

Electronic Fluorescent Ballasts

A Complete Range of Solutions — From The Name You Trust

For more than 30 years, the lighting industry has relied on our TRIAD® brand for the most specified, most installed, most reliable electronic ballasts in the business.

The TRIAD® line offers advantages like installer-friendly universal input voltage, which ensures that you have the right voltage ballast every time, and maximum energy savings for long cycle operations.

And our ULTim8® and AccuStart™ ballasts feature high efficiency designs and programmed start technology that dramatically enhances lamp life.



Universal is the leader in energy saving electronic ballasts.

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. Our T8 ballasts are CEE and NEMA Premium compliant.

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.
- Because these ballasts are CEE and NEMA Premium compliant they may qualify for utility incentives.
- 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.

Product Overview

T5 & T5HO Ballasts For Architectural and High Bay Applications

Whether it's for new construction or a retrofit project, Universal's T5 and T5HO ballasts, with their smaller size and high lumen output, have become the dominant player in architectural and high bay applications.

Programmed Start ballasts feature a "soft start" technology that maximizes lamp life, making them the perfect choice for high cycling applications including those involving occupancy sensors and wall switches.

High Efficiency (AccuStart5®, ULTim5®):

Our high efficiency T5 and T5HO ballasts are ideal for bathrooms, hallways, stairwells, gymnasiums, classrooms, libraries, corridors, offices, recessed volumetric strips, wraps, wall washing, displays, direct/indirect lighting, surface mount, cove, under cabinet or task lighting. Common applications include: commercial, retail, hospitality, restaurants, law offices, medical, institutional, airports, and schools.

The **AccuStart5®** and **ULTim5®** lines of linear fluorescent T5 and T5HO ballasts offer broad appeal to the most common applications. Universal input voltage (108-305 volts). T5 ballasts support (1) or (2) 2' F14T5, 3' F21T5, 4' F28T5, and 5' F35T5 full wattage and energy saving lamps. T5HO ballasts support (1) or (2) 2' F24T5HO 3' F39T5HO and (1) (2) (3) or (4) 4' F54T5HO full wattage and energy saving lamps.

High Bay (AccuStart5HB®):

T5HO High Bay ballasts are ideal for new construction and fixture retrofits in gymnasiums, high bay retail stores and warehouses, manufacturing sites, industrial facilities and similar applications. These High Output ballasts are well suited for applications where space is at a premium, including slim pendant mounted fixtures, cove and task lighting. AccuStart5HB ballasts offer a replacement opportunity for traditional HID high bay applications. Light up the aisles for the forklift operator when lighting is needed. Keep spaces lit when and where needed.

Universal offers the **AccuStart5HB®** line of linear fluorescent T5HO ballasts for High Bay applications. Ideal for extreme temperature (90° C Case Warranty). Universal input voltage (108-305 volts) and high range voltage (347-480 volts). These ballasts support (2) and (4) 117, 119, 120, 182, 184, 229 and 235 watt T5HO ballasts.

Canadian Voltage:

Universal offers Canadian voltage in 347V and high range voltage. These ballasts come in standard efficiency, high efficiency and High Bay for T5 and T5HO applications.



Family of Universal HP Ballasts.



Flexible Fixture design options for T5 and T5HO lamps.

