

Standard Power 1-Lamp-T8

STANDARD ELECTRONIC

SMALL CASE - INSTANT START

FEB 2001

E1/32IS-120SC

One Lamp Operation, 120 V

Lamp Type	F17T8	FB24T8	F25T8	F25T12	FB31T8	F32T8
Lamp Length (Inches)	24	16.5	36	48	22.5	48
Lamp Watts	17	24	25	25	31	32
Line Current (Amps)	0.17	0.20	0.20	0.21	0.24	0.25
Input Watts (ANSI)	19	23	24	25	29	30
Power Factor	>0.90	>0.96	>0.97	>0.97	>0.98	>0.98
Total Harmonic Distortion Rating	<25%	<19%	<19%	<22%	<16%	<16%
Ballast Factor	94%	90%	90%	92%	87%	87%
Ballast Efficacy Factor	4.95	3.91	3.75	3.68	3.00	2.90
System Lumens Per Watt	68	78	79	84	83	87
Initial System Lumens (1)	1300	1800	1900	2100	2400	2600

E1/32IS-277SC

One Lamp Operation, 277V

Lamp Type	F17T8	FB24T8	F25T8	F25T12	FB31T8	F32T8
Lamp Length (Inches)	24	16.5	36	48	22.5	48
Lamp Watts	17	24	25	25	31	32
Line Current (Amps)	0.07	0.08	0.09	0.09	0.11	0.11
Input Watts (ANSI)	19	23	24	25	29	30
Power Factor	>0.90	>0.96	>0.97	>0.97	>0.98	>0.98
Total Harmonic Distortion Rating	<25%	<19%	<19%	<22%	<16%	<16%
Ballast Factor	94%	90%	90%	92%	87%	87%
Ballast Efficacy Factor	4.95	3.91	3.75	3.68	3.00	2.90
System Lumens Per Watt	68	78	79	84	83	87
Initial System Lumens (1)	1300	1800	1900	2100	2400	2600

(1) Based on premium 4', T8 lamp initial lumen ratings, produced by the GE, OSRAM/SYLVANIA, or PHILIPS lamp divisions. Shaded area indicates primary lamp design. Actual Initial Lumens produced will be determined by the specific lamp manufacturer and the rated initial lumens for the lamp selected.

HOWARD
INDUSTRIES, INC.



**BALLAST
PRODUCTS
DIVISION**

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howard-ballast.com](http://www.howard-ballast.com)

Standard Power 2-Lamp-T8

STANDARD ELECTRONIC

SMALL CASE - INSTANT START

E2/32IS-120SC

Two Lamp Operation, 120 V

Lamp Type	F17T8	FB24T8	F25T8	F25T12	FB31T8	F32T8
Lamp Length (Inches)	24	16.5	36	48	22.5	48
Lamp Watts	17	24	25	25	31	32
Line Current (Amps)	0.31	0.39	0.40	0.41	0.48	0.49
Input Watts (ANSI)	34	46	47	49	57	58
Power Factor	>0.90	>0.98	>0.98	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<25%	<24%	<24%	<22%	<20%	<20%
Ballast Factor	93%	92%	90%	92%	87%	87%
Ballast Efficacy Factor	2.74	2.00	1.91	1.88	1.53	1.50
System Lumens Per Watt	76	80	81	86	86	90
Initial System Lumens (1)	2600	3700	3800	4200	4900	5200

One Lamp Operation, 120 V

Lamp Type	FB31T8	F32T8	F40T8
Lamp Length (Inches)	22.5	48	60
Lamp Watts	31	32	40
Line Current (Amps)	0.31	0.32	0.38
Input Watts (ANSI)	37	38	44
Power Factor	>0.98	>0.98	>0.97
Total Harmonic Distortion Rating	<25%	<20%	<20%
Ballast Factor	105%	102%	100%
Ballast Efficacy Factor	2.84	2.68	2.27
System Lumens Per Watt	78	82	84
Initial System Lumens (1)	2900	3100	3700

E2/32IS-277SC

Two Lamp Operation, 277 V

Lamp Type	F17T8	FB24T8	F25T8	F25T12	FB31T8	F32T8
Lamp Length (Inches)	24	16.5	36	48	22.5	48
Lamp Watts	17	24	25	25	31	32
Line Current (Amps)	0.13	0.17	0.17	0.18	0.21	0.22
Input Watts (ANSI)	34	46	47	49	57	58
Power Factor	>0.90	>0.98	>0.98	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<25%	<24%	<24%	<22%	<20%	<20%
Ballast Factor	93%	92%	90%	92%	87%	87%
Ballast Efficacy Factor	2.74	2.00	1.91	1.88	1.53	1.50
System Lumens Per Watt	76	80	81	86	86	90
Initial System Lumens (1)	2600	3700	3800	4200	4900	5200

