

This Is An Original Product From Fulham Co., Inc

Description: Sinehorse Series, High Frequency Electronic, Drop In Replacement for Magnetic, Parallel Wiring, Indoor and Outdoor Sign Applications

This Ballast Will Operate Following Lamps.

For 2, 3 or 4 x T12HO lamps (F36, F48, F60, F72, F84, F96, F120) TOTAL 6ft - 32ft No single lamp may be longer than 10ft No single lamp may be shorter than 3ft For 2, 3 OR 4 x T8HO lamps (F36, F48, F60, F72, F84, F96) TOTAL 6ft - 28ft

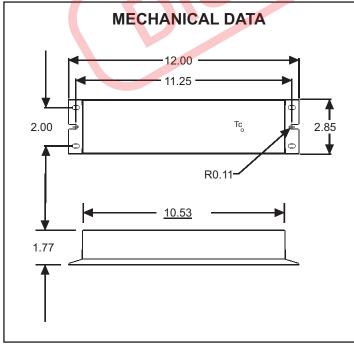
No single lamp may be longer than 8ft No single lamp may be shorter than 3ft

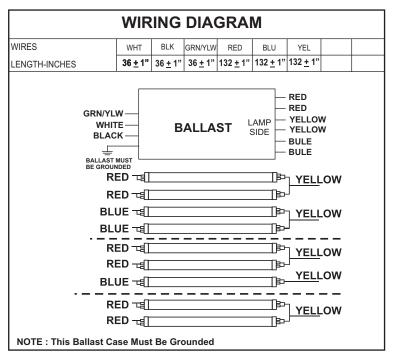
Not Higher Power Factor when using following lamp type: 2 x F36T12HO to F84T12HO, F36T8HO to F72T8HO 3 x F36T12HO to F60T12HO, F36T8HO to F48T8HO

4 x F36T12HO to F48T12HO, F36T8HO

ELECTRICAL DATA (120V APPLICATION)

INPUT VOLT: 120V ± 10%	, 50/60Hz								
LAMP WATTS/TYPE	F36T8HO	F36T8HO	F36T8HO	F36T12HO	F36T12HO	F36T12HO	F48T12HO	F48T12HO	F48T12HO
LAMPS OPERATED	2	3	4	2	3	4	2	3	4
INPUT WATTS	75	94	117	70	90	105	84	109	131
LINE CURRENT:	0.63	0.79	0.97	0.58	0.76	0.88	0.71	0.92	1.08
POWER FACTOR	0.99	0.99	0.99	0.98	0.99	0.99	0.99	0. <mark>9</mark> 9	0.99
BALLAST FACTOR	1.14	1.01	0.92	0.45	0.40	0.36	0.44	0.38	0.34
EFFICACY FACTOR	1.52	1.07	0.79	0.65	0.44	0.34	0.52	0.35	0.26
THD	7.7%	6.0%	5.3%	8.6%	6.3%	5.8%	7.0%	5.5%	4.7%
EMI/RFI COMPLIANCE			F	CC PART	18-A (Non-0	Consumer)			
SOUND RATING					"A"				
BALLAST TYPE				INS	TANT STAF	RT			
VOLTAGE TRANSIENTS				F	WSI 61.42				
INPUT/PROTECTION					FUSE				
MIN. OPERATING TEMP				-3	0°C (-22°F)			
MAX. CASE TEMP		70°C (158°C)							
APPROVALS/CLASS	1		UL/cUL	LISTED, CI	LASS "P",	Type 2 OU1	DOOR		





Fulham extends a limited warranty only to the original purchaser or to the first user for a period of 5 years from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham product catalog (www.fulham.com) Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described.

2012-355-1 rev A



This Is An Original Product From Fulham Co., Inc

Description: Sinehorse Series, High Frequency Electronic, Drop In Replacement for Magnetic, Parallel Wiring, Indoor and Outdoor Sign Applications

This Ballast Will Operate Following Lamps.

