

Triad®

High Efficiency System Offers 40% Energy Savings The most dramatic energy savings innovation in linear fluorescent technology in 25 years

The new Triad® High Efficiency Lamp/Ballast System from Universal Lighting Technologies is the most significant advancement in linear fluorescent energy savings in more than a quarter century. The new system delivers a 40% energy savings compared to conventional magnetic T12 energy-saving systems and 11% versus standard electronic T8 systems.

Innovation Is The Universal Language

The new High Efficiency ballast is designed to operate any lamp manufacturer's F32T8/ES energy-saving lamp or standard F32T8 lamp. The F32T8/ES lamps operate at approximately 2 watts less while providing the same lumen package of standard F32T8 lamps. Additionally, the High Efficiency ballasts operate at approximately 3 to 6 watts less than standard electronic ballasts. When combined together, the High Efficiency Lamp/Ballast system provides the maximum energy savings possible.

The High Efficiency Lamp/Ballast System conserves energy without sacrificing lamp life or light output. It's ideal for retrofits and new construction, and provides immediate savings.

The Power Behind the Energy Savings

The Triad® High Efficiency ballast is available in 2, 3 and 4 lamp models for the F32T8 lamps with ballast factors of .78 and .88. A .88 ballast factor model is also available for the F96T8 lamp. This new ballast also features parallel lamp operation, THD<10% and standard mounting footprint and wiring for easy installation.



Triad® High Efficiency ballasts deliver dramatic energy savings and multi-lamp compatibility.

Features and Benefits

- Reduced energy usage
 - Dramatic energy savings:
 - 40% savings over magnetic T12 systems
 - 11% savings over standard Electronic T8 systems
- Multi-lamp Compatibility
 - For use with F32T8 or F32T8/ES lamps
 - Approved for use with any manufacturer's lamps
- THD <10%
 - Complies with all stringent THD requirements
- Parallel Lamp Operation
 - When one lamp fails, remaining lamps stay lit
- .88 (HE) and .78 (EL) ballast factor options available
 - Facilitates flexible lighting design
 - .78 system matches light levels of F40T12ES systems
- Standard Mounting Footprint and Wiring
 - Easily retrofits into existing fixtures

| EL (.78 BALLAST FACTOR) FAMILY | | | | | | | |
|--------------------------------|---------------------|-------------|-----------------------|-------------|-----------------------|-------------|-----------------------|
| Ballast Type | Lamp Type | 2 Lamp | | 3 Lamp | | 4 Lamp | |
| | | Input Watts | Annual Operating Cost | Input Watts | Annual Operating Cost | Input Watts | Annual Operating Cost |
| Energy Saving Magnetic | F40T12/ES (34 watt) | 74 | \$29.60 | 118 | \$47.20 | 148 | \$59.20 |
| Low Power Electronic | F32T8 | 51 | \$20.40 | 77 | \$30.80 | 100 | \$40.00 |
| High Efficiency Electronic | F32T8 | 48 | \$19.20 | 73 | \$29.20 | 96 | \$38.40 |
| High Efficiency Electronic | F32T8/ES (30 watt) | 45 | \$18.00 | 67 | \$26.80 | 89 | \$35.60 |

| HE (.88 BALLAST FACTOR) FAMILY | | | | | | | |
|---------------------------------|--------------------|-------------|-----------------------|-------------|-----------------------|-------------|-----------------------|
| Ballast Type | Lamp Type | 2 Lamp | | 3 Lamp | | 4 Lamp | |
| | | Input Watts | Annual Operating Cost | Input Watts | Annual Operating Cost | Input Watts | Annual Operating Cost |
| Energy Saving Magnetic | F40T12 (40 watt) | 90 | \$36.00 | 142 | \$56.80 | 180 | \$72.00 |
| Standard Electronic RH-A System | F32T8 | 58 | \$23.20 | 88 | \$35.20 | 112 | \$44.80 |
| High Efficiency Electronic | F32T8 | 55 | \$22.00 | 83 | \$33.20 | 108 | \$43.20 |
| High Efficiency Electronic | F32T8/ES (30 watt) | 52 | \$20.80 | 77 | \$30.80 | 102 | \$40.80 |

Note: The Ballast System Comparison data matrixes are based on a 120 volt system, average usage of 4,000 operating hours, and \$0.10 per KWh.

