



Improved total cost of ownership

Philips Advance EssentiaLine family of dimming ballasts for T8 lamps provide lower up-front costs while maximizing energy savings

The Philips Advance EssentiaLine family of dimmable ballasts offer an alternative-feature set ballast for both *Powerline* and *0-10V* dimming systems. They provide a lower up-front cost while achieving similar energy savings as other solutions over the life of the system. These ballasts optimize the benefits of such popular sustainable lighting techniques as daylight harvesting, occupancy sensing and load shedding to satisfy the need for a more affordable and flexible controllable lighting solution.

The EssentiaLine family of ballasts are designed for use with a wide array of controllers, including wallbox dimmers, daylight harvesting controls, and building management systems from more than 30 control manufacturers.

The *Powerline* versions provide an easy solution without the need for additional control leads. Simply replace the ballasts, replace the switch, dim the lights, that's all it takes. The *0-10V* version of the ballast reduces the number of controls required and allows for a single control to operate across multiple branch circuits. This family of ballasts are ideal for energy savings in such applications as offices, conference rooms,

educational facilities, hotels, and retail as well as other new construction or retrofit installations. Dimming system paybacks just got shorter.

Meets NEMA Premium®, CSA Energy Efficiency, requirements and RoHS compliance

- Helps your efforts to create a more sustainable workplace

Continuous dimming range from 100% light output down to 20%

- Provides task appropriate lighting, while supporting regulations and performance standards such as LEED

Programmed start operation

- Potentially extends lamp life in frequent switching applications such as occupancy sensors and daylight harvesting

PHILIPS
ADVANCE
sense and simplicity

EssentialLine Powerline Dimming Ballasts

No. of Lamps	Input Volts	Lamp Starting Method	Ballast Family	Catalog Number	Max/Min		Full Light Output		Min. Starting Temp. (°F /°C)	Dim.	Wiring Diagram
					Input Power ANSI (Watts)	Ballast Factor	Max. THD %	Line Current (Amps)			
F17T8 FBO16T8 (17W)											
2	120	PS	EssentialLine	RTR-2S32-SC	32/14	0.88-0.20	20	0.27	50/10	B	180
	277			VTR-2S32-SC	32/14	0.88-0.20	20	0.12	50/10		
F25T8 FBO24T8 (25W)											
2	120	PS	EssentialLine	RTR-2S32-SC	46/17	0.88-0.20	20	0.39	50/10	B	180
	277			VTR-2S32-SC	46/17	0.88-0.20	20	0.17	50/10		
F32T8 FBO31T8 F32T8/U6 (32W)											
2	120	PS	EssentialLine	RTR-2S32-SC	59/20	0.88-0.20	20	0.50	50/10	B	180
	277			VTR-2S32-SC	59/20	0.88-0.20	20	0.22	50/10		



Some lamp manufacturers recommend burning in new lamps 100 hours at full light output before dimming. Consult lamp manufacturer for full details.

EssentialLine 0-10V Dimming Ballasts

No. of Lamps	Input Volts	Lamp Starting Method	Ballast Family	Catalog Number	Max/Min		Full Light Output		Min. Starting Temp. (°F /°C)	Dim.	Wiring Diagram
					Input Power ANSI (Watts)	Ballast Factor	Max. THD %	Line Current (Amps)			
F17T8 FBO16T8 (17W)											
2	120-277	PS	EssentialLine	ILV-2S32-SC	32/13	0.88-0.20	20	0.25-0.11	50/10	B	175A
F25T8 FBO24T8 (25W)											
2	120-277	PS	EssentialLine	ILV-2S32-SC	44/15	0.88-0.20	20	0.37-0.16	50/10	B	175A
F32T8 FBO31T8 F32T8/U6 (32W)											
2	120-277	PS	EssentialLine	ILV-2S32-SC	59/18	0.88-0.20	20	0.50-0.21	50/10	B	175A
4				ILV-4S32-G	116/40	0.88-0.20	20	1.00-0.43	50/10	G	176



Some lamp manufacturers recommend burning in new lamps 100 hours at full light output before dimming. Consult lamp manufacturer for full details.

