



INSTALLATION SHEET
FH11-UNV-750L-CEC-A



IMPORTANT SAFE PRACTICES

PLEASE READ CAREFULLY AND FOLLOW ALL INSTRUCTIONS FOR YOUR OWN SAFETY
When using electrical equipment and this lighting device basic safety precaution should be followed at all times including but not limited to the following:

IMPORTANT: An un-switched AC power source of 120VAC or 277VAC is required.

WARNING: This emergency ballast has more than one power supply connection point, to reduce the risk of electric shock, disconnect both the normal and emergency power feed supplies and inverter connector of the emergency ballast before servicing.

WARNING: To prevent high voltage from being present on output leads (red & yellow) prior to installation, inverter connector must be open. Do not join inverter connector until installation is complete and AC power is supplied to the emergency ballast.

CAUTION: The emergency ballast and AC ballast must be fed from the same branch circuit, reference wiring diagram for applicable lamp and ballast configuration.

CAUTION: This emergency ballast is designed for factory or field installation in either the ballast channel, or on top of the indoor luminaire, NOT suitable for use in air handling heated air outlets, outdoor, wet or hazardous locations. Do not install emergency ballast near gas or electric heaters.

Make sure all electrical connections conform to the National Electrical Code and all applicable local regulations.

CAUTION: The battery is sealed, do not attempt to service the battery, it is not replaceable. Battery is rechargeable Ni-Cad type and must be recycled or disposed of properly.

INTENDED USE

This device is designed for use in luminaires listed for indoor damp, or dry locations.

Do not use this emergency ballast with accessory equipment other than recommended by manufacturer; failure to follow this may cause an unsafe condition. Servicing should only be performed by qualified service personnel.

Do not use this emergency ballast for other than intended use.

This device is designed for use with:

Lamps Suitable for use in 0°C - 50°C ambient:

ONE F54T5HO, F72T8HO, FT50W, FT40W, F84T12HO, F39T5HO, F28T5, F60T12SL, F60T12HO, CFTR42W, 40WCRT9, 2D38W, CFTR32W, F70T8, FT55W, F40T8, F60T8HO, F40T12, F96T12SL, FT36/39W, F58T8, CFQ26W, 22WCRT5, 55WCRT5, F48T12HO, F32T8(30W), F32T8, F32T8(28W), F21T5, F24T5HO, 32WCRT9, 2D28W, F14T5, FT24/27W, F32T8(25W), F25T8

TWO FT24/27W, F40T12, F25T8, CFTR18W, 2D28W, FT18W, F30T12, F17T8, F20T12,

Lamps Suitable for use in 15°C - 50°C ambient:

ONE F96T12HO, F96T12HO, F54T5HO, F35T5

TWO CFQ13W, CFTR26W, CFTR13W, 2D38W

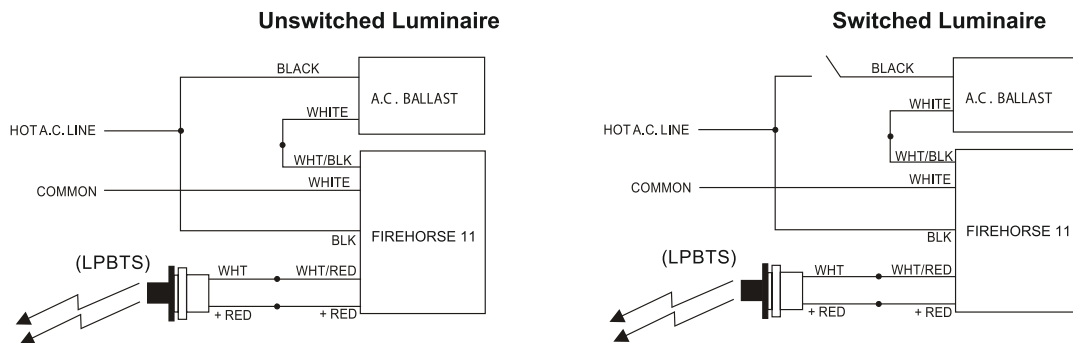
WARRANTY: Fulham Co., Inc. extends limited warranty only to the original purchaser or to the first user for the period of 5 years from the date of manufacture as indicated by the date code stamped on each product and when properly installed and under normal conditions of use. For additional warranty guide line, please refer to our Complete Product Catalog (www.fulham.com) OR call Customer Service at 1-323-779-2980. Due to a program of continuous improvement, Fulham Co., Inc. reserves the right to make any variation in design or construction to the equipment described.

