



The smart choice for maximum flexibility

Philips Advance SmartMate ballasts for CFL lamps are the smart choice for maximizing flexibility while minimizing inventory

Offering maximum versatility, the Philips Advance family of SmartMate ballasts for 4-pin compact fluorescent lamps drive a broad range of quad and triple-tube, circline, 2D, and long twin-tube lamps. SmartMate ballasts' energy efficient design, compact and lightweight housing, and user-friendly features make these ballasts an ideal choice for fixture manufacturers, retrofitters, and MRO replacement.

SmartMate ballasts are ideal in such applications as restaurants, reception areas, conference and meeting rooms, hotel and convention center ballrooms, or when combined with CFL lamps, as an energy efficient replacement for incandescent down-lighting systems.

Philips Advance also offers our distribution partners a way to eliminate the need to stock loose components with SmartMate Replacement Kits. These kits come complete with a Philips Advance SmartMate ballast, a mounting plate adaptor, lead wires, and a wire extraction tool that is easy to use and versatile to address a multitude of fixture configurations.

Reduces SKU requirements and inventory costs

- Dual-entry connector allows ballast to be used with side or bottom exit leads

Enhances wiring accuracy and ease of assembly/installation

- Color-coded, poke-in terminals

Eliminates interference with infrared systems, anti-theft devices, or other electronic equipment

- Operates between 42kHz and 52kHz

Removes power to lamps upon lamp failure

- Lamp End-Of-Life (EOL) Protection Circuit

PHILIPS
ADVANCE

SmartMate Ballasts for I3-26W Quad Tube Compact Fluorescent Lamps

Programmed Start **

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp (°F/C)	Dim.	Wiring Diagram
CFQI3W/G24q - I3W CFL Quad Tube Lamps (PL-CI3W/4P, FI3BDX/4P, CFI3DD/E)									
1	120-277	ICF-2S13-M1-BS-QS	16	1.00	10	0.13-0.06	0/-18	Size 1	160
