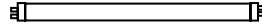


This Is An Original Product From Fulham Co., Inc.

Description: WORKHORSE Specifer Grade Series Electronic Ballast, Drop In Replacement
For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

This Ballast Will Operate Following Lamps:

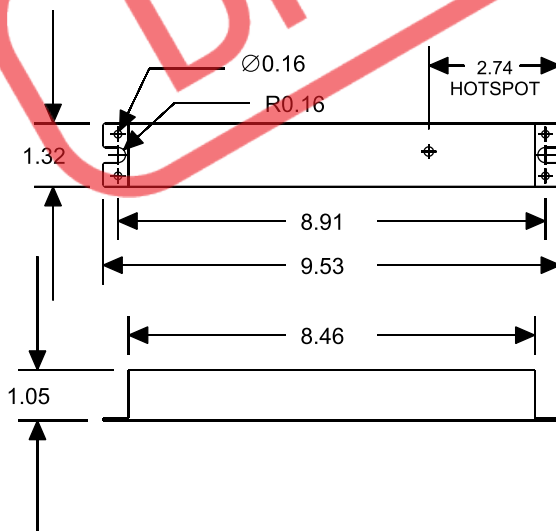


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30,
FBO28T8, FBO31T8, FBO32T8, F32T8, F40T8

ELECTRICAL DATA

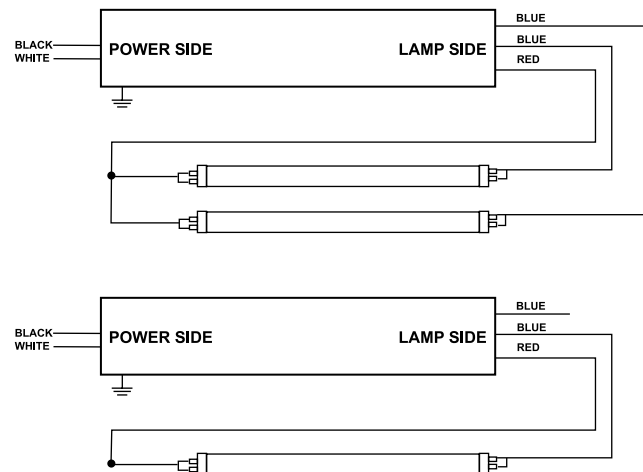
INPUT VOLT	120V ± 10%, 50/60Hz									
LAMP WATTS/TYPE	F17T8	F25T8	F32T8/25	F32T8/28	F32T8/30	FBO28T8	FBO31T8	FBO32T8	F32T8	F40T8
LAMPS OPERATED	1 (ONE)									
INPUT WATTS	21	26	29	30	31	30	32	35	35	44
LINE CURRENT	0.16	0.23	0.24	0.25	0.27	0.25	0.28	0.29	0.29	0.35
POWER FACTOR	≥ 0.95	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98
BALLAST FACTOR	1.10	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.00
BALLAST EFFICACY FACTOR	5.20	4.01	3.67	3.50	3.40	3.50	3.34	3.10	3.10	2.20
THD	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%
CURRENT CREST FACTOR	≤ 1.7									
EMI/RFI COMPLIANCE	FCC PART 18-A (NON-CONSUMER)									
SOUND RATING	"A"									
BALLAST TYPE	INSTANT START									
VOLTAGE TRANSIENTS	ANSI C82.11-1993									
INPUT/PROTECTION	INHERENT THERMAL PROTECTION									
OUTPUT/PROTECTION	-									
MIN. STATING TEMP.	-18°C (0°F)									
MAX. CASE TEMP.	90°C (194°F)									
TYPE "HL" APPROVAL	APPROVED FOR HAZARDOUS LOCATION									
APPROVALS/CLASS	UL/cUL LISTED, CLASS P, 1 OUTDOOR									
REMOTE MOUNTING	18 FT MAX. LEAD LENGTH, 18 AWG									

MECHANICAL DATA



WIRING DIAGRAMS

WIRE	BLACK	WHITE	RED	BLUE	YELLOW	BROWN
	25±1"	25±1"	46±1"	31±1"	-	-

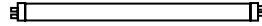


NOTE: This Ballast Must Be Grounded.