For 2, 3 or 4 x T12HO lamps (F36, F48, F60, F72, F84, F96, F120) TOTAL 6ft - 32ft No single lamp may be longer than 10ft No single lamp may be shorter than 3ft For 2, 3 OR 4 x T8HO lamps (F36, F48, F60, F72, F84, F96) TOTAL 6ft - 28ft

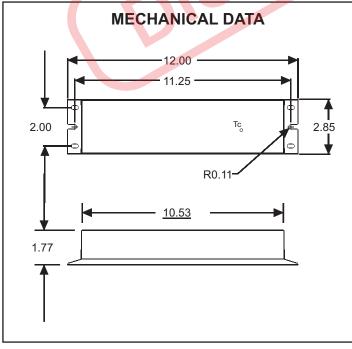
No single lamp may be longer than 8ft No single lamp may be shorter than 3ft

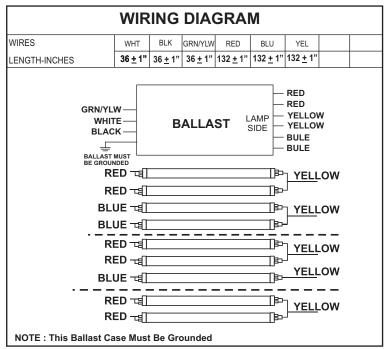
Not Higher Power Factor when using following lamp type: 2 x F36T12HO to F84T12HO, F36T8HO to F72T8HO 3 x F36T12HO to F60T12HO, F36T8HO to F48T8HO

4 x F36T12HO to F48T12HO, F36T8HO

ELECTRICAL DATA (120V APPLICATION)

INPUT VOLT: 120V ± 10%	INPUT VOLT: 120V ± 10%, 50/60Hz								
LAMP WATTS/TYPE	F60T8HO	F60T8HO	F60T8HO	F60T12HO	F60T12HO	F60T12HO	F72T8HO	F72T8HO	F72T8HO
LAMPS OPERATED	2	3	4	2	3	4	2	3	4
INPUT WATTS	119	159	191	105	137	162	139	188	230
LINE CURRENT:	0.98	1.33	1.60	0.87	1.14	1.35	1.17	1.56	1.92
POWER FACTOR	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0. <mark>9</mark> 9	0.99
BALLAST FACTOR	1.12	0.99	0.90	0.44	0.39	0.35	1.11	0.98	0.89
EFFICACY FACTOR	0.95	0.62	0.47	0.42	0.28	0.22	0.80	0.52	0.39
THD	5.2%	4.1%	3.5%	6.6%	5.4%	4.6%	5.0%	3.9%	3.0%
EMI/RFI COMPLIANCE			F	CC PART	18-A (Non-C	Consumer)			
SOUND RATING					"A"				
BALLAST TYPE				INS	TANT STAF	RT			
VOLTAGE TRANSIENTS				F	WSI 61.42				
INPUT/PROTECTION					FUSE				
MIN. OPERATING TEMP				-3	0°C (-22°F))			
MAX. CASE TEMP		70°C (158°C)							
APPROVALS/CLASS	10		UL/cUL	LISTED, CI	_ASS " P ",	Type 2 OUT	DOOR		





Fulham extends a limited warranty only to the original purchaser or to the first user for a period of <u>5 years</u> from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham product catalog (www.fulham.com)

Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described.

2012-355-2 rev A



This Is An Original Product From Fulham Co., Inc

Description: Sinehorse Series, High Frequency Electronic, Drop In Replacement for Magnetic, Parallel Wiring, Indoor and Outdoor Sign Applications

This Ballast Will Operate Following Lamps.