	120-277	ICF-2S13-H1-LD	16	1.00	10	0.13-0.06	0/-18	Size 1	160
	120-277	ICF-2S13-H1-LD-K*	16	1.00	10	0.13-0.06	0/-18	Size 1	160
	120-277	ICF-2S13-M1-BS	16	1.00	10	0.13-0.06	0/-18	Size 1	160
2	120-277	ICF-2S13-M1-BS-QS	29	1.00	10	0.25-0.11	0/-18	Size 1	159
	120-277	ICF-2S13-H1-LD	29	1.00	10	0.25-0.11	0/-18	Size 1	159
	120-277	ICF-2S13-H1-LD-K*	29	1.00	10	0.25-0.11	0/-18	Size 1	159
	120-277	ICF-2S13-M1-BS	29	1.00	10	0.25-0.11	0/-18	Size 1	159
CFQI8W/G24q - I8W CFL Quad Tube Lamps (PL-CI8W/4P, FI8BDX/4P, CFI8DD/E)									
1	120-277	ICF-2S18-M1-BS-QS	19	1.00	10	0.16-0.07	0/-18	Size 1	160
	120-277	ICF-2S18-H1-LD	19	1.00	10	0.16-0.07	0/-18	Size 1	160
	120-277	ICF-2S18-H1-LD-K*	19	1.00	10	0.16-0.07	0/-18	Size 1	160
	120-277	ICF-2S18-M1-BS	19	1.00	10	0.16-0.07	0/-18	Size 1	160
2	120-277	ICF-2S18-M1-BS-QS	35	0.95	10	0.30-0.13	0/-18	Size 1	159
	120-277	ICF-2S18-H1-LD	35	0.95	10	0.30-0.13	0/-18	Size 1	159
	120-277	ICF-2S18-H1-LD-K*	35	0.95	10	0.30-0.13	0/-18	Size 1	159
	120-277	ICF-2S18-M1-BS	35	0.95	10	0.30-0.13	0/-18	Size 1	159
CFQ26W/G24q - 26W CFL Quad Tube Lamps (PL-C26W/4P, F26BDX/4P, CF26DD/E)									
1	120-277	ICF-2S26-M1-BS-QS	27	1.00	10	0.23-0.10	0/-18	Size 1	160
	120-277	ICF-2S26-H1-LD	27	1.00	10	0.23-0.10	0/-18	Size 1	160
	120-277	ICF-2S26-H1-LD-K*	27	1.00	10	0.23-0.10	0/-18	Size 1	160
	120-277	ICF-2S26-M1-BS	27	1.00	10	0.23-0.10	0/-18	Size 1	160
2	120-277	ICF-2S26-M1-BS-QS	51	1.00	10	0.43-0.19	0/-18	Size 1	159
	120-277	ICF-2S26-H1-LD	51	1.00	10	0.43-0.19	0/-18	Size 1	159
	120-277	ICF-2S26-H1-LD-K*	51	1.00	10	0.43-0.19	0/-18	Size 1	159
	120-277	ICF-2S26-M1-BS	51	1.00	10	0.43-0.19	0/-18	Size 1	159
	120-277	ICF-2S42-M2-BS	52	1.00	10	0.43-0.19	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD	52	1.00	10	0.43-0.19	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD-K*	52	1.00	10	0.43-0.19	0/-18	Size 2	159
	120-277	ICF-2S42-90C-M2-BS	52	1.00	10	0.43-0.19	0/-18	Size 2	159
120-277	ICF-2S42-90C-M2-LD	52	1.00	10	0.43-0.19	0/-18	Size 2	159	