This Is An Original Product From Fulham Co., Inc.

Description: WORKHORSE Specifer Grade Series Electronic Ballast, Drop In Replacement
For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

This Ballast Will Operate Following Lamps:

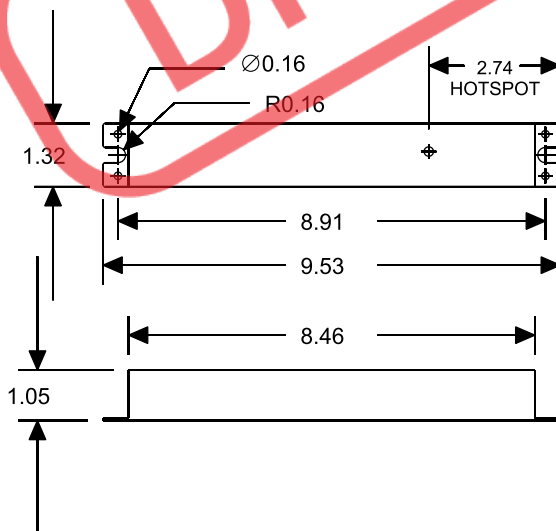


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30,
FBO28T8, FBO31T8, FBO32T8, F32T8, F40T8

ELECTRICAL DATA

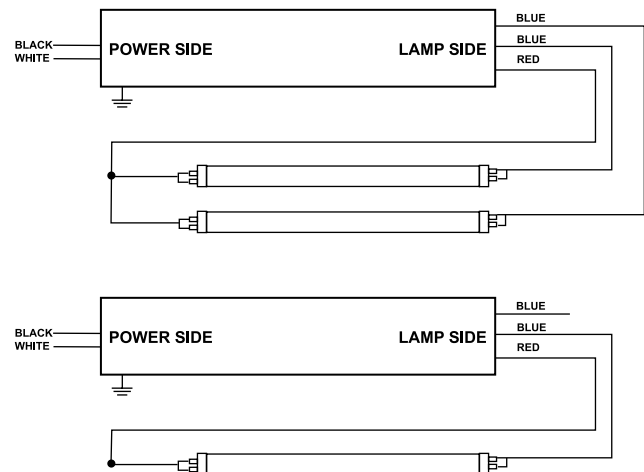
INPUT VOLT	120V ± 10%, 50/60Hz								
LAMP WATTS/TYPE	F17T8	F25T8	F32T8/25	F32T8/28	F32T8/30	FBO28T8	FBO31T8	FBO32T8	F32T8
LAMPS OPERATED	2 (TWO)								
INPUT WATTS	28	42	46	49	51	49	52	55	55
LINE CURRENT	0.25	0.36	0.39	0.41	0.44	0.41	0.44	0.46	0.46
POWER FACTOR	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98	≥ 0.98
BALLAST FACTOR	0.91	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
BALLAST EFFICACY FACTOR	3.20	2.10	1.92	1.82	1.74	1.80	1.70	1.59	1.59
THD	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%
CURRENT CREST FACTOR	≤ 1.7								
EMI/RFI COMPLIANCE	FCC PART 18-A (NON-CONSUMER)								
SOUND RATING	"A"								
BALLAST TYPE	INSTANT START								
VOLTAGE TRANSIENTS	ANSI C82.11-1993								
INPUT/PROTECTION	INHERENT THERMAL PROTECTION								
OUTPUT/PROTECTION	-								
MIN. STATING TEMP.	-18°C (0°F)								
MAX. CASE TEMP.	90°C (194°F)								
TYPE "HL" APPROVAL	APPROVED FOR HAZARDOUS LOCATION								
APPROVALS/CLASS	UL/cUL LISTED, CLASS P, 1 OUTDOOR								
REMOTE MOUNTING	18 FT MAX. LEAD LENGTH, 18 AWG								

MECHANICAL DATA



WIRING DIAGRAMS

WIRE	BLACK	WHITE	RED	BLUE	YELLOW	BROWN
	25±1"	25±1"	46±1"	31±1"	-	-

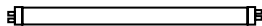


NOTE: This Ballast Must Be Grounded.