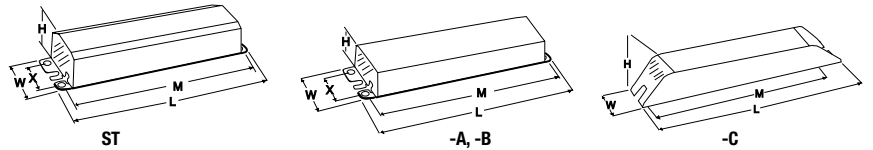
TRIAD® ELECTRONIC BALLASTS

FOR F40T8 LAMPS

F40T8

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											
F40T8 - Three Lamp Applications												
3	PAR-IS	347	B432I347HPL	0.29	100	> .99	0.81	0.81	< 10	0/-18	7	ST
		120	B432IUNVEL-A	0.81	97	> .99	0.86	0.89	< 10	0/-18	7a	-A
		277	B432IUNVHE-A	0.35	94	> .98	0.91	0.91	< 10	0/-18	7a	-A
		120	B432IUNVHE-A	0.93	111	> .99	0.96	0.86	< 10	0/-18	7a	-A
		277	B432IUNVHE-A	0.39	107	> .98	0.96	0.90	< 10	0/-18	7a	-A
		120	B432IUNVHP-A	0.95	114	> .99	0.92	0.81	< 10	0/-18	7a	-A
3	PAR-PS	120	B432PUNVEL-A	0.79	95	> .99	0.70	0.74	< 10	-20/-29	49	-A
		277	B432PUNVEL-A	0.34	92	> .98	0.76	0.76	< 10	-20/-29	49	-A
		120	B432PUNVHE-A	0.93	111	> .90	0.93	0.84	< 10	-20/-29	49	-A
		277	B432PUNVHE-A	0.40	109	> .90	0.93	0.85	< 10	-20/-29	49	-A

Overall Dimensions			Mounting Dimensions		
Draw #	L	W	H	M	X
ST	9.50"	2.40"	1.55"	8.89"	1.69"
-A	9.50"	1.70"	1.18"	8.89"	1.69"
-B	9.50"	1.50"	1.00"	8.89"	0.88"
-C	14.25"	1.18"	1.00"	13.75"	---



WIRING DIAGRAMS

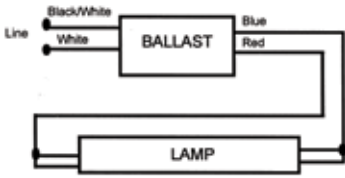


DIAGRAM 1

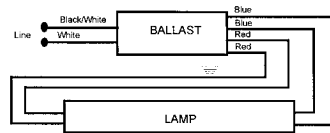
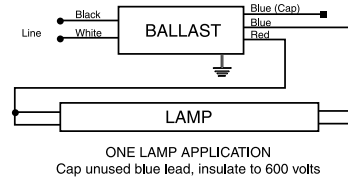
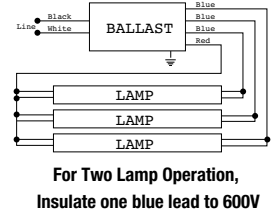


DIAGRAM 2



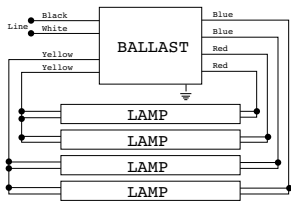
ONE LAMP APPLICATION
Cap unused blue lead, insulate to 600 volts

DIAGRAM 3a



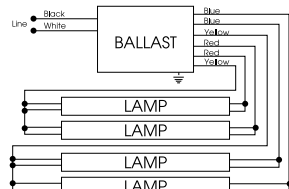
For Two Lamp Operation,
Insulate one blue lead to 600V

DIAGRAM 6



For Three Lamp Operation,
Insulate one blue lead to 600V

DIAGRAM 7



For three lamp operation, cap any
blue lead, insulate to 600V

DIAGRAM 7a

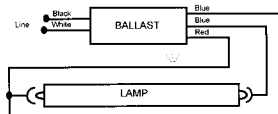
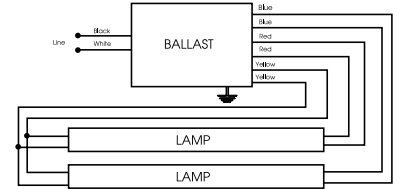


DIAGRAM 14



For one lamp operation, cap any
blue lead, insulate to 600V

DIAGRAM 30

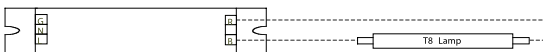


DIAGRAM 22

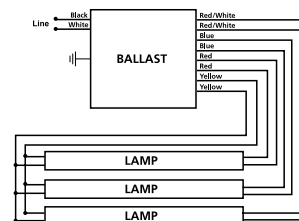
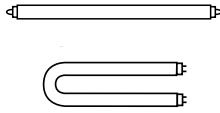


DIAGRAM 49



- Instant Starting Options
- 1-2 Lamp Applications
- 8' T8 SLIMLINE
- High Performance Models