*Replacement/Retrofit ballast kits indicated with suffix K are available to distributors. ** Ballast part numbers that end with the suffix QS are Quick Start ballasts.

SmartMate Ballasts for I3-26W Triple Tube Compact Fluorescent Lamps

Programmed Start **

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp (°F/C)	Dim.	Wiring Diagram
CFTRI3W/GX24q - I3W CFL Triple Tube Lamps (FI3TBX/4P, CFI3DT/E)									
1	120-277	ICF-2S13-M1-BS-QS	16	1.00	10	0.13-0.06	0/-18	Size 1	160
	120-277	ICF-2S13-H1-LD	16	1.00	10	0.13-0.06	0/-18	Size 1	160
	120-277	ICF-2S13-H1-LD-K*	16	1.00	10	0.13-0.06	0/-18	Size 1	160
	120-277	ICF-2S13-M1-BS	16	1.00	10	0.13-0.06	0/-18	Size 1	160
2	120-277	ICF-2S13-M1-BS-QS	29	1.00	10	0.25-0.11	0/-18	Size 1	159
	120-277	ICF-2S13-H1-LD	29	1.00	10	0.25-0.11	0/-18	Size 1	159
	120-277	ICF-2S13-H1-LD-K*	29	1.00	10	0.25-0.11	0/-18	Size 1	159
	120-277	ICF-2S13-M1-BS	29	1.00	10	0.25-0.11	0/-18	Size 1	159

*Replacement/Retrofit ballast kits indicated with suffix K are available to distributors. ** Ballast part numbers that end with the suffix QS are Quick Start ballasts.