GENERAL INSTRUCTIONS

CAUTION: FireHorse emergency ballast and AC ballast must be fed from the same branch circuit, **120VAC OR 277VAC UNSWITCHED POWER SOURCE IS REQUIRED WITHOUT EXCEPTION.**

CAUTION: FireHorse emergency ballast can be used to add emergency lighting with or without an AC ballast and with most fluorescent luminaire without affecting normal luminaire operation. FireHorse emergency ballasts will operate with either a switched or un-switched luminaire. **IMPORTANT:** If a switched luminaire is used, an **un-switched hot lead** must be connected to the emergency ballast to ensure the ballast remains in an uninterrupted charge condition while primary power source is active. Reference Illustration 1 wiring diagram for appropriate option

Illustration 1



REMOTE EMERGENCY BALLAST: FireHorse emergency ballast can be mounted in the ballast compartment, on top of the luminaire or remote.

IMPORTANT: When mounting the emergency ballast at a remote location the emergency ballast must be installed within one half (1/2) distance of the recommended AC ballast remote specification; reference appropriate AC remote location specification before installing emergency ballast. The maximum remote distance for the emergency ballast is fifty feet (50'); the shorter of the two distances is recommended for optimum emergency ballast operation when used with AC ballast.

REMOTE (OPTIONAL) TEST SWITCH PLATE: It is recommended the remote test switch plate (Optional) be mounted within fifty feet (50') of the luminaire and is subject to NEC and applicable local electrical code.

IMPORTANT: Indicator (LED light) illuminated indicates battery in charge mode when AC power is applied. It is recommended and required by applicable code to test emergency ballast to ensure proper function of the system; push the test switch for thirty (30) seconds every 30 days to ensure the emergency ballast is functioning as evidenced by reduced illumination of one or two lamps. Conduct a ninety minute (90) discharge test one time (1) per year; either one or two lamps should operate at reduced illumination for a minimum of ninety minutes (90).

ASSEMBLY and FIELD INSTALLATION WIRING:

WARNING: AC power must be off before proceeding with assembly or installation of emergency ballast. Select the correct wiring diagram for one or two lamp operation and AC ballast before assembly and wiring of the emergency ballast

WARNING: Inverter connector has to be opened (not connected) for preventing high voltage on output leads (Red and Yellow). Wait until all the wiring or installation process is completed and AC is supplying power to the emergency ballast then join the inverter connector.

TESTING SYSTEM: The emergency battery requires a charge minimum of one (1) hour before testing the circuit. A full charge requires twenty four (24) hours.

GENERAL INSTRUCTIONS

1. MOUNTING THE FIREHORSE 11

Remove the ballast channel cover. Mount the FIREHORSE-11 in the ballast channel at least 1/2" away from A.C. Ballast(s).

2. INSTALLING THE LIGHTED PUSH BUTTON TEST SWITCH (LPBTS)

Recessed Troffer Luminaire - Select a convenient location with proper clearance and drill or punch a 7/8" hole (1/2" knock out). Insert the 7/8" bushing into the hole. Push the plastic tube through the bushing. Route the leads of the LPBTS through the plastic tube. Connect the LED wires from the unit to the LPBTS (Red to Red, White to White/Red). Push the entire assembly back into the tube until the lens collar rests against the plastic tube. The plastic tube should be adjusted so that the LPBTS is within 1/4" of the luminaire lens. The LPBTS must be visible after installation. Refer to illustration 2.

Strip Luminaire - select a convenient location on the Luminaire so the LPBTS can be seen after installation. Allow for proper clearance inside the luminaire and drill or punch a 1/2" hole. Remove the nut from the LPBTS. Push the LPBTS housing into the 1/2" hole and secure with the nut. Connect the LED wires from the LPBTS (Red to Red, White to White/Red). Refer to Illustration 3.

