

ELECTRONIC FLUORESCENT CONTROLLABLE BALLASTS

PHILIPS

PowerSpec HDF ballasts

Fluorescent Dimming

Philips PowerSpec HDF ballasts provide high-performance, full-range dimming of linear and compact fluorescent light sources. PowerSpec HDF is ideal for aesthetic and architectural dimming in commercial spaces, as well as sophisticated, energy-oriented applications. PowerSpec HDF smoothly dims linear T5 lamps to 1% of full output, and T8, compact T5, T4, Triple Tube and Quad Tube, and circular T5 fluorescent lamps to 3% of full output.

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 3% - 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

IntelliVolt Technology (120-277V, 50/60Hz)

Enhances accuracy and ease of ordering while reducing stocking/SKU requirements

For 13W - 70W Lamps

HIGH POWER FACTOR SOUND RATED A

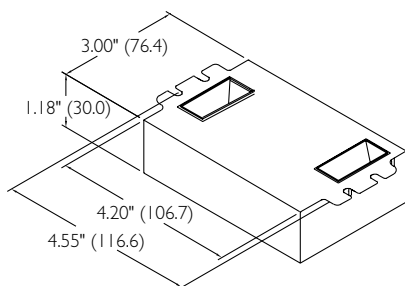
PowerSpec HDF Electronic Dimming Ballast



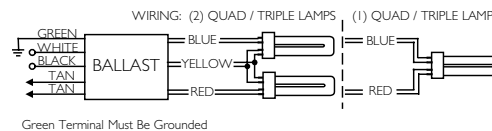
Electronic Fluorescent
Controllable Ballasts

No. of Lamps	Input Volts	Lamp Starting Method	Ballast Family	Catalog Number	Max/Min		Full Light Output		Min. Starting Temp. (°F/°C)	Dim.	Wiring Dia.
					Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)			
CFQ13W/G24q - 13W CFL Quad Tube Lamp (PL-C13W/4P, F13DBX/4P, CF13DD/E) CFTR13W/GX24q - 13W CFL Triple Tube Lamp (F13TBX/4P, CF13DT/E)											
1	120-277	PS	PowerSpec HDF	HDF226T4	18/6	1.00 - 0.03	10	0.15 - 0.07	50/10	Size 5	I65GTG
2					33/19			0.28 - 0.12			
CFQ18W/G24q - 18W CFL Quad Tube Lamp (PL-C18W/4P, F18DBX/4P, CF18DD/E) CFTR18W/GX25q - 18W CFL Triple Tube Lamp (PL-T18W, F18TBX/4P, CF18DT/E)											
1	120-277	PS	PowerSpec HDF	HDF226T4	23/7	1.00 - 0.03	10	0.19 - 0.09	50/10	Size 5	I65GTG
2					41/11			0.34 - 0.15			
CFQ26W/G24q - 26W CFL Quad Tube Lamp (PL-C26W/4P, F26DBX/4P, CF26DD/E) CFTR26W/GX24q - 26W CFL Triple Tube Lamp (PL-T26W, F26TBX/4P, CF26DT/E)											
1	120-277	PS	PowerSpec HDF	HDF226T4	30/8	1.00 - 0.03	10	0.25 - 0.11	50/10	Size 5	I65GTG
2					55/13			0.46 - 0.20			
CFTR32W/GX24q - 32W CFL Triple Tube Lamp (PL-T32W, F32TBX/4P, CF32DT/E)											
1	120-277	PS	PowerSpec HDF	HDF226T4	36/9	1.00 - 0.03	10	0.30 - 0.13	50/10	Size 5	I65GTG
2				HDF242T4	75/19			0.63 - 0.21			
CFTR42W/GX24q - 42W CFL Triple Tube Lamp (PL-T42W, F42TBX/4P, CF42DT/E)											
1	120-277	PS	PowerSpec HDF	HDF226T4	47/9	1.00 - 0.03	10	0.39 - 0.17	50/10	Size 5	I65GTG
2				HDF242T4	98/18			0.82 - 0.36			
CFTR57W/GX24q - 57W CFL Triple Tube Lamp (PL-T57W, F57QBX/4P, CF57DT/E)											
1	120-277	PS	PowerSpec HDF	HDF242T4	65/16	1.00 - 0.03	10	0.55 - 0.24	50/10	Size 5	I65GTG
CFTR70W/GX24q - 70W CFL Triple Tube Lamp (F70QBX/4P, CF70DT/E)											
1	120-277	PS	PowerSpec HDF	HDF242T4	75/16	1.00 - 0.03	10	0.63 - 0.27	50/10	Size 5	I65GTG

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.