Dimensions

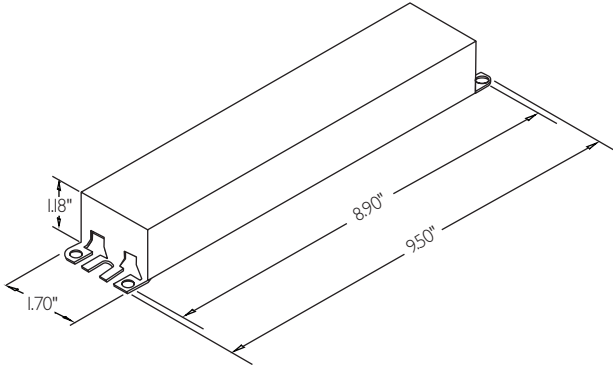


Fig. B

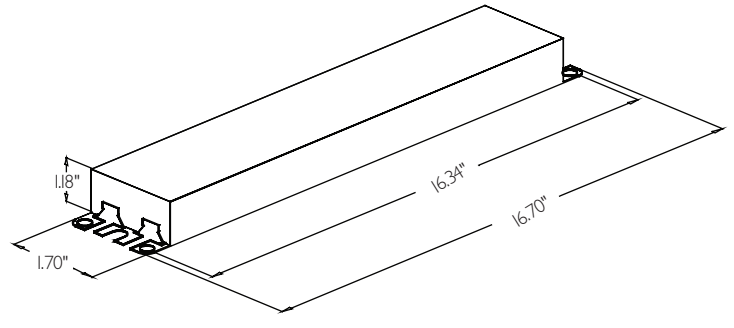
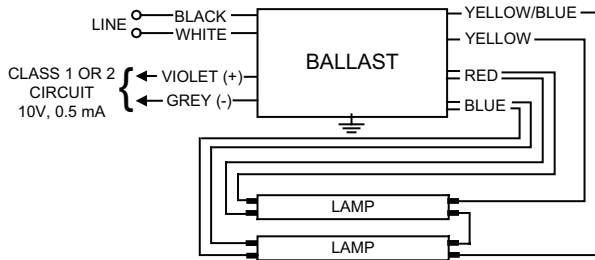
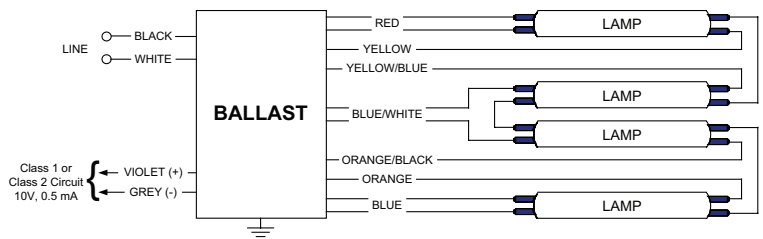


Fig. G

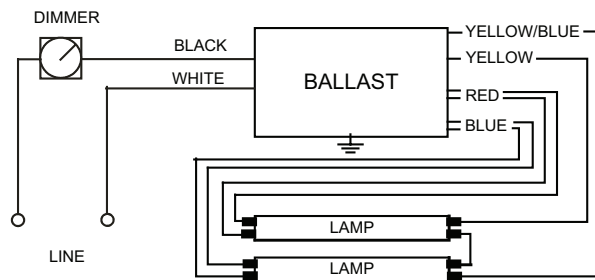
Wiring Diagrams



Diag. 175A



Diag. 176



Diag. 180

Ballast Specification

Section I - Physical Characteristics

- 1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- 1.2 Ballast shall be provided in an all metal housing to meet all plenum requirements.

Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start.
- 2.2 Ballast shall be provided with integral protection circuitry to withstand connection of low voltage control leads to mains power supply. In this event, ballast shall default to maximum light output.
- 2.3 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.4 Ballast shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
- 2.5 Ballast shall be high frequency electronic type and operate lamps above 42kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.6 Ballast shall have a Power Factor greater than 0.98 at full light output, and greater than 0.90 throughout the dimming range for the primary lamp.
- 2.7 Ballast shall have Ballast Factor of 0.88 at full light output and 0.20 at minimum light output for the primary lamp.
- 2.8 Ballast shall provide for a Lamp Current Crest factor of 1.7 or less throughout the dimming range in accordance with lamp manufacturer's recommendations.
- 2.9 Ballast shall have a Class A sound rating.
- 2.10 Ballast shall have a minimum starting temperature of 10°C (50°F) for primary lamp.
- 2.11 Ballast shall start the lamps at any selected light output setting without first going to any other light output setting.
- 2.12 Ballast input current shall have Total Harmonic Distortion (THD) of less than 20% at maximum light output when operated at nominal line voltage with primary lamp.
- 2.13 Ballast shall tolerate sustained open circuit or momentary short circuit output conditions.
- 2.14 Ballast shall properly start lamps in the event lamps are replaced with ballast energized.

Section III - Regulatory Requirements

- 3.1 Ballast shall not contain Polychlorinated Biphenyl (PCB).
- 3.2 Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type I Outdoor; and, Canadian Standards Association (CSA) certified where applicable.
- 3.3 Ballast shall comply with ANSI C62.41 Category A for Transient protection.
- 3.4 Ballast shall comply with ANSI C82.11 where applicable.
- 3.5 Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
- 3.6 Ballast shall be RoHS compliant.
- 3.7 Ballast shall meet the requirements of California Title 24 and NEMA Premium.
- 3.8 Ballast shall comply with NEMA 410 for in-rush current limits.

Section IV - Other

- 4.1 Ballast shall be manufactured in a factory certified to ISO 9002 Quality System Standards.
- 4.2 Ballast shall carry a ___ limited warranty from date of manufacture against defects in material or workmanship. This warranty is conditioned upon operation at a maximum case temperature of _____, among other items. (Go to our website for up-to-date warranty information, www.philips.com/advancewarranty).
- 4.3 Manufacturer shall have a twenty year history of producing electronic ballasts for the North American market.
- 4.4 0-10V ballasts shall be controlled by a Class 1 or Class 2 low voltage 0-10VDC controller. *Powerline* ballasts shall be controlled by an approved Mark 10 *Powerline* control.



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