For 2, 3 or 4 x T12HO lamps (F36, F48, F60, F72, F84, F96, F120) TOTAL 6ft - 32ft No single lamp may be longer than 10ft No single lamp may be shorter than 3ft For 2, 3 OR 4 x T8HO lamps (F36, F48, F60, F72, F84, F96) TOTAL 6ft - 28ft

No single lamp may be longer than 8ft

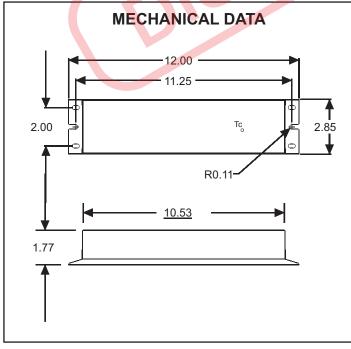
No single lamp may be shorter than 3ft

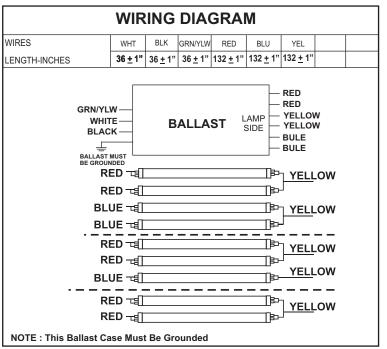
Not Higher Power Factor when using following lamp type: 2 x F36T12HO to F84T12HO, F36T8HO to F72T8HO 3 x F36T12HO to F60T12HO, F36T8HO to F48T8HO

4 x F36T12HO to F48T12HO, F36T8HO

ELECTRICAL DATA (120V APPLICATION)

INPUT VOLT: 120V ± 10%, 50/60Hz									
LAMP WATTS/TYPE	F72T12HO	F72T12HO	F72T12HO	F84T12HO	F84T12HO	F84T12HO	F96T12HO	F96T12HO	F96T12HO
LAMPS OPERATED	2	3	4	2	3	4	2	3	4
INPUT WATTS	121	161	195	139	183	221	155	205	251
LINE CURRENT:	1.01	1.34	1.62	1.16	1.52	1.83	1.28	1.71	2.10
POWER FACTOR	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0. <mark>9</mark> 9	0.99
BALLAST FACTOR	0.44	0.39	0.35	0.44	0.38	0.35	0.43	0.38	0.34
EFFICACY FACTOR	0.36	0.24	0.18	0.31	0.21	0.16	0.28	0.18	0.14
THD	5.5%	4.3%	3.3%	4.6%	3.7%	2.7%	4.7%	3.6%	2.0%
EMI/RFI COMPLIANCE			F	CC PART	18-A (Non-C	Consumer)			
SOUND RATING					"A"				
BALLAST TYPE				INS	TANT STAF	RT			
VOLTAGE TRANSIENTS				ŀ	WSI 61.42				
INPUT/PROTECTION					FUSE				
MIN. OPERATING TEMP				-3	0°C (-22°F)			·
MAX. CASE TEMP		70°C (158°C)							
APPROVALS/CLASS	1		UL/cUL	LISTED, CI	LASS P,	Type 2 OUT	TDOOR		





Fulham extends a limited warranty only to the original purchaser or to the first user for a period of 5 years from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham product catalog (www.fulham.com) Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described. 2012-355-3 rev A



This Is An Original Product From Fulham Co., Inc

Description: Sinehorse Series, High Frequency Electronic, Drop In Replacement for Magnetic, Parallel Wiring, Indoor and Outdoor Sign Applications

This Ballast Will Operate Following Lamps.

For 2, 3 or 4 x T12HO lamps (F36, F48, F60, F72, F84, F96, F120) TOTAL 6ft - 32ft No single lamp may be longer than 10ft No single lamp may be shorter than 3ft For 2, 3 OR 4 x T8HO lamps (F36, F48, F60, F72, F84, F96) TOTAL 6ft - 28ft

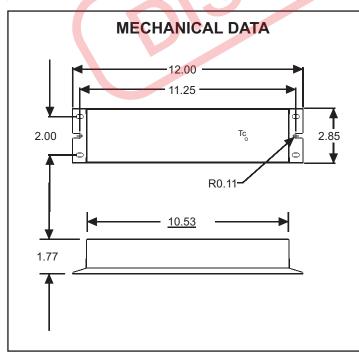
No single lamp may be longer than 8ft No single lamp may be shorter than 3ft