-LS Size 5



Diag. I65GTG

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 the Indoor Switches and Dimmers section at www.philips.com/lightingcontrolsna for compatible PowerSpec HDF controls
Refer to pages 9-23 to 9-27 for lead lengths and shipping data

ELECTRONIC FLUORESCENT BALLASTS

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														
<p>CFL Mounting/Connector Options</p> <p>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</p> <p>Linear Fluorescent Mounting/Connector Options</p> <p>2LS = 2 Level Switching</p>																							
<p>CFL Can Description</p> <p>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</p> <p>Linear Fluorescent Can Description</p> <p>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</p>																							
<p>Lamp Watts (Primary lamp)</p>																							
<p>Wiring Configuration</p> <p>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</p>																							
<p>Maximum Number of Lamps</p>																							
<p>Family Name</p> <table border="0"> <tr> <td>CF = Compact Fluorescent</td> <td>CN = Centium</td> </tr> <tr> <td>DA = ROVR</td> <td>DL = ROVR</td> </tr> <tr> <td>EB = AmbiStar</td> <td>ELB = AmbiStar</td> </tr> <tr> <td>EZ = Mark 10® Powerline</td> <td>LV = EssentiaLine 0-10V</td> </tr> <tr> <td>MB = AmbiStar</td> <td>OP = Optanium</td> </tr> <tr> <td>TR = EssentiaLine Powerline</td> <td>UV = PureVolt</td> </tr> <tr> <td>ZT = Mark 7® 0-10V</td> <td></td> </tr> </table>										CF = Compact Fluorescent	CN = Centium	DA = ROVR	DL = ROVR	EB = AmbiStar	ELB = AmbiStar	EZ = Mark 10® Powerline	LV = EssentiaLine 0-10V	MB = AmbiStar	OP = Optanium	TR = EssentiaLine Powerline	UV = PureVolt	ZT = Mark 7® 0-10V	
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<p>Input Voltage</p> <p>G = 347V H = IntelliVolt 347V to 480V 50/60 Hz I = IntelliVolt 120V to 277V 50/60 Hz R = 120V V = 277V</p>																							

Corporate Offices

(800) 322-2086

Customer Support/Technical Service

(800) 372-3331

(+) | 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	
GOPA-1P32-LW-SC	8'	Yes	Yes	8'	8'					1 (c)
GOPA-1P32-SC	8'	Yes	Yes	8'	8'					1 (c)
GOPA-2P32-LW-SC	8'	Yes	Yes	8'	8'					1 (c)
GOPA-2P32-SC	8'	Yes	Yes	8'	8'					1 (c)
GOPA-3P32-LW-SC	8'	Yes	Yes	8'	8'					1 (c)
GOPA-3P32-SC	8'	Yes	Yes	8'	8'					1 (c)
GOPA-4P32-LW-SC	8'	Yes	Yes	8'	8'	8'				1 (c)
GOPA-4P32-SC	8'	Yes	Yes	8'	8'	8'				1 (c)
HCN-2S54-90C-WL	20'	Yes	Yes	20'	4'	20'				3
HCN-4S54-90C-2LS-G	20'	Yes	Yes	20'	4'	4'	20'	20'	20'	7
HDF128T5	6'	NA	NA							4
HDF132T8	6'	NA	NA							4
HDF140T5	6'	NA	NA							4
HDF154T5	No	NA	NA							5
HDF224T5	6'	Yes	Yes	6'	6'	6'				1
HDF226T4	No	No	No							5
HDF228T5	6'	Yes	Yes	6'	6'	6'				1
HDF232T8	6'	Yes	Yes	6'	6'	6'				1
HDF239T5	6'	Yes	Yes	6'	6'	6'				1
HDF240T5	6'	No	No							4
HDF242T5	No	No	No							5
HDF254T5	No	No	Yes	5'	4'	4'				3
HDF332T8	No	No	No							5
HDF432T8	No	No	Yes	1'	1.25'	5.2'	1.25'	4.2'		3
HOP-2PSP54-L	20'	Yes	Yes	20'	20'	15'				1
HOP-4PSP54-2LS-G	20'	Yes	Yes	20'	20'	15'	15'	15'		1
ICF-1D38-HI-LD	15'	NA	NA							4
ICF-2S13-HI-LD	1-Lamp	15'	NA	NA						4
ICF-2S13-M1-BS	2-Lamp	6'	Yes	Yes	2'	6'	6'			2
ICF-2S18-HI-LD	1-Lamp	15'	NA	NA						4
ICF-2S18-M1-BS	2-Lamp	6'	Yes	Yes	2'	6'	6'			2
ICF-2S26-HI-LD	1-Lamp	15'	NA	NA						4
ICF-2S26-M1-BS	2-Lamp	6'	Yes	Yes	2'	6'	6'			2
ICF-2S42-M2-BS	1-Lamp	15'	NA	NA						4
ICF-2S42-M2-LD	2-Lamp	6'	Yes	Yes	2'	6'	6'			2
ICF-2S42-90C-M2-BS	1-Lamp	15'	NA	NA						4
ICF-2S42-90C-M2-LD	2-Lamp	6'	Yes	Yes	2'	6'	6'			2
ICF-2S70-M4-LD		6'	Yes	Yes	2'	6'	6'			2
ICN-132-MC	20'	NA	NA							4
ICN-1P32-N	20'	NA	NA							4
ICN-1S80	20'	NA	NA							4
ICN-1TTP40-SC	20'	NA	NA							4
ICN-2M32-MC	20'	Yes	Yes	20'	20'					1
ICN-2P32-N	20'	Yes	Yes	20'	20'					1 (e)
ICN-2P60-SC	20'	Yes	Yes	20'	20'					1
ICN-2S24	20'	Yes	Yes	20'	4'	20'				3
ICN-2S24-N	20'	Yes	Yes	20'	4'	20'				3
ICN-2S28	10'	Yes	Yes	10'	10'	10'				3
ICN-2S28-N	10'	Yes	Yes	10'	10'	10'				3
ICN-2S39	20'	Yes	Yes	20'	4'	20'				3
ICN-2S39-N	20'	Yes	Yes	20'	4'	20'				3

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