

# ADVANCE

by ignify

## Ballasts

Mark 7 0-10V

DIMMABLE



RoHS<sup>‡</sup>  
COMPLIANT



### 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

- Lamp recognition – the ability to “sense” and operate the lamp at optimal performance.
- Full range continuous dimming (100% light output down to 3%)
- 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)



# Mark 7 0-10V DIMMABLE

## Mark 7 0-10V Ballasts For 13 - 70W T4 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)			
<b>CFQ13W/G24q - 13W CFL Quad Tube Lamp (PL-CI3W/4P, F13DBX/4P, CF13DD/E)</b>									
<b>CFTR13W/GX24q - 13W CFL Triple Tube Lamp (PL-TI3W, F13TBX/4P, CF13DT/E)</b>									
1	120-277	IQT-2S26-M5-BS	18/6	1.00/0.03	10	0.15-0.07	50/10	Size 5	58A
1	120-277	IQT-2S26-M5-LD	18/6	1.00/0.03	10	0.15-0.07	50/10	Size 5	58A
2	120-277	IQT-2S26-M5-BS	33/19	1.00/0.03	10	0.28-0.12	50/10	Size 5	59A
2	120-277	IQT-2S26-M5-LD	33/19	1.00/0.03	10	0.28-0.12	50/10	Size 5	59A
<b>CFQ18W/G24q - 18W CFL Quad Tube Lamp (PL-CI8W/4P, F18DBX/4P, CF18DD/E)</b>									
<b>CFTR18W/GX24q - 18W CFL Triple Tube Lamp (PL-TI8W, F18TBX/4P, CF18DT/E)</b>									
1	120-277	IQT-2S26-M5-BS	23/7	1.00/0.03	10	0.19-0.09	50/10	Size 5	58A
1	120-277	IQT-2S26-M5-LD	23/7	1.00/0.03	10	0.19-0.09	50/10	Size 5	58A
2	120-277	IQT-2S26-M5-BS	41/11	1.00/0.03	10	0.34-0.15	50/10	Size 5	59A
2	120-277	IQT-2S26-M5-LD	41/11	1.00/0.03	10	0.34-0.15	50/10	Size 5	59A
<b>CFQ26W/G24q - 26W CFL Quad Tube Lamp (PL-C26W/4P, F26DBX/4P, CF26DD/E)</b>									
<b>CFTR26W/GX24q - 26W CFL Triple Tube Lamp (PL-T26W, F26TBX/4P, CF26DT/E)</b>									
1	120-277	IQT-2S26-M5-BS	30/8	1.00/0.03	10	0.25-0.11	50/10	Size 5	58A
1	120-277	IQT-2S26-M5-LD	30/8	1.00/0.03	10	0.25-0.11	50/10	Size 5	58A
2	120-277	IQT-2S26-M5-BS	55/13	1.00/0.03	10	0.46-0.20	50/10	Size 5	59A
2	120-277	IQT-2S26-M5-LD	55/13	1.00/0.03	10	0.46-0.20	50/10	Size 5	59A
<b>CFTR32W/GX24q - 32W CFL Triple Tube Lamp (PL-T32W, F32TBX/4P, CF32DT/E)</b>									
1	120-277	IQT-2S26-M5-BS	36/9	1.00/0.03	10	0.30-0.13	50/10	Size 5	58A
1	120-277	IQT-2S26-M5-LD	36/9	1.00/0.03	10	0.30-0.13	50/10	Size 5	58A
2	120-277	IQT-2T42-M5-BS	75/19	1.00/0.03	10	0.63-0.21	50/10	Size 5	59A
2	120-277	IQT-2T42-M5-LD	75/19	1.00/0.03	10	0.63-0.21	50/10	Size 5	59A
<b>CFTR42W/GX24q - 42W CFL Triple Tube Lamp (PL-T42W, F42TBX/4P, CF42DT/E)</b>									
1	120-277	IQT-2S26-M5-BS	47/9	1.00/0.03	10	0.39-0.17	50/10	Size 5	58A
1	120-277	IQT-2S26-M5-LD	47/9	1.00/0.03	10	0.39-0.17	50/10	Size 5	58A
2	120-277	IQT-2T42-M5-BS	98/18	1.00/0.03	10	0.82-0.36	50/10	Size 5	59A
2	120-277	IQT-2T42-M5-LD	98/18	1.00/0.03	10	0.82-0.36	50/10	Size 5	59A
<b>CFTR57W/GX24q - 57W CFL Triple Tube Lamp (PL-T57W, F57QBX/4P, CF57DT/E)</b>									
1	120-277	IQT-2T42-M5-BS	65/16	1.00/0.03	10	0.55-0.24	50/10	Size 5	58A
1	120-277	IQT-2T42-M5-LD	65/16	1.00/0.03	10	0.55-0.24	50/10	Size 5	58A
<b>CFTR70W/GX24q - 70W CFL Triple Tube Lamp (F70QBX/4P, CF70DT/E)</b>									
1	120-277	IQT-2T42-M5-BS	75/16	1.00/0.03	10	0.63-0.27	50/10	Size 5	58A
1	120-277	IQT-2T42-M5-LD	75/16	1.00/0.03	10	0.63-0.27	50/10	Size 5	58A