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp (°F/C)	Dim.	Wiring Diagram
CFTR18W/GX24q - 18W CFL Triple Tube Lamps (PL-T18W, F18TBX/4P, CF18DT/E)									
1	120-277	ICF-2S18-M1-BS-QS	20	1.05	10	0.17-0.08	0/-18	Size 1	160
	120-277	ICF-2S18-H1-LD	20	1.05	10	0.17-0.08	0/-18	Size 1	160
	120-277	ICF-2S18-H1-LD-K*	20	1.05	10	0.17-0.08	0/-18	Size 1	160
	120-277	ICF-2S18-M1-BS	20	1.05	10	0.17-0.08	0/-18	Size 1	160
2	120-277	ICF-2S18-M1-BS-QS	39	1.05	10	0.33-0.14	0/-18	Size 1	159
	120-277	ICF-2S18-H1-LD	39	1.05	10	0.33-0.14	0/-18	Size 1	159
	120-277	ICF-2S18-H1-LD-K*	39	1.05	10	0.33-0.14	0/-18	Size 1	159
	120-277	ICF-2S18-M1-BS	39	1.05	10	0.33-0.14	0/-18	Size 1	159
CFTR26W/GX24q - 26W CFL Triple Tube Lamps (PL-T26W, F26TBX/4P, CF26DT/E)									
1	120-277	ICF-2S26-M1-BS-QS	29	1.10	10	0.24-0.11	0/-18	Size 1	160
	120-277	ICF-2S26-H1-LD	26	1.10	10	0.24-0.11	0/-18	Size 1	160
	120-277	ICF-2S26-H1-LD-K*	26	1.10	10	0.24-0.11	0/-18	Size 1	160
	120-277	ICF-2S26-M1-BS	26	1.10	10	0.24-0.11	0/-18	Size 1	160
2	120-277	ICF-2S26-M1-BS-QS	54	1.00	10	0.45-0.20	0/-18	Size 1	159
	120-277	ICF-2S26-H1-LD	54	1.00	10	0.45-0.20	0/-18	Size 1	159
	120-277	ICF-2S26-H1-LD-K*	54	1.00	10	0.45-0.20	0/-18	Size 1	159
	120-277	ICF-2S26-M1-BS	54	1.00	10	0.45-0.20	0/-18	Size 1	159
	120-277	ICF-2S42-M2-BS	54	1.00	10	0.46-0.21	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD	54	1.00	10	0.46-0.21	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD-K*	54	1.00	10	0.46-0.21	0/-18	Size 2	159
	120-277	ICF-2S42-90C-M2-BS	54	1.00	10	0.46-0.21	0/-18	Size 2	159
CFTR32W/GX24q - 32W CFL Triple Tube Lamps (PL-T32W, F32TBX/4P, CF32DT/E)									
1	120-277	ICF-2S26-M1-BS-QS	36	0.98	10	0.31-0.13	0/-18	Size 1	160
	120-277	ICF-2S26-H1-LD	36	0.98	10	0.31-0.13	0/-18	Size 1	160
	120-277	ICF-2S26-H1-LD-K*	36	0.98	10	0.31-0.13	0/-18	Size 1	160
	120-277	ICF-2S26-M1-BS	36	0.98	10	0.31-0.13	0/-18	Size 1	160
2	120-277	ICF-2S42-M2-BS	68	0.98	10	0.57-0.25	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD	68	0.98	10	0.57-0.25	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD-K*	68	0.98	10	0.57-0.25	0/-18	Size 2	159
	120-277	ICF-2S42-90C-M2-BS	68	0.98	10	0.57-0.25	0/-18	Size 2	159
CFTR42W/GX24q - 42W CFL Triple Tube Lamps (PL-T42W, F42TBX/4P, CF42DT/E)									
1	120-277	ICF-2S26-M1-BS-QS	46	0.98	10	0.38-0.17	0/-18	Size 1	160
	120-277	ICF-2S26-H1-LD	46	0.98	10	0.38-0.17	0/-18	Size 1	160
	120-277	ICF-2S26-H1-LD-K*	46	0.98	10	0.38-0.17	0/-18	Size 1	160
	120-277	ICF-2S26-M1-BS	46	0.98	10	0.38-0.17	0/-18	Size 1	160
2	120-277	ICF-2S42-M2-BS	93	0.97	10	0.78-0.33	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD	93	0.97	10	0.78-0.33	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD-K*	93	0.97	10	0.78-0.33	0/-18	Size 2	159
	120-277	ICF-2S42-90C-M2-BS	93	0.97	10	0.78-0.33	0/-18	Size 2	159
120-277	ICF-2S42-90C-M2-LD	93	0.97	10	0.78-0.33	0/-18	Size 2	159	

*Replacement/Retrofit ballast kits indicated with suffix K are available to distributors. ** Ballast part numbers that end with the suffix QS are Quick Start ballasts.