"EL" System is ideal for replacing systems with the 34 watt energy-saving T12 lamps installed.

"HE" System is ideal for replacing systems with the full wattage F40T12 lamps and new construction.

High Efficiency Lamp Ballasts

| Catalog Number | Lamp Type | Qty. | Input Watts | Nominal Line Amps | Power Factor | Ballast Factor | Ballast Efficacy Factor | Total Harmonic Distortion | Crest Factor | Wiring Dia. |
|-------------------|-----------|------|-------------|-------------------|--------------|----------------|-------------------------|---------------------------|--------------|-------------|
| B232I120EL | | | | | | | | | | |
| | F32T8/ES* | 2 | 45 | 0.38 | >.98 | .78 | 1.73 | <10% | <1.7 | 1 |
| | F32T8 | 2 | 48 | 0.41 | >.98 | .78 | 1.63 | <10% | <1.7 | 1 |
| B232I277EL | | | | | | | | | | |
| | F32T8/ES* | 2 | 45 | 0.17 | >.98 | .78 | 1.73 | <10% | <1.7 | 1 |
| | F32T8 | 2 | 48 | 0.18 | >.98 | .78 | 1.63 | <10% | <1.7 | 1 |
| B332I120EL | | | | | | | | | | |
| | F32T8/ES* | 3 | 67 | 0.56 | >.99 | .78 | 1.16 | <10% | <1.7 | 2 |
| | F32T8 | 3 | 73 | 0.61 | >.99 | .78 | 1.07 | <10% | <1.7 | 2 |
| B332I277EL | | | | | | | | | | |
| | F32T8/ES* | 3 | 66 | 0.24 | >.99 | .78 | 1.18 | <10% | <1.7 | 2 |
| | F32T8 | 3 | 73 | 0.26 | >.99 | .78 | 1.07 | <10% | <1.7 | 2 |
| B432I120EL | | | | | | | | | | |
| | F32T8/ES* | 4 | 89 | 0.75 | >.99 | .78 | 0.88 | <10% | <1.7 | 3 |
| | F32T8 | 4 | 96 | 0.81 | >.99 | .78 | 0.81 | <10% | <1.7 | 3 |
| B432I277EL | | | | | | | | | | |
| | F32T8/ES* | 4 | 88 | 0.32 | >.99 | .78 | 0.89 | <10% | <1.7 | 3 |
| | F32T8 | 4 | 95 | 0.35 | >.99 | .78 | 0.82 | <10% | <1.7 | 3 |
| B232I120HE | | | | | | | | | | |
| | F32T8/ES* | 2 | 52 | 0.43 | >.98 | .88 | 1.69 | <10% | <1.7 | 1 |
| | F32T8 | 2 | 55 | 0.46 | >.98 | .88 | 1.60 | <10% | <1.7 | 1 |
| B232I277HE | | | | | | | | | | |
| | F32T8/ES* | 2 | 52 | 0.19 | >.98 | .88 | 1.69 | <10% | <1.7 | 1 |
| | F32T8 | 2 | 55 | 0.20 | >.98 | .88 | 1.60 | <10% | <1.7 | 1 |
| B332I120HE | | | | | | | | | | |
| | F32T8/ES* | 3 | 77 | 0.65 | >.99 | .88 | 1.14 | <10% | <1.7 | 2 |
| | F32T8 | 3 | 83 | 0.70 | >.99 | .88 | 1.06 | <10% | <1.7 | 2 |
| B332I277HE | | | | | | | | | | |
| | F32T8/ES* | 3 | 76 | 0.28 | >.99 | .88 | 1.16 | <10% | <1.7 | 2 |
| | F32T8 | 3 | 82 | 0.30 | >.99 | .88 | 1.07 | <10% | <1.7 | 2 |
| B432I120HE | | | | | | | | | | |
| | F32T8/ES* | 4 | 102 | 0.85 | >.99 | .88 | 0.86 | <10% | <1.7 | 3 |
| | F32T8 | 4 | 108 | 0.90 | >.99 | .88 | 0.81 | <10% | <1.7 | 3 |
| B432I277HE | | | | | | | | | | |
| | F32T8/ES* | 4 | 101 | 0.37 | >.99 | .88 | 0.87 | <10% | <1.7 | 3 |
| | F32T8 | 4 | 107 | 0.39 | >.99 | .88 | 0.82 | <10% | <1.7 | 3 |
| B259I120HE | | | | | | | | | | |
| | F96T8/ES* | 2 | 102 | 0.85 | >.99 | .88 | 0.86 | <10% | <1.7 | 1 |
| | F96T8 | 2 | 108 | 0.93 | >.99 | .88 | 0.81 | <10% | <1.7 | 1 |
| B259I277HE | | | | | | | | | | |
| | F96T8/ES* | 2 | 100 | 0.36 | >.99 | .88 | 0.88 | <10% | <1.7 | 1 |
| | F96T8 | 2 | 106 | 0.38 | >.99 | .88 | 0.83 | <10% | <1.7 | 1 |

