
- Manufacturer shall have been manufacturing electronic ballasts for at least thirty years.
- Ballasts shall be manufactured in an ISO 9001 / ISO 9002 Certified Facility in North America.
- Ballasts shall be manufactured by Universal Lighting Technologies.

Understanding Universal Part Numbers

ELECTRONIC

Our nomenclature for electronic CFL ballasts follows the system already in place for other Universal electronic ballasts. The exceptions are that the model number prefix for compact fluorescent is a C rather than a B.



Example: Electronic C240PUNVHP-B000C

Ballast Type: C — CFL Electronic Ballast

Lamp Qty: 2

Lamp Type: 40W TT5, 4 Pin (FT40W/2611)

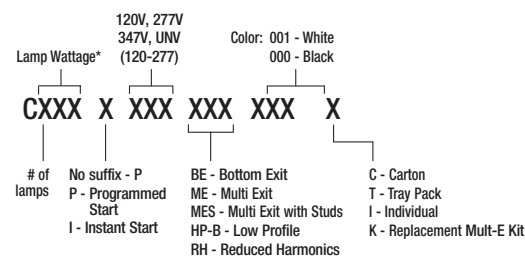
P: Programmed Start

Voltage: UNV 120 to 277 volts

HP-B: High Performance <10%; low profile can

000: Color—Black

C: Packaging container style—Carton Pack



Example: C213UNVMES000C*

Ballast Type: C

Lamp Quantity: 2

Lamp Type: 13W Quad, 4 Pin (CFQ13W/G24q)

Voltage: UNV 120 to 277 volts

MES: Multi-exit connection, with studs

000C: Color—Black

C: Packaging container style—Carton Pack

*Exception is C2642, which does not distinguish number of lamps. See catalog.