This Is An Original Product From Fulham Co., Inc.

Description: WORKHORSE Specifer Grade Series Electronic Ballast, Drop In Replacement
For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

This Ballast Will Operate Following Lamps:

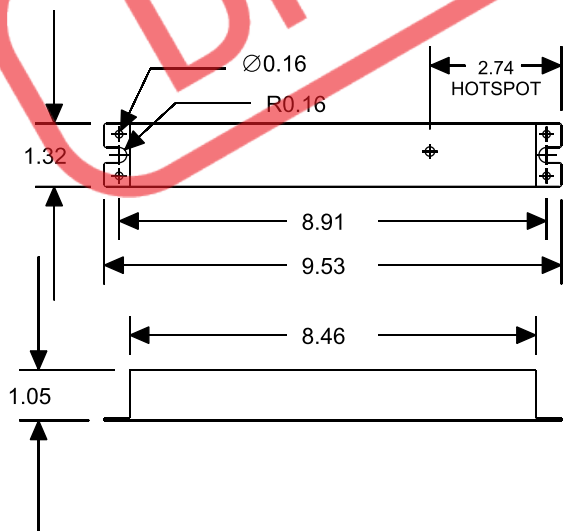


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30,
FBO28T8, FBO31T8, FBO32T8, F32T8, F40T8

ELECTRICAL DATA

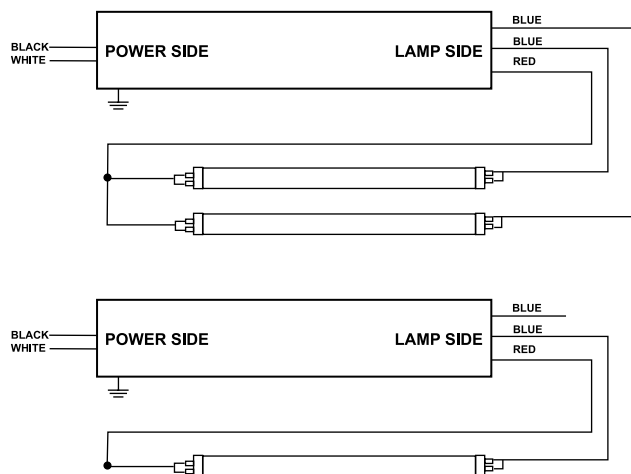
INPUT VOLT	230V ± 10%, 50/60Hz									
LAMP WATTS/TYPE	F17T8	F25T8	F32T8/25	F32T8/28	F32T8/30	FBO28T8	FBO31T8	FBO32T8	F32T8	F40T8
LAMPS OPERATED	1 (ONE)									
INPUT WATTS	21	26	29	29	30	29	31	34	34	43
LINE CURRENT	0.10	0.12	0.13	0.13	0.13	0.13	0.14	0.15	0.15	0.19
POWER FACTOR	≥ 0.95	≥ 0.96	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97
BALLAST FACTOR	1.10	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.00
BALLAST EFFICACY FACTOR	5.20	4.01	3.67	3.67	3.60	3.67	3.40	3.15	3.15	2.30
THD	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%
CURRENT CREST FACTOR	≤ 1.7									
EMI/RFI COMPLIANCE	FCC PART 18-A (NON-CONSUMER)									
SOUND RATING	"A"									
BALLAST TYPE	INSTANT START									
VOLTAGE TRANSIENTS	ANSI C82.11-1993									
INPUT/PROTECTION	INHERENT THERMAL PROTECTION									
OUTPUT/PROTECTION	-									
MIN. STATING TEMP.	-18°C (0°F)									
MAX. CASE TEMP.	90°C (194°F)									
TYPE "HL" APPROVAL	APPROVED FOR HAZARDOUS LOCATION									
APPROVALS/CLASS	UL/cUL LISTED, CLASS P, 1 OUTDOOR									
REMOTE MOUNTING	18 FT MAX. LEAD LENGTH, 18 AWG									

MECHANICAL DATA



WIRING DIAGRAMS

WIRE	BLACK	WHITE	RED	BLUE	YELLOW	BROWN
	25±1"	25±1"	46±1"	31±1"	-	-

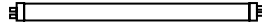


NOTE: This Ballast Must Be Grounded.