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp (°F/C)	Dim.	Wiring Diagram
CFTR57W/GX24q - 57W CFL Lamps (PL-T57W, F57QBX/4P, CF57DT/E)									
1	120-277	ICF-2S42-M2-BS	59	0.94	10	0.50-0.21	0/-18	Size 2	160
	120-277	ICF-2S42-M2-LD	59	0.94	10	0.50-0.21	0/-18	Size 2	160
	120-277	ICF-2S42-M2-LD-K*	59	0.94	10	0.50-0.21	0/-18	Size 2	160
	120-277	ICF-2S42-90C-M2-BS	59	0.94	10	0.50-0.21	0/-18	Size 2	160
	120-277	ICF-2S42-90C-M2-LD	59	0.94	10	0.50-0.21	0/-18	Size 2	160
2	120-277	ICF-2S70-M4-LD	128-126	1.00	10	1.07-0.46	0/-18	Size 4	159
CFTR70W/GX24q - 70W CFL Lamps (F70QBX/4P, CF70DT/E)									
1	120-277	ICF-2S42-M2-BS	75	0.96	10	0.63-0.27	0/-18	Size 2	160
	120-277	ICF-2S42-M2-LD	75	0.96	10	0.63-0.27	0/-18	Size 2	160
	120-277	ICF-2S42-M2-LD-K*	75	0.96	10	0.63-0.27	0/-18	Size 2	160
	120-277	ICF-2S42-90C-M2-BS	75	0.96	10	0.63-0.27	0/-18	Size 2	160
	120-277	ICF-2S42-90C-M2-LD	75	0.96	10	0.63-0.27	0/-18	Size 2	160
2	120-277	ICF-2S70-M4-LD	156-152	1.00	10	1.30-0.56	0/-18	Size 4	159

*Replacement/Retrofit ballast kits indicated with suffix K are available to distributors.

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp (°F/C)	Dim.	Wiring Diagram
CFS10W/GR10q - 10W 2D Lamp (F10 2D/4P)									
1	120-277	ICF-2S13-HI-LD	13	1.05	15	0.11-0.05	0/-18	Size 1	160
	120-277	ICF-2S13-HI-LD-K*	13	1.05	15	0.11-0.05	0/-18	Size 1	160
	120-277	ICF-2S13-MI-BS	13	1.05	15	0.11-0.05	0/-18	Size 1	160
2	120-277	ICF-2S13-HI-LD	23	0.95	15	0.19-0.09	0/-18	Size 1	159
	120-277	ICF-2S13-HI-LD-K*	23	0.95	15	0.19-0.09	0/-18	Size 1	159
	120-277	ICF-2S13-MI-BS	23	0.95	15	0.19-0.09	0/-18	Size 1	159
CFS16W/GR10q - 16W 2D Lamp (F16 2D/4P)									
1	120-277	ICF-2S13-HI-LD	17	1.00	15	0.14-0.06	0/-18	Size 1	160
	120-277	ICF-2S13-HI-LD-K*	17	1.00	15	0.14-0.06	0/-18	Size 1	160
	120-277	ICF-2S13-MI-BS	17	1.00	15	0.14-0.06	0/-18	Size 1	160
2	120-277	ICF-2S18-HI-LD	37	1.00	10	0.31-0.13	0/-18	Size 1	159
	120-277	ICF-2S18-HI-LD-K*	37	1.00	10	0.31-0.13	0/-18	Size 1	159
	120-277	ICF-2S18-MI-BS	37	1.00	10	0.31-0.13	0/-18	Size 1	159
CFS21W/GR10q - 21W 2D Lamp (F21 2D/4P)									
1	120-277	ICF-2S18-HI-LD	20	0.90	15	0.16-0.07	0/-18	Size 1	160
	120-277	ICF-2S18-HI-LD-K*	20	0.90	15	0.16-0.07	0/-18	Size 1	160
	120-277	ICF-2S18-MI-BS	20	0.90	15	0.16-0.07	0/-18	Size 1	160
2	120-277	ICF-2S18-HI-LD	40	0.91	10	0.33-0.14	0/-18	Size 1	159
	120-277	ICF-2S18-HI-LD-K*	40	0.91	10	0.33-0.14	0/-18	Size 1	159
	120-277	ICF-2S18-MI-BS	40	0.91	10	0.33-0.14	0/-18	Size 1	159
	120-277	ICF-2S26-HI-LD	51	1.12	10	0.42-0.18	0/-18	Size 1	159
	120-277	ICF-2S26-HI-LD-K*	51	1.12	10	0.42-0.18	0/-18	Size 1	159
	120-277	ICF-2S26-MI-BS	51	1.12	10	0.42-0.18	0/-18	Size 1	159
CFS28W/GR10q - 28W 2D Lamp (PL-Q 28W/4P, F28 2D/4P)									
1	120-277	ICF-1D38-HI-LD	27	1.00	10	0.23-0.10	0/-18	Size 1	160
2	120-277	ICF-2S42-M2-BS	57	1.00	10	0.48-0.21	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD	57	1.00	10	0.48-0.21	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD-K*	57	1.00	10	0.48-0.21	0/-18	Size 2	159
	120-277	ICF-2S42-90C-M2-BS	57	1.00	10	0.48-0.21	0/-18	Size 2	159
	120-277	ICF-2S42-90C-M2-LD	57	1.00	10	0.48-0.21	0/-18	Size 2	159