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

## Mark 7 0-10V Ballasts For 36 - 80W FT5 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)			
<b>FT36W/2G11 - 36/39W Long Twin Tube Lamp (PL-L36W, F39BX/RS, FT36DL)</b>									
2	120-277	IZT-2TTS40-SC	75/16	1.00/0.03	10	0.64-0.27	50/10	B	58A
<b>FT40W/2G11/RS - 40W Long Twin Tube Lamp (PL-L40W, F40BX, FT40DL/RS)</b>									
2	120-277	IZT-2TTS40-SC	90/16	1.00/0.03	10	0.64-0.28	50/10	B	58A
<b>FT55W/2G11 - 55W Long Twin Tube Lamp (PL-L55W, F55BX, FT55DL)</b>									
1	120	RZT-154	59/13	0.90/0.03	10	0.50	50/10	D	58A
1	277	VZT-154	59/13	0.90/0.03	10	0.22	50/10	D	58A
2	120-277	IZT-2S54-D	108/16	0.80/0.03	10	0.90-0.38	50/10	D	59A
<b>FT80W/2G11 - 80W Long Twin Tube Lamp (PL-L80W, FT80DL)</b>									
1	120-277	IZT-180-D	86/16	1.00/0.03	10	0.73-0.30	50/10	D	58A

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.

### Dimensions

Figure	A	B	C	D	E
B	1.18"	1.70"	8.90"	9.50"	
D	1.0"	1.18"	16.34"	16.70"	2.00"
5 - LD	1.29"	3.00"	4.20"	4.55"	
5 - BS	1.29"	3.00"	4.20"	4.55"	2.00"

Figure B

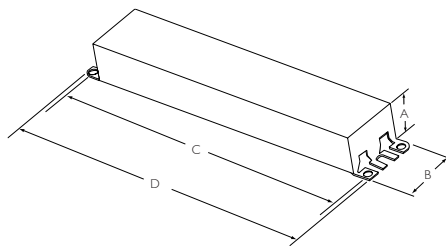


Figure D - Includes connectors with no leads

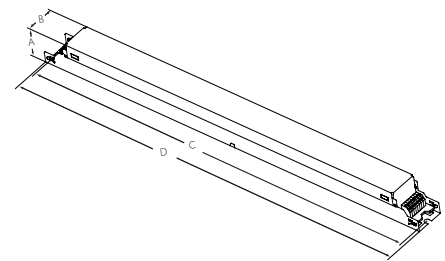


Figure 5 - LD

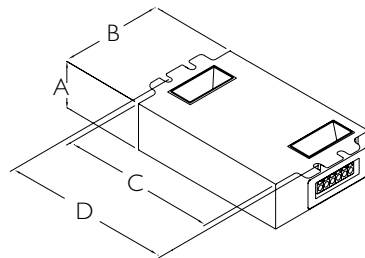
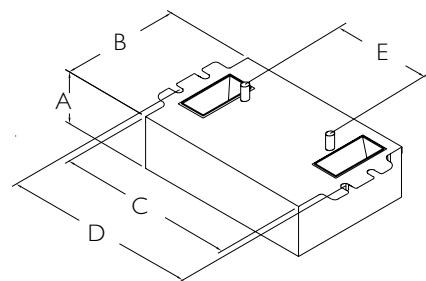


Figure 5 - BS



### Wiring Diagrams

Diagram 58A

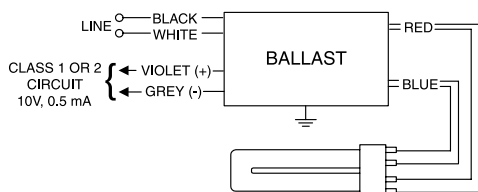
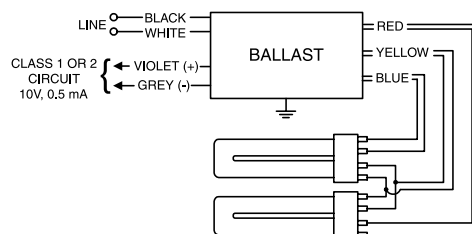


Diagram 59A



# Mark 7 0-10V DIMMABLE

## 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.

The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract.

