ELECTRONIC FLUORESCENT CONTROLLABLE BALLASTS

Fluorescent Ballasts - Dimming - Mark 7 *0-10V*

0-10V Electronic Dimming Ballasts for Linear Fluorescent and 4-Pin Compact Fluorescent Lamps

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 30 manufacturers.

When paired with linear fluorescent and 4-pin compact fluorescent lamps, Mark 7 *0–10V* ballasts optimize the benefits of such popular sustainable lighting techniques as daylight harvesting, occupancy sensors, and load shedding to satisfy the need for an affordable, flexible and versatile controllable lighting solution

Available in linear fluorescent and 4-pin compact fluorescent models
Making this ideal for a variety of applications

Full range continuous dimming (100% light output down to 5% - T5/HO to 1%)
Provides task appropriate comfort only where necessary to increase potential energy savings while supporting LEED performance standards

Programmed start operation
Potentially extends lamp life in frequent switching applications such as occupancy sensors and daylight harvesting

IntelliVolt technology (120 - 277V, 50/60Hz)
Enhances accuracy and ease of ordering while reducing stocking/SKU requirements

NEMA Premium

The following ballasts meet NEMA Premium®:
IZT-132-SC, IZT-2S32-SC, IZT-3S32-SC,
IZT-4S32, VZT-4S32-HL, VZT-4S32-G, VZT-4PSP32-G

As a licensee in the NEMA Premium Ballast Program, Philips Lighting Electronics N.A. has determined that these products meet the NEMA Premium specification for premium energy efficiency.

Note: Easy way to test dimming functionality of 0-10V dimming ballasts is to 'short' together the violet and grey control wires. If the lamps go to full dim, then the ballast is dimming fine.

For 49 - 80W Lamps

HIGH POWER FACTOR SOUND RATED A

Mark 7 0-10V Electronic Dimming Ballast

No. of Lamps	Input Volts	Lamp Starting Method	Ballast Family	Catalog Number	Max/Min Input Power ANSI (Watts)	Max/Min Ballast Factor	Full Light Output THD %	Full Light Output Line Current (Amps)	Min. Starting Temp. (°F/°C)	Dim.	Wiring Dia.
F54T5/HO/ES (49W)											
1	120	PS	Mark 7 *0-10V*	RZT-154	59/13	1.00/0.03	10	0.49	50/10	D	55A
	277			VZT-154				0.21			
2	120			RZT-2S54	117/24			0.98			56A
	277			VZT-2S54				0.42			
F54T5/HO (54W)											
1	120	PS	Mark 7 *0-10V*	RZT-154	63/13	1.00/0.03	10	0.53	50/10	D	55A
	277			VZT-154				0.23			
2	120			RZT-2S54	125/24			1.05			56A
	277			VZT-2S54				0.45			
F80T5/HO (80W)											
1	120-277	PS	Mark 7 *0-10V*	IZT-180-D	94/18	1.00/0.03	10	0.73-0.30	50/10	D	55A
FC12T5/HO (55W)											
1	120	PS	Mark 7 *0-10V*	RZT-154	59/13	0.90/0.03	10	0.50	50/10	D	55A
	277			VZT-154				0.22			
2	120			RZT-2S54	114/24			0.96			56A
	277			VZT-2S54				0.42			

Some lamp manufacturers recommend burning in new lamps 100 hours at full light output before dimming. Consult lamp manufacturer.
Ballasts utilizing poke-in connectors can accept wire gauges from AWG 16 - 20.

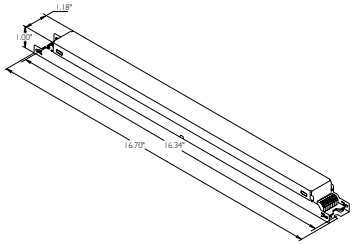
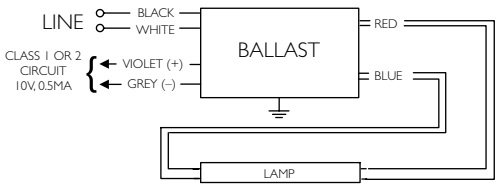


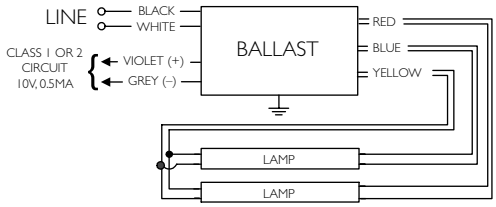
Fig. D
Includes connectors with no leads



Diag. 55A

Mark 7 *0-10V* Control Wiring (Grey and Violet)

Wire Size	Maximum Length (Ft.)
AWG-16	800
AWG-18	500
AWG-20	320



Diag. 56A

ONLY USE RAPID-START SOCKETS

Refer to pages 1-15 to 1-19 for information on remote/tandem wiring and lead length extension
Refer to pages 2-32 & 2-33 for compatible low voltage controls
Refer to pages 9-23 to 9-27 for lead lengths and shipping data

Ordering Information

How to Order

Philips Lighting Systems and Controls has developed the industry's broadest distribution system for electronic ballasts. More than 3000 stocking distributors nationwide. For information on the distributor best able to serve your needs, please call 800-372-3331.