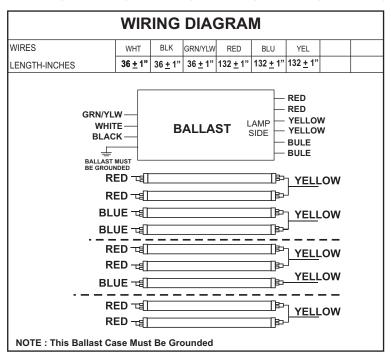
Not Higher Power Factor when using following lamp type: 2 x F36T12HO to F84T12HO, F36T8HO to F72T8HO 3 x F36T12HO to F60T12HO, F36T8HO to F48T8HO

4 x F36T12HO to F48T12HO, F36T8HO

ELECTRICAL DATA (120V APPLICATION)

INPUT VOLT: 120V ± 10%	, 50/60Hz								
LAMP WATTS/TYPE	F96T8HO	F96T8HO	F120T12HO	F120T12HO					
LAMPS OPERATED	2	3	2	3					
INPUT WATTS	176	240	191	253					
LINE CURRENT:	1.48	2.00	1.60	2.12					
POWER FACTOR	0.99	0.99	0.99	0.99					
BALLAST FACTOR	1.08	0.95	0.42	0.37					
EFFICACY FACTOR	0.61	0.40	0.22	0.15					
THD	3.9%	2.4%	3.3%	1.8%					
EMI/RFI COMPLIANCE			F	CC PART 1	8-A (Non-0	Consumer			
SOUND RATING					"A"				
BALLAST TYPE				INS	TANT STAF	RT			
VOLTAGE TRANSIENTS				A	NSI 61.42				
INPUT/PROTECTION					FUSE				
MIN. OPERATING TEMP				-3	0°C (-22°F)			
MAX. CASE TEMP		70°C (158°C)							
APPROVALS/CLASS	10		UL/cUL	LISTED, CL	ASS " P ",	Type 2 OU	TDOOR		





Fulham extends a limited warranty only to the original purchaser or to the first user for a period of <u>5 years</u> from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham product catalog (www.fulham.com)

Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described.

2012-355-4 rev A



This Is An Original Product From Fulham Co., Inc

Description: Sinehorse Series, High Frequency Electronic, Drop In Replacement for Magnetic, Parallel Wiring, Indoor and Outdoor Sign Applications

This Ballast Will Operate Following Lamps.

For 2, 3 or 4 x T12HO lamps (F36, F48, F60, F72, F84, F96, F120) TOTAL 6ft - 32ft No single lamp may be longer than 10ft No single lamp may be shorter than 3ft For 2, 3 OR 4 x T8HO lamps (F36, F48, F60, F72, F84, F96) TOTAL 6ft - 28ft

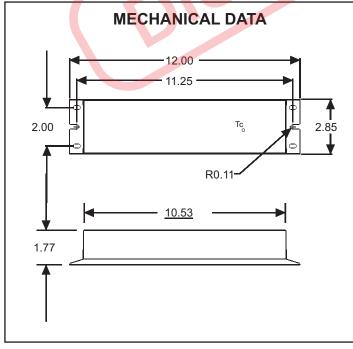
No single lamp may be longer than 8ft No single lamp may be shorter than 3ft

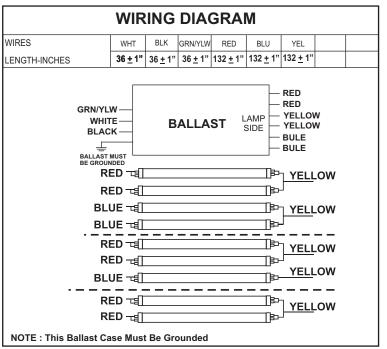
Not Higher Power Factor when using following lamp type: 2 x F36T12HO to F84T12HO, F36T8HO to F72T8HO 3 x F36T12HO to F60T12HO, F36T8HO to F48T8HO

4 x F36T12HO to F48T12HO, F36T8HO

ELECTRICAL DATA (277V APPLICATION)

