



GE UltraMax® T8 Bi-Level Dimming Ballasts

The GE632MAX-H90-S60 & GE432MAX90-S60 ballasts are cost effective energy management solutions for big box retail, warehouses, and industrial facilities, providing the flexibility to reduce light levels in unoccupied spaces and cut energy usage during peak load

Perfect for Bi-Level Switching

- 100% to 60% bi-level dimming
- Great for fixed light output applications as well
- Unlimited hi-low cycle switching - limited to approximately five on/off cycles (starts) per day
- Use with line voltage occupancy sensors, lighting panel relays or when using two switches for multiple (high/low) light levels in one area

Sufficient Lighting, Flexible Operation

Reduces uneven light distribution and dark spaces caused when switching in rows, checkerboard patterns, or using tandem wiring patterns

- High ballast factor (1.18) to low (.71) step dimming
- 100% light level of a 2 high ballast factor is approximately the same as a 3 lamp normal ballast factor
- 100% light level of a 3 high ballast factor is approximately the same as a 4 lamp normal ballast factor
- Multi-volt 120-277V flexibility
- Anti-striation control for use with F32T8/WM, F28T8 or F32T8/25W reduced wattage lamps
- 2, 3, 4 or 6 lamp offering

Meets or Exceeds Industry Standards

- High efficiency NEMA premium: 6-lamp = extreme 95% efficiency at full load
- UL rating 55°C ambient approved
- UL type CC anti-arc rating



The GE UltraMax® T8 Bi-Level dimming ballasts offer an energy management solution to reduce lighting levels in warehouses, storage spaces, and other places that often go unoccupied.



GE632MAX-H90-S60

71497

GE LFL UltraMax™ Step Dimming Electronic Dimming Ballast

- Same price as equivalent 6 lamp fixed light output Ballast
- Ideal for 400w Metal Halide retrofits
- Ideal for Cold Storage facilities - 20°F Starting Temperature, reduce power by 40% when unoccupied, goes to full power immediately – No warm up! †
- Brighter and more efficient than 4 lamp T5HO fixtures
- Easier to wire than a T5HO or PS Ballast
- Bi-Level Switching 100 to 60%*
- Great for fixed light out put applications as well!
- Ultra 95% Electrical Efficiency*
- Anti-Striation Control for better light quality, with no striations
- UL 55°C Ambient Rating – High Temperature Protection Circuit*
- Cold temperature - 20°F Minimum Starting Temperature†
- High Bay High-Low Switching Ballast for 6, 5, & 4 lamp operation*
- 1.7"x1.2"x11.5" can*
- 3-wire power line occupancy sensor compatible (9 of 10 sensors on market are 3-wire power line)
- Allows for unlimited switching from high to low, limited to approximately 5 full on/off starts per day*

* GE Exclusive

† In enclosed fixtures - fixture must trap heat generated from lamps in cold environments

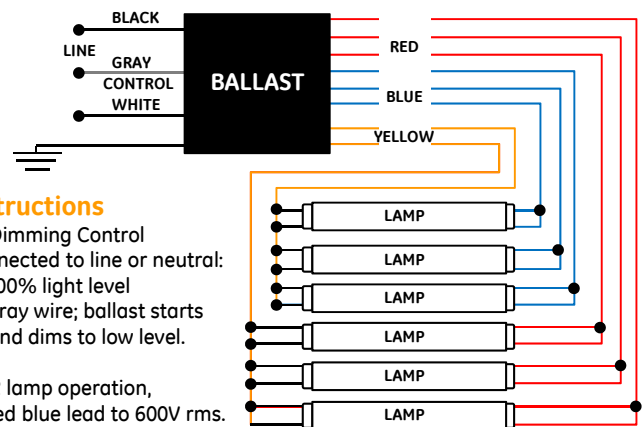
+ For optimal lamp performance when using UltraMax 6 lamp GE632MAX-H90-S60, GE recommends starting at full light output or 1.18 ballast factor and allow lamps to burn for several minutes before switching to low dim levels

Safety Features & Performance

- High Temperature Rated: Suitable for high temperature applications
- UL Type 1 Outdoor
- cUL Listed
- UL Type CC
- Meets ANSI Standard C82.11-Cons 2002
- UL Type HL
- FCC Part 18 (Class A) for EMI and RFI Non-Consumer Limits
- 5 year limited warranty at 70°C max case temperature or 3 year limited warranty at 90°C max case temperature
- Meets ANSI Standard C62.41-199

Lamp Types

- F32T8
- F28T8
- F32T8/WM
- F32T8 and U
- F32T8/25W
- F28T8/UMX
- F40T8



Wiring Instructions

Line Voltage Dimming Control
Gray wire connected to line or neutral:
Operates at 100% light level
Open circuit gray wire; ballast starts
At high level and dims to low level.