Electronic Ballast Part Number Breakdown

I CF - 2 S 26 - HI - LD

CFL Mounting/Connector Options

BL = Bottom leads
BLS = Bottom leads with mounting studs
BS = Bottom mounting studs with single entry color coded connectors
EL = End leads
LD = Length mounting feet with SmartMate® dual entry color coded connectors
QS = QuikStart

Linear Fluorescent Mounting/Connector Options

2LS = 2 Level Switching

CFL Can Desription
HI = Hybrid metal / plastic case, size 1
M1 = Metal case, size 1
M2 = Metal case, size 2
M3 = Metal case, size 3
M4 = Metal case, size 4
M5 = Metal case, size 5
M6 = Metal case, size 6

Linear Fluorescent Can Desription
90C = 90°C maximum case temperature rating
A = 'A' can
D = 'D' can
G = 'G' can
HL = High light output
L = 'L' can
LW = Low watt
MC = Micro can
N = 'N' can
SC = Small can

Lamp Watts (Primary lamp)

Wiring Configuration

D = 2D, series
M = Modified parallel**
P = Parallel
PSP = Programmed Start Parallel
Q = Quad CFL, series
S = Series
T = Triple CFL, series
TTS = Long twin tube, series
TTP = Long twin tube, parallel

Maximum Number of Lamps

Family Name

CF = Compact Fluorescent
DA = ROVR
EB = AmbiStar
EZ = Mark 10® *Powerline*
MB = AmbiStar
TR = EssentiaLine *Powerline*
ZT = Mark 7® *0-10V*
CN = Centium
DL = ROVR
ELB = AmbiStar
LV = EssentiaLine *0-10V*
OP = Optanium
UV = PureVolt

Input Voltage

G = 347V
H = IntelliVolt 347V to 480V 50/60 Hz
I = IntelliVolt 120V to 277V 50/60 Hz
R = 120V
V = 277V

Corporate Offices
(800) 322-2086

Customer Support/Technical Service
(800) 372-3331
(+) 1 847 390-5000 (International)

Visit our web site at www.philips.com/advance

- Plan your lighting installation carefully; consider using the services of a qualified lighting designer
- Consult your local electric utility regarding demand side management rebate programs.
- Select the Philips Advance electronic ballast which best matches the requirements of your application. The technical specifications in this catalog (located on pages 9-6 to 9-13) will be useful in obtaining bids from electrical contractors.
- Contact your local Philips Lighting distributor. You will find them to be a helpful supplier of both products and information.

* Many current and all future electronic ballast part numbers will not use the "RH-TP" suffixes even though these ballasts will be thermally protected.
** Parallel Wiring Configuration. However, if one lamp fails, all other lamps in the circuit will extinguish.

ELECTRONIC FLUORESCENT BALLASTS

	Allowed Wiring Configuration			Maximum Lead Length (Feet) for Tandem or Through Wiring (Total length of all wires between ballast and lamp sockets)						Application Note
	Remote (max length)	Tandem	Through	Blue	Red	Yellow	Blue/White	Brown	Orange	
REB-4P32-SC	20"	Yes	Yes	20'	20'	20'				1
REB-2S13-M6-EL	No	No	No							5
REB-2S18-M6-EL	No	No	No							5
REB-2S26-M6-EL	No	No	No							5
RELB-1S40-SC	20"	NA	NA							4
RELB-2S40-N	20"	Yes	Yes	4'	10'	10'				2
REZ-132-SC	6'	NA	NA							4
REZ-154	No	NA	NA							5
REZ-1Q18-M2-BS REZ-1Q18-M2-LD	No	NA	NA							5
REZ-1T42-M2-BS REZ-1T42-M2-LD	No	NA	NA							5
REZ-1TTS40-SC	6'	NA	NA							4
REZ-2Q18-M2-BS REZ-2Q18-M2-LD	No	No	No							5
REZ-2Q26-M2-BS REZ-2Q26-M2-LD	No	No	No							5
REZ-2S32-SC	6'	Yes	Yes	6'	6'	6'				1
REZ-2S54	No	No	Yes	5'	4'	4'				3
REZ-2T42-M3-BS REZ-2T42-M3-LD	No	No	No							5
REZ-2TTS40-SC	6'	No	No							5
REZ-3S32-SC	No	No	No							5
RK-2S32-TP	20'	Yes	Yes	4'	20'	20'				2 (a)
RTR-2S32-SC	6'	Yes	Yes	6'	6'	6'				1
RZT-154	No	NA	NA							5
RZT-2S54	No	No	Yes	5'	4'	4'				3
VEZ-132-SC	6'	NA	NA							4
VEZ-154	No	NA	NA							5
VEZ-1Q18-M2-BS VEZ-1Q18-M2-LD	No	NA	NA							5
VEZ-1T42-M2-BS VEZ-1T42-M2-LD	No	NA	NA							5
VEZ-1TTS40-SC	6'	NA	NA							4
VEZ-2Q18-M2-BS VEZ-2Q18-M2-LD	No	No	No							5
VEZ-2Q26-M2-BS VEZ-2Q26-M2-LD	No	No	No							5
VEZ-2S32-SC	6'	Yes	Yes	6'	6'	6'				1
VEZ-2S54	No	No	Yes	5'	4'	4'				5
VEZ-2T42-M3-BS VEZ-2T42-M3-LD	No	No	No							5
VEZ-2TTS40-SC	6'	No	No							4
VEZ-3S32-SC	No	No	No							5
VK-2S32-TP	20'	Yes	Yes	4'	20'	20'				2 (a)
VTR-2S32-SC	6'	Yes	Yes	6'	6'	6'				1
VZT-154	No	NA	NA							5
VZT-2S54	No	No	Yes	5'	4'	4'				3
VZT-4S32-HL	No	No	Yes	1'	1.25'	5.2'	1.25'	4.2'		3
VZT-4PSP32-G	No	No	Yes	5'	5'	1'	5'	R/W=5'		3
VZT-4S32-G	No	No	Yes	1'	1.25'	5.2'	1.25'	4.2'		3

For nominal input voltage and 25°C ambient temperature. See all notes on page 1-19.