INPUT VOLT: 277V ± 10%	, 50/60Hz								
LAMP WATTS/TYPE	F36T8HO	F36T8HO	F36T8HO	F36T12HO	F36T12HO	F36T12HO	F48T12HO	F48T12HO	F48T12HO
LAMPS OPERATED	2	3	4	2	3	4	2	3	4
INPUT WATTS	76	97	116	70	90	105	84	108	130
LINE CURRENT:	0.36	0.43	0.48	0.35	0.40	0.45	0.39	0.46	0.53
POWER FACTOR	0.75	0.82	0.86	0.72	0.80	0.84	0.78	0.84	0.88
BALLAST FACTOR	1.15	1.01	0.91	0.45	0.40	0.36	0.44	0.38	0.34
EFFICACY FACTOR	1.51	1.04	0.79	0.65	0.44	0.34	0.52	0.35	0.26
THD	22.6%	19.7%	17.5%	24.6%	18.6%	17.5%	22.1%	20.8%	17.3%
EMI/RFI COMPLIANCE			F	CC PART	18-A (Non-0	Consumer)			
SOUND RATING					"A"				
BALLAST TYPE				INS	TANT STAF	RT			
VOLTAGE TRANSIENTS				F	WSI 61.42				
INPUT/PROTECTION					FUSE				
MIN. OPERATING TEMP				-3	0°C (-22°F)			
MAX. CASE TEMP		70°C (158°C)							
APPROVALS/CLASS			UL /cUL	LISTED, CI	LASS P ,	Type 2 OU7	rdoor		





Fulham extends a limited warranty only to the original purchaser or to the first user for a period of <u>5 years</u> from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham product catalog (www.fulham.com)

Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described.

2012-355-5 rev A



This Is An Original Product From Fulham Co., Inc

Description: Sinehorse Series, High Frequency Electronic, Drop In Replacement for Magnetic, Parallel Wiring, Indoor and Outdoor Sign Applications

This Ballast Will Operate Following Lamps.

For 2, 3 or 4 x T12HO lamps (F36, F48, F60, F72, F84, F96, F120) TOTAL 6ft - 32ft No single lamp may be longer than 10ft No single lamp may be shorter than 3ft For 2, 3 OR 4 x T8HO lamps (F36, F48, F60, F72, F84, F96) TOTAL 6ft - 28ft

No single lamp may be longer than 8ft

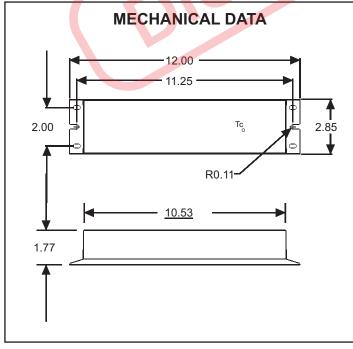
No single lamp may be shorter than 3ft

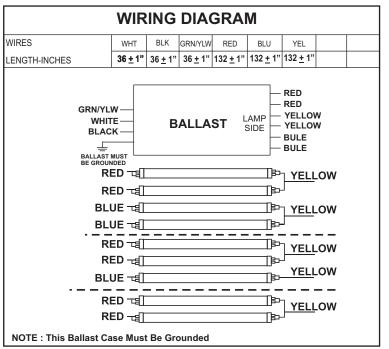
Not Higher Power Factor when using following lamp type: 2 x F36T12HO to F84T12HO, F36T8HO to F72T8HO 3 x F36T12HO to F60T12HO, F36T8HO to F48T8HO

4 x F36T12HO to F48T12HO, F36T8HO

ELECTRICAL DATA (277V APPLICATION)