*Replacement/Retrofit ballast kits indicated with suffix K are available to distributors.

SmartMate Ballasts for 38W 2D Compact Fluorescent Lamps

Programmed Start

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp (°F/C)	Dim.	Wiring Diagram
CFS38W/GRI0q - 38W 2D Lamp (PL-Q 38W/4P, F38 2D/4P)									
1	120-277	ICF-ID38-HI-LD	31	0.85	10	0.26-0.11	0/-18	Size 1	160
	120-277	ICF-2S42-M2-BS	62	0.80	10	0.55-0.23	0/-18	Size 2	159
	120-277	ICF-2S42-M2-LD	62	0.80	10	0.55-0.23	0/-18	Size 2	159
2	120-277	ICF-2S42-M2-LD-K*	62	0.80	10	0.55-0.23	0/-18	Size 2	159
	120-277	ICF-2S42-90C-M2-BS	62	0.80	10	0.55-0.23	0/-18	Size 2	159
	120-277	ICF-2S42-90C-M2-LD	62	0.80	10	0.55-0.23	0/-18	Size 2	159

*Replacement/Retrofit ballast kits indicated with suffix K are available to distributors.

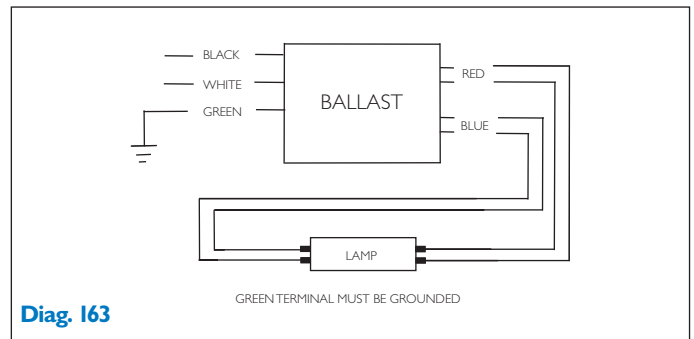
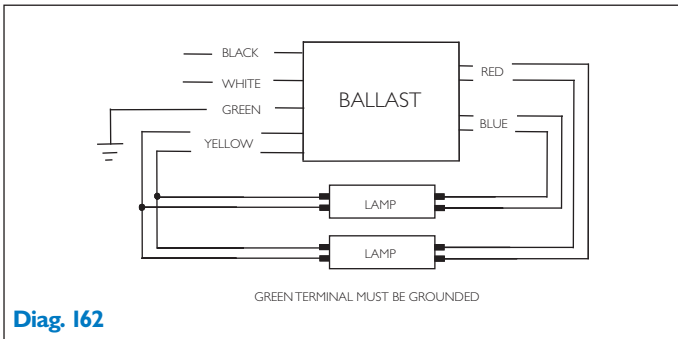
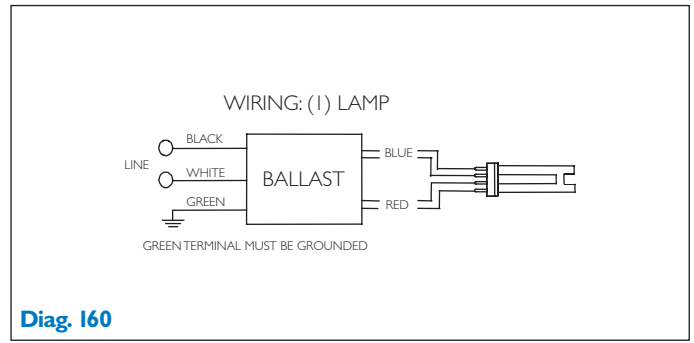
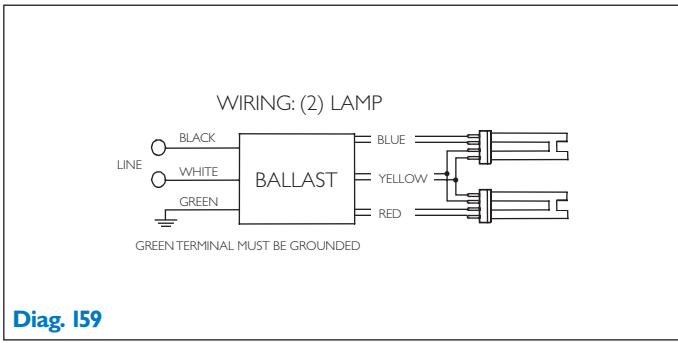
SmartMate Ballasts for 22-40W Circline Compact Fluorescent Lamps