This Is An Original Product From Fulham Co., Inc.

Description: WORKHORSE Specifer Grade Series Electronic Ballast, Drop In Replacement
For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

This Ballast Will Operate Following Lamps:

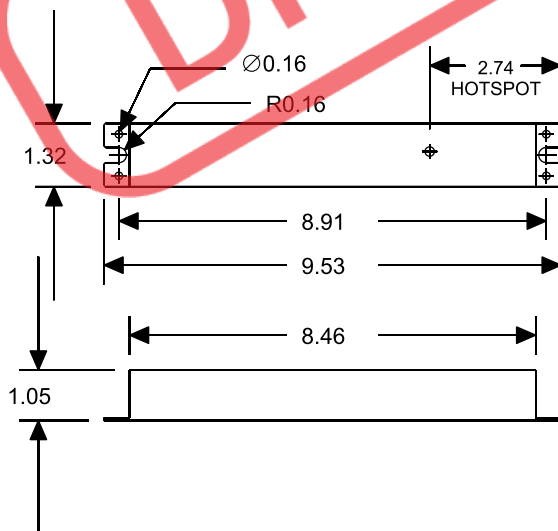


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30,
FBO28T8, FBO31T8, FBO32T8, F32T8, F40T8

ELECTRICAL DATA

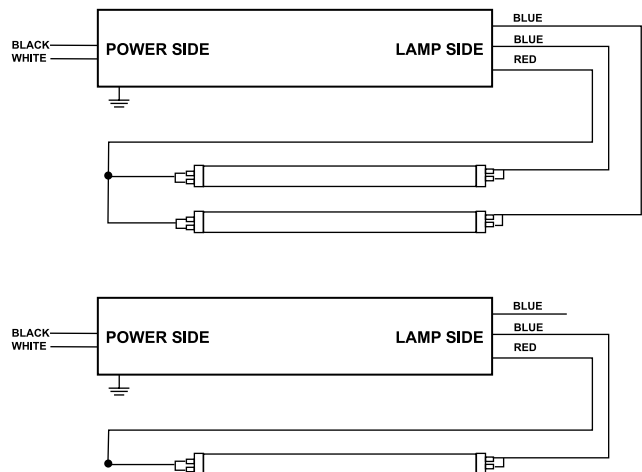
INPUT VOLT	230V ± 10%, 50/60Hz								
LAMP WATTS/TYPE	F17T8	F25T8	F32T8/25	F32T8/28	F32T8/30	FBO28T8	FBO31T8	FBO32T8	F32T8
LAMPS OPERATED	2 (TWO)								
INPUT WATTS	28	41	45	47	51	47	51	54	54
LINE CURRENT	0.13	0.18	0.20	0.21	0.23	0.21	2.29	0.24	0.24
POWER FACTOR	≥ 0.96	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97
BALLAST FACTOR	0.91	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
BALLAST EFFICACY FACTOR	3.20	2.14	1.95	1.88	1.70	1.85	1.70	1.60	1.60
THD	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 10%
CURRENT CREST FACTOR	≤ 1.7								
EMI/RFI COMPLIANCE	FCC PART 18-A (NON-CONSUMER)								
SOUND RATING	"A"								
BALLAST TYPE	INSTANT START								
VOLTAGE TRANSIENTS	ANSI C82.11-1993								
INPUT/PROTECTION	INHERENT THERMAL PROTECTION								
OUTPUT/PROTECTION	-								
MIN. STATING TEMP.	-18°C (0°F)								
MAX. CASE TEMP.	90°C (194°F)								
TYPE "HL" APPROVAL	APPROVED FOR HAZARDOUS LOCATION								
APPROVALS/CLASS	UL/cUL LISTED, CLASS P, 1 OUTDOOR								
REMOTE MOUNTING	18 FT MAX. LEAD LENGTH, 18 AWG								

MECHANICAL DATA



WIRING DIAGRAMS

WIRE	BLACK	WHITE	RED	BLUE	YELLOW	BROWN
	25±1"	25±1"	46±1"	31±1"	-	-

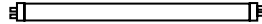


NOTE: This Ballast Must Be Grounded.