INPUT VOLT: 277V ± 10%	, 50/60Hz								
LAMP WATTS/TYPE	F60T8HO	F60T8HO	F60T8HO	F60T12HO	F60T12HO	F60T12HO	F72T8HO	F72T8HO	F72T8HO
LAMPS OPERATED	2	3	4	2	3	4	2	3	4
INPUT WATTS	118	156	187	103	135	160	138	185	224
LINE CURRENT:	0.49	0.61	0.72	0.44	0.55	0.62	0.55	0.71	0.84
POWER FACTOR	0.87	0.92	0.94	0.84	0.89	0.92	0.90	0.94	0.96
BALLAST FACTOR	1.12	0.99	0.90	0.44	0.39	0.35	1.11	0.98	0.89
EFFICACY FACTOR	0.96	0.63	0.48	0.43	0.29	0.22	0.81	0.53	0.40
THD	17.0%	13.6%	12.5%	18.7%	15.7%	14.3%	15.2%	12.3%	10.8%
EMI/RFI COMPLIANCE			F	CC PART	18-A (Non-C	Consumer)			
SOUND RATING					"A"				
BALLAST TYPE				INS	TANT STAF	RT			
VOLTAGE TRANSIENTS				P	NSI 61.42				
INPUT/PROTECTION					FUSE				
MIN. OPERATING TEMP				-3	0°C (-22°F))			
MAX. CASE TEMP				70)°C (158°C)			
APPROVALS/CLASS	16		UL/cUL	LISTED, CI	_ASS "P",	Type 2 OU1	DOOR		





Fulham extends a limited warranty only to the original purchaser or to the first user for a period of 5 years from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham product catalog (www.fulham.com) Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described.

2012-355-6 rev A



This Is An Original Product From Fulham Co., Inc

Description: Sinehorse Series, High Frequency Electronic, Drop In Replacement for Magnetic, Parallel Wiring, Indoor and Outdoor Sign Applications

This Ballast Will Operate Following Lamps.

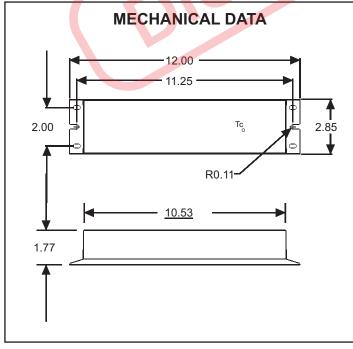
For 2, 3 or 4 x T12HO lamps (F36, F48, F60, F72, F84, F96, F120) TOTAL 6ft - 32ft No single lamp may be longer than 10ft No single lamp may be shorter than 3ft For 2, 3 OR 4 x T8HO lamps (F36, F48, F60, F72, F84, F96) TOTAL 6ft - 28ft

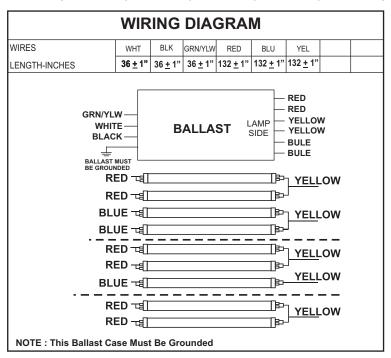
No single lamp may be longer than 8ft No single lamp may be shorter than 3ft

Not Higher Power Factor when using following lamp type: 2 x F36T12HO to F84T12HO, F36T8HO to F72T8HO 3 x F36T12HO to F60T12HO, F36T8HO to F48T8HO 4 x F36T12HO to F48T12HO, F36T8HO

ELECTRICAL DATA (277V APPLICATION)

INPUT VOLT: 277V ± 10%	INPUT VOLT: 277V ± 10%, 50/60Hz								
LAMP WATTS/TYPE	F72T12HO	F72T12HO	F72T12HO	F84T12HO	F84T12HO	F84T12HO	F96T12HO	F96T12HO	F96T12HO
LAMPS OPERATED	2	3	4	2	3	4	2	3	4
INPUT WATTS	120	158	191	137	180	216	153	201	245
LINE CURRENT:	0.49	0.62	0.73	0.55	0.69	0.81	0.61	0.78	0.93
POWER FACTOR	0.87	0.92	0.94	0.90	0.93	0.95	0.92	0. <mark>9</mark> 5	0.97
BALLAST FACTOR	0.44	0.39	0.35	0.44	0.38	0.35	0.43	0.38	0.34
EFFICACY FACTOR	0.37	0.25	0.18	0.32	0.21	0.16	0.28	0.19	0.14
THD	17.2%	14.0%	11.0%	15.8%	12.9%	9.7%	14.8%	11.1%	9.9%
EMI/RFI COMPLIANCE			F	CC PART	18-A (Non-C	Consumer)			
SOUND RATING					"A"				
BALLAST TYPE				INS	TANT STAF	RT			
VOLTAGE TRANSIENTS				ŀ	WSI 61.42				
INPUT/PROTECTION					FUSE				
MIN. OPERATING TEMP				-3	0°C (-22°F)			
MAX. CASE TEMP		70°C (158°C)							
APPROVALS/CLASS	1		UL/cUL	LISTED, CI	LASS " P ",	Type 2 OUT	TDOOR		