Programmed Start

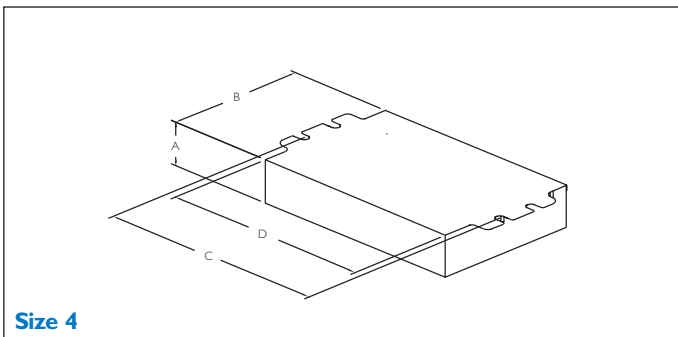
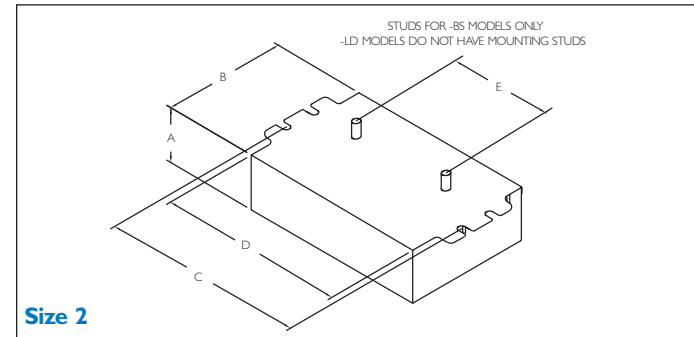
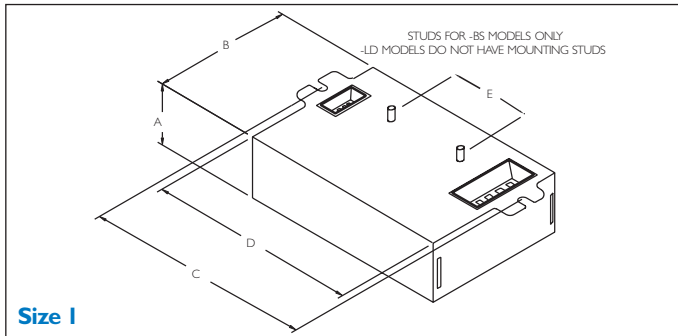
No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp (°F/C)	Dim.	Wiring Diagram
FC95T5 (22W Circline)									
1	120-277	ICF-ID38-HI-LD	25	1.00	15	0.21-0.09	0/-18	Size 1	163
FC12T5 (40W Circline)									
1	120-277	ICF-ID38-HI-LD	38	0.95	10	0.32-0.14	0/-18	Size 1	163
(1) FC95T5 (1) FC12T5 ((1) 22W & (1) 40W Circline)									
	120-277	ICF-2S42-M2-BS	61	0.85	10	0.51-0.22	0/-18	Size 2	162
	120-277	ICF-2S42-M2-LD	61	0.85	10	0.51-0.22	0/-18	Size 2	162
1 & 1	120-277	ICF-2S42-M2-LD-K*	61	0.85	10	0.51-0.22	0/-18	Size 2	162
	120-277	ICF-2S42-90C-M2-BS	61	0.85	10	0.51-0.22	0/-18	Size 2	162
	120-277	ICF-2S42-90C-M2-LD	61	0.85	10	0.51-0.22	0/-18	Size 2	162

*Replacement/Retrofit ballast kits indicated with suffix K are available to distributors.

Wiring Diagrams



Dimensions



Size	A	B	C	D	E
1	0.98"	2.40"	4.60"	4.20"	2.00"
2	1.29"	3.00"	4.55"	4.20"	2.00"
4	1.29"	3.00"	7.50"	7.00"	

Ballast Specification

Section I - Physical Characteristics

- I.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- I.2 Ballast shall be available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- I.3 Ballast shall be provided with poke-in wire trap connectors color-coded per ANSI C82.II.

Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start except for ballasts with -QS suffix, which shall be Rapid Start.
- 2.2 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.3 Ballast shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
- 2.4 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.
- 2.5 Ballast shall have a Power Factor greater than 0.98 for primary lamp.
- 2.6 Ballast shall have a minimum ballast factor of 1.00 for primary lamp.
- 2.7 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.8 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.9 Ballast shall have a Class A sound rating.
- 2.10 Ballast shall have a minimum starting temperature of -18C (0F) for primary lamp.
- 2.11 Ballast shall provide Lamp EOL Protection Circuit.
- 2.12 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 be rated for use in air-handling spaces.
- 3.4 Ballast shall comply with ANSI C62.41 Category A for transient protection.
- 3.5 Ballast shall comply with ANSI C82.II where applicable.
- 3.6 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).
- 3.7 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 _____ limited warranty from date of manufacture against defects in material or workmanship for operation at a maximum case temperature of _____ (Go to our web site 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 Ballast shall be Philips Advance part # _____ or approved equal.



©2011 Philips Lighting Electronics North America,
A Division of Philips Electronics North America Corporation.

All rights reserved.
Printed in the USA

Form No. EL-2130-A

Philips Lighting
10275 West Higgins Road
Rosemont, IL 60018
Tel: 800-322-2086 Fax: 888-423-1882
Customer Support/Technical Service: 800-372-3331
OEM Support: 866-915-5886