

Maximum dimming versatility



MARK 7 0-10V DIMMABLE BALLASTS FOR T5 & T5HO LAMPS

RoHS[‡]
COMPLIANT



Listed 704G

Philips Advance Mark 7 0-10V Dimmable Ballasts provide maximum versatility with low voltage dimming. The Mark 7 0-10V series of dimmable electronic ballasts offer maximum versatility by incorporating separate control leads for use with a wide array of controllers, including occupancy sensors, daylight harvesting controls, and building management systems from more than 40 manufacturers.

Features

- Full range continuous dimming (100% light output down to 3% – T5/HO down to 1%)
- IntelliVolt technology (120 - 277V, 50/60Hz)

Benefits

- Compatible with controls from numerous manufacturers using standard 0-10VDC controls
- Ideal for frequent switching applications such as occupancy sensors and daylight harvesting – Programmed start operation

Applications

- Ideal for conference rooms, auditoriums, educational facilities, hotels, restaurants, and department stores as well as other new construction or retrofit installations where dimming is desired.

([‡] See page 2 for footnote)

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ADVANCE

MARK 7 0-10V DIMMABLE BALLASTS FOR T5 & T5HO LAMPS

Mark 7 0-10V Ballasts For 14 - 28W T5 Lamps

Programmed Start

No. of Lamps	Input Volts	Catalog Number	Max/Min		Full Light Output		Minimum Starting Temp (°F/°C)	Dim.	Wiring Diagram
			Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)			
F14T5 (14W)									
1	120-277	IZT-128-D	19/6	1.00/0.03	10	0.15-0.07	50/10	D	55A
2	120-277	IZT-2S28-D	34/9	1.00/0.03	10	0.29-0.12	50/10	D	56A
F21T5 (21W)									
1	120-277	IZT-128-D	25/6	1.00/0.03	10	0.20-0.09	50/10	D	55A
2	120-277	IZT-2S28-D	49/10	1.00/0.03	10	0.42-0.18	50/10	D	56A
F25T5 (28W/ES)									
1	120-277	IZT-128-D	30/7	1.00/0.03	10	0.25-0.11	50/10	D	55A
2	120-277	IZT-2S28-D	59/12	1.00/0.03	10	0.51-0.21	50/10	D	56A
F28T5 (28W)									
1	120-277	IZT-128-D	32/7	1.00/0.03	10	0.27-0.12	50/10	D	55A
2	120-277	IZT-2S28-D	63/12	1.00/0.03	10	0.57-0.22	50/10	D	56A

Ballasts utilizing poke-in connectors can accept wire gauges from AWG 16 - 20.

Some lamp manufacturers recommend burning in new lamps 100 hours at full light output prior to dimming. Consult lamp manufacturer.

Mark 7 0-10V Ballasts For 24 - 80W T5HO Lamps

Programmed Start

No. of Lamps	Input Volts	Catalog Number	Max/Min		Full Light Output		Minimum Starting Temp (°F/°C)	Dim.	Wiring Diagram
			Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)			
F24T5/HO (24W)									
1	120-277	IZT-124-D	25/8	1.00/0.03	10	0.21-0.09	50/10	D	55A
2	120-277	IZT-2S24-D	53/11	1.00/0.03	10	0.44-0.18	50/10	D	56A
F39T5/HO (39W)									
1	120-277	IZT-124-D	40/8	0.92/0.03	10	0.34-0.14	50/10	D	55A
2	120-277	IZT-2S24-D	84/11	0.85/0.03	10	0.70-0.29	50/10	D	56A
F54T5/HO/ES (49W)									
1	120	RZT-154	59/13	1.00/0.03	10	0.49	60/16	D	55A
1	277	VZT-154	59/13	1.00/0.03	10	0.21	60/16	D	55A
2	120-277	IZT-2S54-D	109/16	1.00/0.03	10	0.91	60/16	D	56A
F54T5/HO (54W)									
1	120	RZT-154	63/13	1.00/0.03	10	0.53	50/10	D	55A
1	277	VZT-154	63/13	1.00/0.03	10	0.23	50/10	D	55A
2	120-277	IZT-2S54-D	118/16	1.00/0.03	10	0.98	50/10	D	56A
F80T5/HO (80W)									
1	120-277	IZT-180-D	94/18	1.00/0.03	10	0.79-0.33	50/10	D	55A
FC12T5/HO (55W)									
1	120	RZT-154	59/13	1.00/0.03	10	0.50	50/10	D	55A
1	277	VZT-154	59/13	1.00/0.03	10	0.22	50/10	D	55A
2	120-277	IZT-2S54-D	98/18	0.80/0.03	10	0.82	50/10	D	56A

Ballasts utilizing poke-in connectors can accept wire gauges from AWG 16 - 20.