One Lamp Operation, 277 V

Lamp Type	FB31T8	F32T8	F40T8
Lamp Length (Inches)	22.5	48	60
Lamp Watts	31	32	40
Line Current (Amps)	0.13	0.14	0.16
Input Watts (ANSI)	37	38	45
Power Factor	>0.98	>0.98	>0.97
Total Harmonic Distortion Rating	<25%	<20%	<20%
Ballast Factor	105%	102%	100%
Ballast Efficacy Factor	2.84	2.68	2.22
System Lumens Per Watt	78	82	82
Initial System Lumens (1)	2900	3100	3700

(1) Based on premium 4', T8 lamp initial lumen ratings, produced by the GE, OSRAM/SYLVANIA, or PHILIPS lamp divisions. Shaded area indicates primary lamp design. Actual Initial Lumens produced will be determined by the specific lamp manufacturer and the rated initial lumens for the lamp selected.

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Standard Power 3-Lamp-T8

STANDARD ELECTRONIC

SMALL CASE - INSTANT START

E3/32IS-120SC

Three Lamp Operation, 120 V

Lamp Type	F17T8	FB24T8	F25T8	F25T12	FB31T8	F32T8
Lamp Length (Inches)	24	16.5	36	48	22.5	48
Lamp Watts	17	24	25	25	31	32
Line Current (Amps)	0.46	0.60	0.61	0.62	0.71	0.74
Input Watts (ANSI)	51	68	72	73	85	87
Power Factor	>0.90	>0.95	>0.95	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<25%	<25%	<25%	<20%	<20%	<20%
Ballast Factor	95%	94%	92%	92%	87%	87%
Ballast Efficacy Factor	1.86	1.38	1.28	1.26	1.02	1.00
System Lumens Per Watt	78	82	81	86	86	90
Initial System Lumens (1)	4000	5600	5800	6300	7300	7800

Two Lamp Operation, 120 V

Lamp Type	F25T12	FB31T8	F32T8	F40T8
Lamp Length (Inches)	48	22.5	48	60
Lamp Watts	25	31	32	40
Line Current (Amps)	0.50	0.57	0.58	0.68
Input Watts (ANSI)	58	67	68	80
Power Factor	>0.95	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<25%	<25%	<25%	<20%
Ballast Factor	105%	103%	103%	96%
Ballast Efficacy Factor	1.81	1.54	1.51	1.20
System Lumens Per Watt	83	87	91	89
Initial System Lumens (1)	4800	5800	6200	7100

E3/32IS-277SC

Three Lamp Operation, 277 V

Lamp Type	F17T8	FB24T8	F25T8	F25T12	FB31T8	F32T8
Lamp Length (Inches)	24	16.5	36	48	22.5	48
Lamp Watts	17	24	25	25	31	32
Line Current (Amps)	0.20	0.25	0.26	0.27	0.31	0.32
Input Watts (ANSI)	50	67	72	72	84	86
Power Factor	>0.90	>0.95	>0.95	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<30%	<25%	<25%	<20%	<20%	<20%
Ballast Factor	95%	94%	92%	92%	87%	87%
Ballast Efficacy Factor	1.90	1.40	1.28	1.28	1.04	1.01
System Lumens Per Watt	80	84	81	88	87	91
Initial System Lumens (1)	4000	5600	5800	6300	7300	7800

Two Lamp Operation, 277 V

Lamp Type	F25T12	FB31T8	F32T8	F40T8
Lamp Length (Inches)	48	22.5	48	60
Lamp Watts	25	31	32	40
Line Current (Amps)	0.22	0.24	0.25	0.29
Input Watts (ANSI)	58	67	68	80
Power Factor	>0.95	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<25%	<25%	<25%	<20%
Ballast Factor	105%	103%	103%	96%
Ballast Efficacy Factor	1.81	1.54	1.51	1.20
System Lumens Per Watt	83	87	91	89
Initial System Lumens (1)	4800	5800	6200	7100

(1) Based on premium 4', T8 lamp initial lumen ratings, produced by the GE, OSRAM/SYLVANIA, or PHILIPS lamp divisions. Shaded area indicates primary lamp design. Actual Initial Lumens produced will be determined by the specific lamp manufacturer and the rated initial lumens for the lamp selected.