For N-1 or N-2 lamp operation,
insulate unused blue lead to 600V rms.

For fixed light output full power applications
connect both gray and black input leads to phase
Install and ground per National Electric Code – NEC

This is an instant start ballast, and it is not recommended to use sensors on the black line input wire and may void lamp warranty. Switching from high to low will not impact lamp life

The GE UltraMax® T8 Bi-Level dimming ballasts offer a cost effective method of achieving 40% energy savings without a full-range dimming ballast. Ideal for daylighting, load-shedding during peak demand charges in high-bay or commercial lighting applications.



GE432MAX90-S60

73229

GE LFL UltraMax™ Step Dimming Electronic Dimming Ballast

- Step Dimming at the same price as Standard H T8 Ballast – reduce power loads by 40%
- Great Retail Application for evening Load Reduction
- Ideal for Cold Storage facilities - 20°F Starting Temperature, reduce power by 40% when unoccupied, goes to full power immediately – No warm up! †
- Easier to wire than a T5HO or PS Ballast
- Bi-Level Switching 100 to 60%
- Great for fixed light applications as well!
- Ultra 95% Electrical Efficiency at full load*
- Anti-Striation Control for better light quality, with no striations
- UL 55°C Ambient Rating – High Temperature Protection Circuit
- UL Type CC Rating provides protection against arcing in electrical devices
- Cold temperature -22°F Minimum Starting Temperature †
- High Bay High-Low Switching Ballast
- 3-wire power line occupancy sensor compatible (9 of 10 sensors on market are 3-wire power line)
- Allows for unlimited switching from high to low, limited to approximately 5 full on/off cycles (starts) per day+

* GE Exclusive

† In enclosed fixtures - fixture must trap heat generated from lamps in cold environments

+ For optimal lamp performance when using UltraMax 4 lamp GE432MAX90-S60, GE recommends starting at full light output or 1.18 ballast factor and allow lamps to burn for several minutes before switching to low dim levels

Safety Features & Performance

- High Temperature Rated: Suitable for high temperature applications
- UL Type 1 Outdoor
- cUL Listed
- UL Type CC
- UL Type HL
- FCC Part 18 (Class A) for EMI and RFI Non-Consumer Limits
- 5 year limited warranty at 70°C max case temperature or 3 year limited warranty at 90°C max case temperature
- Meets ANSI Standard C62.41-1991
- Meets ANSI Standard C82.11-Cons 2002

Lamp Types

- F32T8
- F40T8
- F32T8/WM
- F28T8
- F32T8/25W

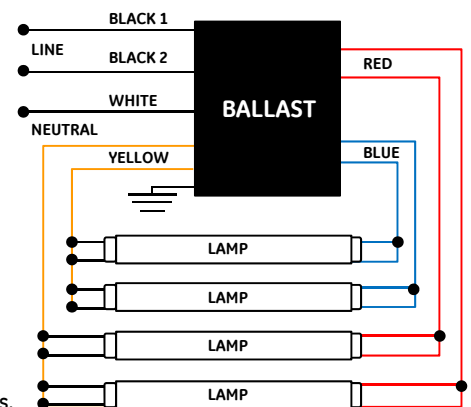
Wiring Instructions

Line Voltage Dimming Control
For 100% light output, connect both black wires to phase.
For Step-Dimming functionality, connect one or the other black wire to phase.
Ballast starts at high level and dims to low level.

For N-1 lamp operation, insulate unused blue lead to 600V rms.

For fixed light output full power applications
Connect both black input leads to phase
Install and ground per National Electric Code – NEC

This is an instant start ballast, and it is not recommended to use sensors on the black line input wire and may void lamp warranty. Switching from high to low will not impact lamp life



GE UltraMax® T8 Bi-Level Dimming Ballasts

71497-4 GE632MAX-H90-S60 - 6 or 5 - F32T8 120 to 277 "H" 1.18 BF UltraMax 95% efficiency, 1-wire powerline 100/60% step dim											
Type	Lamps #	Input Volts	Light Level	Dimming Level	Input Watts	Nominal Line Amps	Power Factor	Ballast Factor	Harmonic Total	Crest Factor	Min Start Temp
F32T8	6	120	100%	100%	221	1.94	> .99	1.18	< 10%	<1.4	-22°F
F32T8	6	120	60%	60%	133	1.13	> .99	.71	< 10%	<1.4	-22°F
F32T8	6	277	100%	100%	215	0.82	> .97	1.18	< 10%	<1.4	-22°F
F32T8	6	277	60%	61%	132	0.53	> .94	.71	<17%	<1.4	-22°F
F32T8/25W	6	120	100%	100%	178	1.57	> .99	1.18	< 10%	<1.4	60°F
F32T8/25W	6	120	60%	68%	122	1.03	> .99	.75	< 10%	<1.4	60°F
F32T8/25W	6	277	100%	100%	176	0.68	> .96	1.18	<16%	<1.4	60°F
F32T8/25W	6	277	60%	69%	121	0.49	> .93	.75	<17%	<1.4	60°F
F28T8	6	120	100%	100%	187	1.64	> .99	1.18	< 10%	<1.4	60°F
F28T8	6	120	60%	66%	123	1.05	> .99	.74	< 10%	<1.4	60°F
F28T8	6	277	100%	100%	184	0.70	> .96	1.18	<13%	<1.4	60°F
F28T8	6	277	60%	66%	122	0.50	> .93	.74	<17%	<1.4	60°F