*ES extensions will change to accommodate the different lamp manufacturers designations for high efficiency lamps.



It's Easy To Reach Us...

Phone: (615) 316-5100
BallastFax: (708) 445-4444
 for specifications and purchasing information 24 hours a day
Web site: www.universalballast.com

E-mail: webmaster@universalballast.com

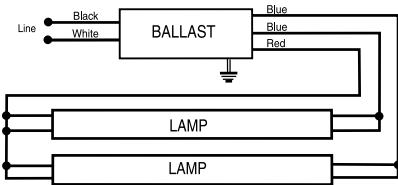
For Technical Engineering Services (TES), application support and warranty information, call 1-800-BALLAST.

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 All specification information is subject to change without notification.

WIRING DIAGRAMS FOR HIGH EFFICIENCY LAMP BALLASTS

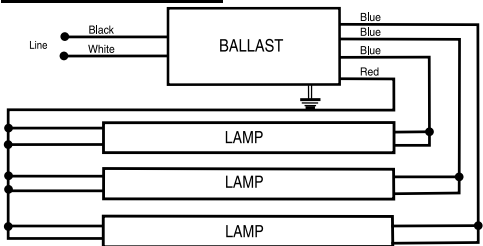
WIRING DIAGRAM 1



TWO LAMP APPLICATION
 Ballast Must Be Grounded

Note: For one lamp application, cap any blue lead, insulate to 600 volts.

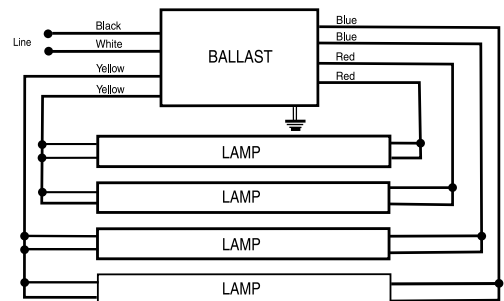
WIRING DIAGRAM 2



THREE LAMP APPLICATION
 Ballast Must Be Grounded

Note: For two lamp application, cap any blue lead, insulate to 600 volts.

WIRING DIAGRAM 3



FOUR LAMP APPLICATION
 Ballast Must Be Grounded

Note: For three lamp application, cap any blue lead, insulate to 600 volts.

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