This Is An Original Product From Fulham Co., Inc.

Description: WORKHORSE Specifer Grade Series Electronic Ballast, Drop In Replacement
For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

This Ballast Will Operate Following Lamps:

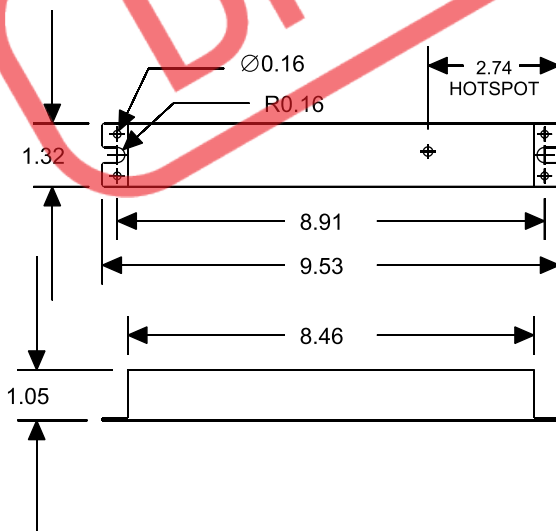


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30,
FBO28T8, FBO31T8, FBO32T8, F32T8, F40T8

ELECTRICAL DATA

INPUT VOLT	277V ± 10%, 50/60Hz									
LAMP WATTS/TYPE	F17T8	F25T8	F32T8/25	F32T8/28	F32T8/30	FBO28T8	FBO31T8	FBO32T8	F32T8	F40T8
LAMPS OPERATED	1 (ONE)									
INPUT WATTS	21	26	29	29	30	29	31	34	34	43
LINE CURRENT	0.09	0.10	0.11	0.11	0.12	0.11	0.13	0.11	0.13	0.16
POWER FACTOR	≥ 0.95	≥ 0.96	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97
BALLAST FACTOR	1.10	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.00
BALLAST EFFICACY FACTOR	5.20	4.01	3.67	3.67	3.60	3.67	3.40	3.15	3.15	2.30
THD	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%
CURRENT CREST FACTOR	≤ 1.7									
EMI/RFI COMPLIANCE	FCC PART 18-A (NON-CONSUMER)									
SOUND RATING	"A"									
BALLAST TYPE	INSTANT START									
VOLTAGE TRANSIENTS	ANSI C82.11-1993									
INPUT/PROTECTION	INHERENT THERMAL PROTECTION									
OUTPUT/PROTECTION	-									
MIN. STATING TEMP.	-18°C (0°F)									
MAX. CASE TEMP.	90°C (194°F)									
TYPE "HL" APPROVAL	APPROVED FOR HAZARDOUS LOCATION									
APPROVALS/CLASS	UL/cUL LISTED, CLASS P, 1 OUTDOOR									
REMOTE MOUNTING	18 FT MAX. LEAD LENGTH, 18 AWG									

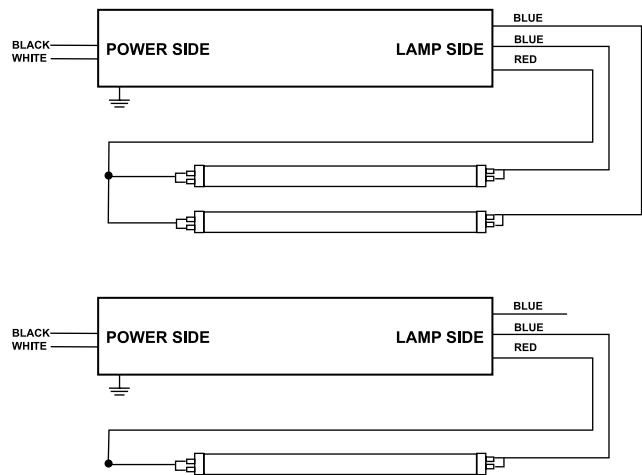
MECHANICAL DATA



Where : L = Length, W = Width, H = Height

WIRING DIAGRAMS

WIRE	BLACK	WHITE	RED	BLUE	YELLOW	BROWN
	25±1"	25±1"	46±1"	31±1"	-	-

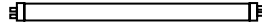


NOTE: This Ballast Must Be Grounded.