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Standard Power 4-Lamp-T8

STANDARD ELECTRONIC

SMALL CASE - INSTANT START

E4/32IS-120SC

Four Lamp Operation, 120 V

Lamp Type	F17T8	FB24T8	F25T8	F25T12	FB31T8	F32T8
Lamp Length (Inches)	24	16.5	36	48	22.5	48
Lamp Watts	17	24	25	25	31	32
Line Current (Amps)	0.55	0.74	0.76	0.80	0.95	0.97
Input Watts (ANSI)	62	87	90	95	111	114
Power Factor	>0.95	>0.97	>0.98	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<25%	<20%	<20%	<20%	<20%	<20%
Ballast Factor	92%	90%	89%	89%	87%	87%
Ballast Efficacy Factor	1.48	1.03	0.99	0.94	0.78	0.76
System Lumens Per Watt	84	83	83	86	87	91
Initial System Lumens (1)	5200	7200	7500	8200	9700	10400

Three Lamp Operation, 120 V

Lamp Type	FB24T8	F25T8	F25T12	FB31T8	F32T8	F40T8
Lamp Length (Inches)	16.5	36	48	22.5	48	60
Lamp Watts	24	25	25	31	32	40
Line Current (Amps)	0.63	0.64	0.70	0.77	0.79	0.96
Input Watts (ANSI)	72	74	81	91	93	113
Power Factor	>0.95%	>0.96	>0.96	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<20%	<20%	<20%	<20%	<20%	<20%
Ballast Factor	100%	99%	101%	97%	96%	94%
Ballast Efficacy Factor	1.39	1.34	1.25	1.07	1.03	0.83
System Lumens Per Watt	83	84	86	89	92	92
Initial System Lumens (1)	6000	6200	7000	8100	8600	10400

E4/32IS-277SC

Four Lamp Operation, 277 V

Lamp Type	F17T8	FB24T8	F25T8	F25T12	FB31T8	F32T8
Lamp Length (Inches)	24	16.5	36	48	22.5	48
Lamp Watts	17	24	25	25	31	32
Line Current (Amps)	0.23	0.32	0.33	0.35	0.41	0.42
Input Watts (ANSI)	62	87	90	95	111	114
Power Factor	>0.95	>0.97	>0.98	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<25%	<20%	<20%	<20%	<20%	<20%
Ballast Factor	92%	90%	89%	89%	87%	87%
Ballast Efficacy Factor	1.48	1.03	0.99	0.94	0.78	0.76
System Lumens Per Watt	84	83	83	86	87	91
Initial System Lumens (1)	5200	7200	7500	8200	9700	10400

Three Lamp Operation, 277 V

Lamp Type	FB24T8	F25T8	F25T12	FB31T8	F32T8	F40T8
Lamp Length (Inches)	16.5	36	48	22.5	48	60
Lamp Watts	24	25	25	31	32	40
Line Current (Amps)	0.27	0.28	0.30	0.33	0.34	0.42
Input Watts (ANSI)	72	74	81	91	93	113
Power Factor	>0.95	>0.96	>0.96	>0.98	>0.98	>0.98
Total Harmonic Distortion Rating	<20%	>20%	<20%	<20%	<20%	<20%
Ballast Factor	100%	99%	101%	97%	96%	94%
Ballast Efficacy Factor	1.39	1.34	1.25	1.07	1.03	0.83
System Lumens Per Watt	83	84	86	89	92	92
Initial System Lumens (1)	6000	6200	7000	8100	8600	10400

(1) Based on premium 4', T8 lamp initial lumen ratings, produced by the GE, OSRAM/SYLVANIA, or PHILIPS lamp divisions. Shaded area indicates primary lamp design. Actual Initial Lumens produced will be determined by the specific lamp manufacturer and the rated initial lumens for the lamp selected.