Fulham extends a limited warranty only to the original purchaser or to the first user for a period of <u>5 years</u> from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham product catalog (www.fulham.com)

Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described.

2012-355-7 rev A



This Is An Original Product From Fulham Co., Inc

Description: Sinehorse Series, High Frequency Electronic, Drop In Replacement for Magnetic, Parallel Wiring, Indoor and Outdoor Sign Applications

This Ballast Will Operate Following Lamps.

For 2, 3 or 4 x T12HO lamps (F36, F48, F60, F72, F84, F96, F120) TOTAL 6ft - 32ft No single lamp may be longer than 10ft No single lamp may be shorter than 3ft For 2, 3 OR 4 x T8HO lamps (F36, F48, F60, F72, F84, F96) TOTAL 6ft - 28ft

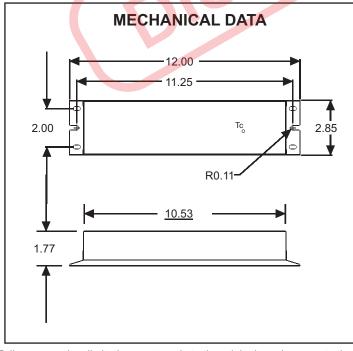
No single lamp may be longer than 8ft No single lamp may be shorter than 3ft

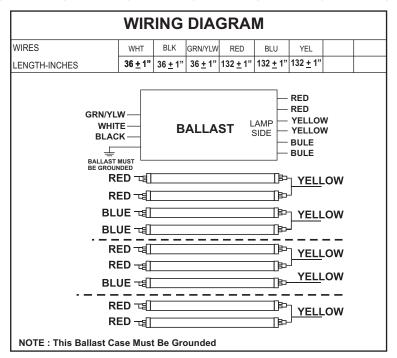
Not Higher Power Factor when using following lamp type: 2 x F36T12HO to F84T12HO, F36T8HO to F72T8HO 3 x F36T12HO to F60T12HO, F36T8HO to F48T8HO

4 x F36T12HO to F48T12HO, F36T8HO

ELECTRICAL DATA (277V APPLICATION)

INPUT VOLT: 277V ± 10%	, 50/60Hz					-	-	•	•
LAMP WATTS/TYPE	F96T8HO	F96T8HO	F120T12HO	F120T12HO					
LAMPS OPERATED	2	3	2	3					
INPUT WATTS	175	235	188	247					
LINE CURRENT:	0.69	0.90	0.73	0.94					
POWER FACTOR	0.94	0.96	0.94	0.97					
BALLAST FACTOR	1.08	0.95	0.42	0.37					
EFFICACY FACTOR	0.62	0.41	0.23	0.15					
THD	12.9%	9.7%	11.6%	8.7%					
EMI/RFI COMPLIANCE			F	CC PART 1	18-A (Non-0	Consumer		-	•
SOUND RATING					"A"				
BALLAST TYPE				INS	TANT STAF	RT			
VOLTAGE TRANSIENTS				A	NSI 61.42				
INPUT/PROTECTION					FUSE				
MIN. OPERATING TEMP				-3	0°C (-22°F)			
MAX. CASE TEMP		70°C (158°C)							
APPROVALS/CLASS	16		UL/cUL	LISTED, CL	ASS " P ",	Type 2 OU	TDOOR		





Fulham extends a limited warranty only to the original purchaser or to the first user for a period of <u>5 years</u> from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham product catalog (www.fulham.com)

Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described.

2012-355-8 rev A