This Is An Original Product From Fulham Co., Inc.

Description: WORKHORSE Specifer Grade Series Electronic Ballast, Drop In Replacement
For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

This Ballast Will Operate Following Lamps:

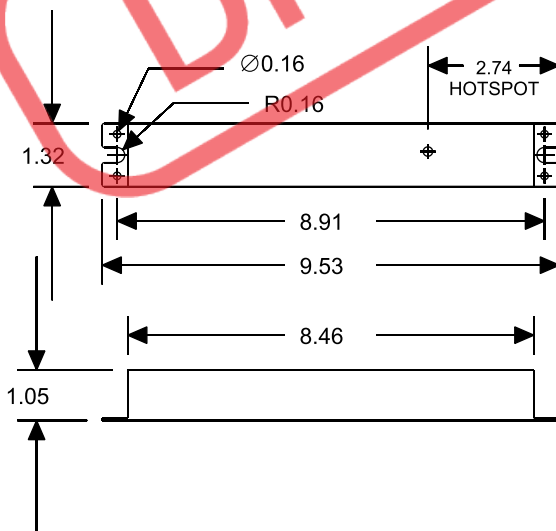


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30,
FBO28T8, FBO31T8, FBO32T8, F32T8, F40T8

ELECTRICAL DATA

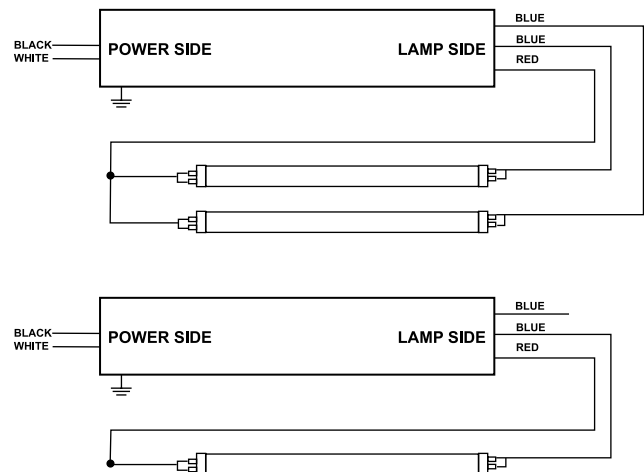
INPUT VOLT	277V ± 10%, 50/60Hz								
LAMP WATTS/TYPE	F17T8	F25T8	F32T8/25	F32T8/28	F32T8/30	FBO28T8	FBO31T8	FBO32T8	F32T8
LAMPS OPERATED	2 (TWO)								
INPUT WATTS	28	41	45	47	51	47	51	54	54
LINE CURRENT	0.11	0.16	0.17	0.18	0.19	0.18	0.19	0.20	0.20
POWER FACTOR	≥ 0.96	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97	≥ 0.97
BALLAST FACTOR	0.91	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
BALLAST EFFICACY FACTOR	3.20	2.14	1.95	1.88	1.70	1.85	1.70	1.60	1.60
THD	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 10%
CURRENT CREST FACTOR	≤ 1.7								
EMI/RFI COMPLIANCE	FCC PART 18-A (NON-CONSUMER)								
SOUND RATING	"A"								
BALLAST TYPE	INSTANT START								
VOLTAGE TRANSIENTS	ANSI C82.11-1993								
INPUT/PROTECTION	INHERENT THERMAL PROTECTION								
OUTPUT/PROTECTION	-								
MIN. STATING TEMP.	-18°C (0°F)								
MAX. CASE TEMP.	90°C (194°F)								
TYPE "HL" APPROVAL	APPROVED FOR HAZARDOUS LOCATION								
APPROVALS/CLASS	UL/cUL LISTED, CLASS P, 1 OUTDOOR								
REMOTE MOUNTING	18 FT MAX. LEAD LENGTH, 18 AWG								

MECHANICAL DATA



WIRING DIAGRAMS

WIRE	BLACK	WHITE	RED	BLUE	YELLOW	BROWN
	25±1"	25±1"	46±1"	31±1"	-	-



NOTE: This Ballast Must Be Grounded.