Some lamp manufacturers recommend burning in new lamps 100 hours at full light output prior to dimming. Consult lamp manufacturer.

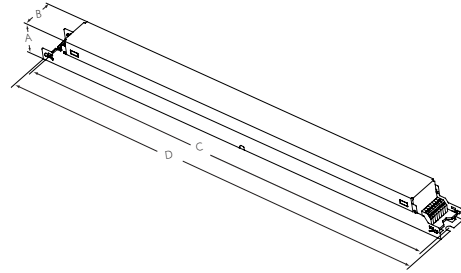
‡ Restrictions on Hazardous Substances (RoHS) is a European directive (2002/95/EC) designed to limit the content of 6 substances [lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE)] in electrical and electronic products. For products used in North America compliance to RoHS is voluntary and self-certified.

MARK 7 0-10V DIMMABLE BALLASTS FOR T5 & T5HO LAMPS

Dimensions

Figure	A	B	C	D
D	1.00"	1.18"	16.34"	16.70"

Figure D - Includes connectors with no leads



Wiring Diagrams

Diagram 55A

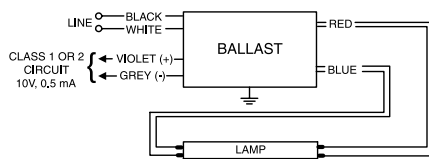
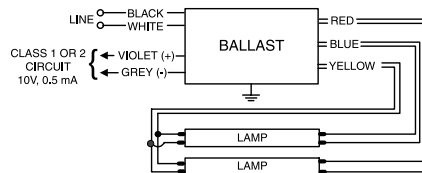


Diagram 56A



MARK 7 0-10V DIMMABLE BALLASTS FOR T5 & T5HO LAMPS

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 available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- 1.3 Ballast shall be provided with poke-in wire trap connectors or integral leads color coded per ANSI C82.11.

Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start.
- 2.2 IZT-4PSP32-G ballast shall provide Independent Lamp Operation (ILO) allowing remaining lamp(s) to maintain full light output when one or more lamps fail.
- 2.3 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.
- 2.4 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.5 Ballast shall operate from 50/60 Hz input source of 120V or 277V or 347V with sustained variations of +/- 10% (voltage and frequency). IntelliVolt models shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
- 2.6 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.7 Ballast shall have a Power Factor greater than 0.98 at full light output and greater than 0.90 throughout the dimming range for primary lamp.
- 2.8 Ballast shall have a minimum ballast factor of 1.00 (120V and 277V 1-3 lamp models) or 0.88 (120V and 277V 4 lamp models and 347V 2-3 lamp models) or 1.18 (277V 4 lamp HL models) at maximum light output and 0.03 at minimum light output for primary lamp.
- 2.9 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.10 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage and 100% power.
- 2.11 Ballast shall have a Class A sound rating.
- 2.12 Ballast shall have a minimum starting temperature of 10C (50F) for primary lamp.
- 2.13 Ballast shall provide Lamp EOL Protection Circuit for all T5, T5/HO and CFL lamps.
- 2.14 Ballast shall control lamp light output from 100% - 3% relative light output for series operation T8 and CFL lamps, 100% - 5% relative light output for parallel operation T8 and 100% - 1% relative light output for T5/HO lamps.

- 2.15 Ballast shall ignite the lamps at any light output setting without first going to another output setting.
- 2.16 Ballast shall tolerate sustained open circuit and short circuit output conditions.

Section III - Regulatory Requirements

- 3.1 Ballast shall not contain any 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 comply with NEMA 410 for in-rush current limits.

Section IV - Other

- 4.1 Ballast shall be manufactured in a factory certified to ISO 9001 Quality System Standards.
- 4.2 Ballast shall carry a five-year limited warranty from date of manufacture against defects in material or workmanship for operation at a maximum case temperature of 70C.
- 4.3 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.
- 4.4 Ballast shall be controlled by a Class 1 or Class 2 low voltage 0-10VDC controller.
- 4.5 Ballast shall be Philips Advance part # _____ or approved equal.



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EL-2011-B 11/13

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