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Standard Power T8

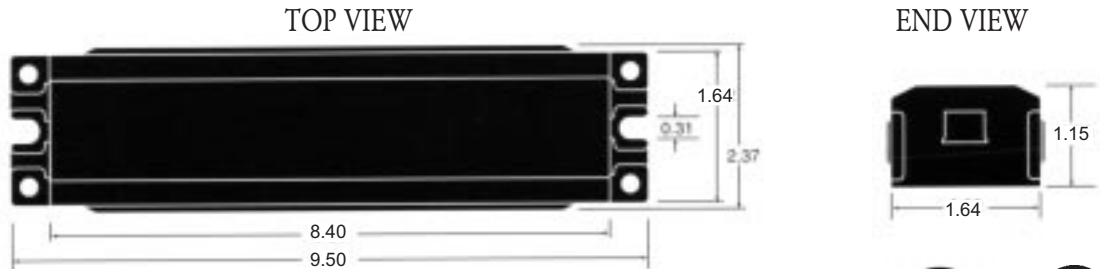
STANDARD ELECTRONIC

SMALL CASE, INSTANT START

SPECIFICATIONS

- Current Crest Factor:** Ballast shall have a Lamp Current Crest Factor of <1.7 .
- Transient Protection:** Ballast shall withstand line voltage transients and surges as specified in ANSI C62.41-1991. Ballast will withstand 6,000 volt Ring Wave standard for location category B3 and 6,000 volt Combination Wave standard for location category C1.
- EMI and RFI Limits:** Ballast shall comply with the limits of FCC Part 18C for Non-Consumer equipment.
- UL, Canadian UL, CSA:** Ballast shall be UL, Canadian UL and CSA Certified, Class P, Type 1, outdoor.
- Operating Frequency:** Ballast shall have a frequency of 20-27kHz.
- Starting Temperature:** Ballast shall have a 0°F minimum starting temperature.
- Made in U.S.A.:** Ballast shall be manufactured in the U.S.A. by Howard Industries, Inc.
- Potting:** Ballast shall contain potting compound for proper dissipation of heat, mechanical stability, and moisture protection.
- Lamp Lead Orientation:** Ballast shall have lamp leads exiting both ends of housing.
- Circuit Configuration:** Ballast shall be Instant Start with Parallel circuit configuration.
- Sound Rating:** Ballast shall be sound rated Class A.
- Power Factor:** Ballast shall have minimum Power Factor of 98% on primary lamp configuration.
- Remote Mounting:** Ballast shall operate at a maximum of 20 feet at 0°C.
- Voltage Range:** Ballast shall operate within an input voltage range of $\pm 10\%$.
- Inrush Current:** Ballast shall have an inrush current not greater than 15 times operating current.
- Warranty:** Ballast shall have a five-year warranty.

BALLAST DIMENSIONS



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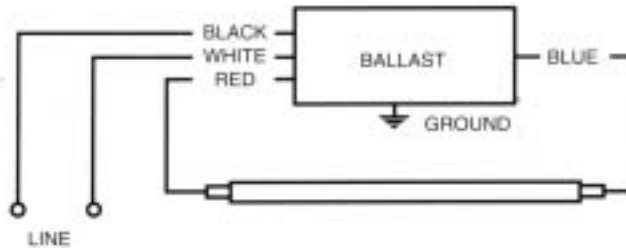
UL, Canadian UL and
CSA Certified

Standard Power T8

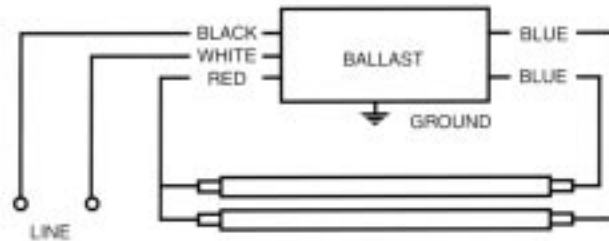
STANDARD ELECTRONIC

SMALL CASE, INSTANT START

1 Lamp Wiring Diagram

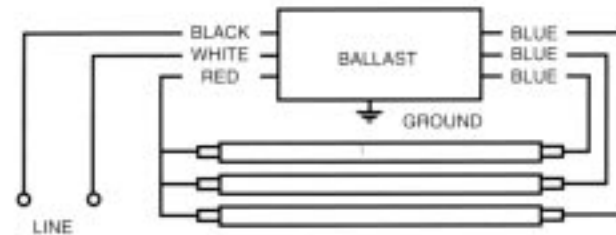


2 Lamp Wiring Diagram



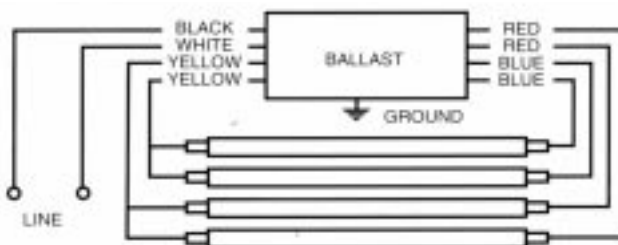
For 1-lamp operation cap one blue lead.

3 Lamp Wiring Diagram



For 2-lamp operation cap one blue lead.

4 Lamp Wiring Diagram



For 3-lamp operation cap one blue lead.

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