TRIAD® ELECTRONIC BALLASTS

FOR (1) AND (2)

F48T8, F72T8, F96T8 AND F96T8ES 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															
F48T8 - One Lamp Applications																
1	IS	120	B244I120HE	0.30	35	> .95	1.04	2.97	< 10	0/-18	14	ST				
		277	B244I277HE-A	0.14	36	> .90	1.06	2.94		0/-18	14	-A				
F48T8 - Two Lamp Applications																
2	PAR-IS	120	B244I120HE	0.47	55	> .95	0.90	1.64	< 10	0/-18	14	ST				
		277	B244I277HE-A	0.21	56	> .95	0.89	1.59		0/-18	14	-A				
F72T8 - One Lamp Applications																
1	IS	120	B244I120HE	0.42	50	> .95	1.03	2.06	< 10	0/-18	14	ST				
		277	B244I277HE-A	0.19	52	> .95	1.04	2.00		0/-18	14	-A				
F72T8 - Two Lamp Applications																
2	PAR-IS	120	B244I120HE	0.70	82	> .95	0.88	1.07	< 10	0/-18	14	ST				
		277	B244I277HE-A	0.30			0.87	1.06		0/-18	14	-A				
F96T8 - One Lamp Applications																
1	IS	120	B259IUNVEL-A	0.54	64	> .99	0.99	1.55	< 10	32/0	15	-A				
		277		> .97												
		120	B259IUNVHP-A	0.60	72	> .99	1.08	1.50								
		277		> .98												
		120	B259IUNVHE-A	0.60	71	> .99	1.08	1.52								
		277		> .97												
		120	B259IUNVEL-A	0.93	111	> .99	.88	0.79								
		277		> .98												
347	B259I347HP	0.20	68	> .97	1.05	1.54	< 10	32/0	14	ST						
F96T8 - Two Lamp Applications																
2	PAR-IS	120	B259IUNVEL-A	0.84	101	> .99	.78	0.77	< 10	32/0	15	-A				
		277		> .98												
		120	B259IUNVHE-A	0.92	108	> .99	.88	0.81								
		277		> .99												
		120	B259IUNVHP-A	0.95	113	> .99	0.88	0.78								
		277		> .98												
		347	B259I347HP	0.33	113	> .99	0.89	0.79					< 10	32/0	14	ST
		F96T8ES (57W) - One Lamp Applications														
1	IS	120	B259IUNVHE-A	0.56	67	> .99	1.08	1.61	< 10	60/16	15	-A				
		277		> .97												
		120	B259IUNVEL-A	0.51	61	> .99	0.99	1.62								
277	> .97															
F96T8ES (57W) - Two Lamp Applications																
2	PAR-IS	120	B259IUNVHE-A	0.92	108	> .99	0.88	0.81	< 10	60/16	15	-A				
		277		> .99												
		120	B259IUNVEL-A	0.80	95	> .99	0.78	0.82								
		277		> .98												
F96T8ES (54W) - One Lamp Applications																
1	IS	120	B259IUNVHE-A	0.51	61	> .99	1.08	1.77	< 10	60/16	15	-A				
		277		> .96												
F96T8ES (54W) - Two Lamp Applications																
2	PAR-IS	120	B259IUNVHE-A	0.80	95	> .99	0.88	0.93	< 10	60/16	15	-A				
		277		> .98												
F96T8ES (49W) - One Lamp Applications																
1	IS	120	B259IUNVEL-A	0.41	48	> .99	0.99	2.06	< 10	60/16	15	-A				
		277		> .96												
F96T8ES (49W) - Two Lamp Applications																
2	PAR-IS	120	B259IUNVEL-A	0.64	77	> .99	0.78	1.01	< 10	60/16	15	-A				
		277		> .98												

STARTING METHOD LEGEND

- IS = Instant Start RS = Rapid Start PAR-PS = Parallel Programmed Start PAR-RS = Parallel Rapid Start SER-IS = Series Instant Start
 PS = Programmed Start PAR-IS = Parallel Instant Start SER-PS = Series Programmed Start SER-RS = Series Rapid Start

See page 1-33 for Dimensions and Wiring Diagrams