73229-9 GE432MAX90-S60 - 4 - F32T8 120 to 277 "H" 1.18 BF UltraMax 100/60% step dim											
Type	Lamps #	Input Volts	Light Level	Dimming Level	Input Watts	Nominal Line Amps	Power Factor	Ballast Factor	Harmonic Total	Crest Factor	Min Start Temp
F32T8	4	120	100%	100%	149	1.25	> .99	1.18	< 10%	<1.4	-22°F
F32T8	4	120	60%	59%	88	0.74	> .99	.71	< 10%	<1.4	-22°F
F32T8	4	277	100%	100%	146	0.54	> .97	1.18	< 10%	<1.4	-22°F
F32T8	4	277	60%	60%	87	0.34	> .94	.71	<17%	<1.4	-22°F
F32T8/25W	4	120	100%	100%	116	0.96	> .99	1.18	< 10%	<1.4	60°F
F32T8/25W	4	120	60%	65%	75	0.63	> .99	.75	< 10%	<1.4	60°F
F32T8/25W	4	277	100%	100%	114	0.43	> .96	1.18	<16%	<1.4	60°F
F32T8/25W	4	277	60%	66%	75	0.28	> .93	.75	<17%	<1.4	60°F
F28T8	4	120	100%	100%	127	1.07	> .99	1.18	< 10%	<1.4	60°F
F28T8	4	120	60%	62%	78	0.65	> .99	.74	< 10%	<1.4	60°F
F28T8	4	277	100%	100%	125	0.48	> .96	1.18	<13%	<1.4	60°F
F28T8	4	277	60%	63%	78	0.29	> .93	.74	<17%	<1.4	60°F

6 Lamp Physical Parameters

Case dimensions

Length (L)	11.8 in (298.45 mm)
Width (W)	1.7 in (43.18 mm)
Height (H)	1.2 in (30.48 mm)

Mounting dimensions

Mount Length (M)	11.1 in (282.95 mm)
Mount Slots (MS)	0.2 in (6.35 mm)
Weight	3.1 lbs.

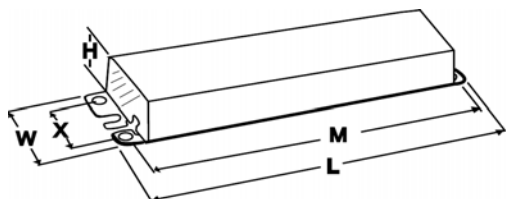
4 Lamp Physical Parameters

Case dimensions

Length (L)	9.5 in (241.30 mm)
Width (W)	1.7 in (43.18 mm)
Height (H)	1.2 in (29.97 mm)

Mounting dimensions

Mount Length (M)	8.9 in (225.80 mm)
Mount Slots (MS)	0.3 in (7.92 mm)
Weight	1.4 lbs.



For additional product and application information, please consult GE's Website: www.gelighting.com

Warehouse Energy Savings Example

Lamp: F32 T8		Effective Watts : 66%	
% of Power		% of Time	
100 ¹		15	
90		0	
80		0	
70		0	
60 ²		85	
50		0	
40		0	
30		0	
20		0	
10		0	
OFF		0	
Total Time		100%	
# of Fixtures		800	
Energy Cost per kWh		\$0.10	
Hours per day		12	
Days per week		6	
Energy Cost with control		\$31,155	
Energy Cost without control		\$47,204	
Annual Energy Savings		\$16,049	
Energy Savings per fixture		\$20	
Energy Savings		34%	

¹ 100% light output is only needed for periods of heavy warehouse activity, such as operating a forklift, but not necessary for unoccupied spaces

² 60% light output may well meet codes and suffice for 85% of normal warehouse activity

Information provided is subject to change without notice. Please verify all details with GE. All values are design or typical values when measured under laboratory conditions, and GE makes no warranty or guarantee, express or implied, that such performance will be obtained under end-use conditions.