Illustration 2

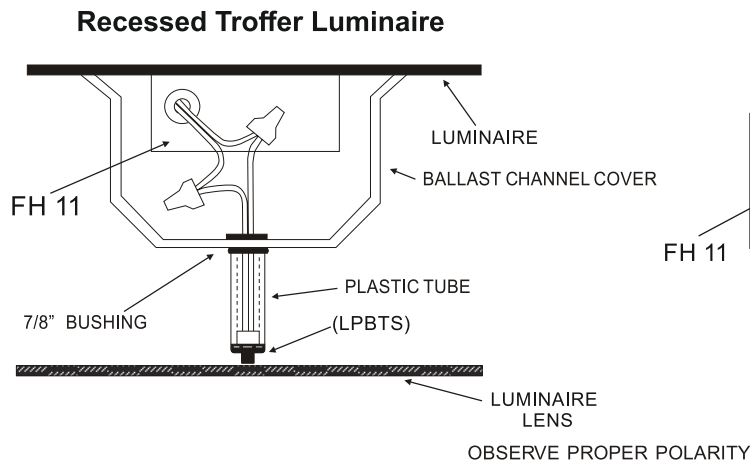
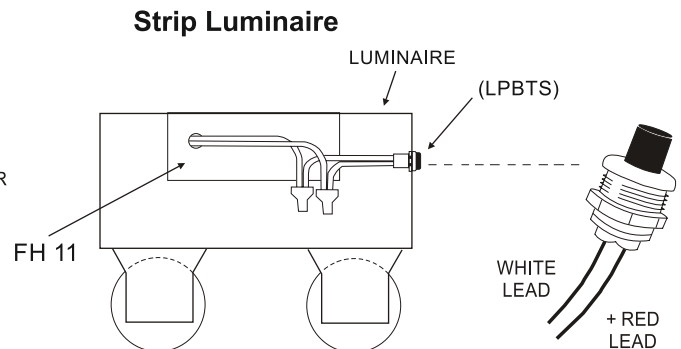


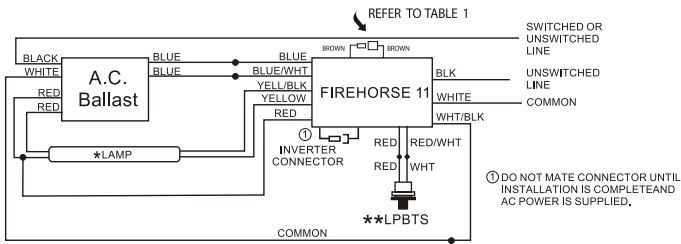
Illustration 3



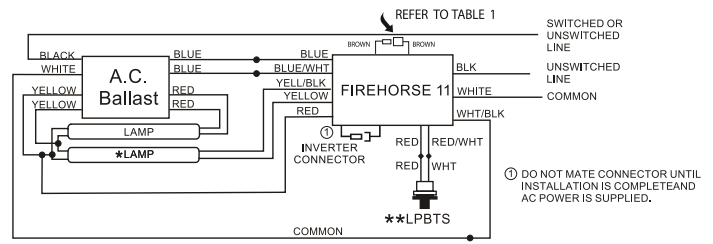
WIRING DIAGRAMS

EMERGENCY BALLAST AND AC BALLAST MUST BE FED FROM THE SAME BRANCH CIRCUIT
TYPICAL SCHEMATICS ONLY. MAY BE USED WITH OTHER BALLASTS. CONSULT THE FACTORY FOR OTHER WIRING DIAGRAMS.

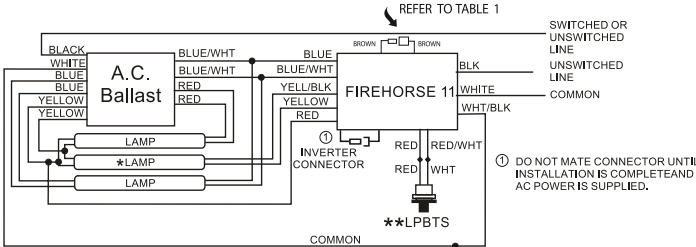
1. ONE (1) LAMP RAPID START AC BALLAST



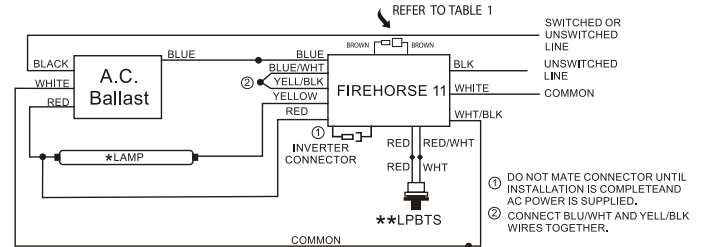
2. TWO (2) LAMPS RAPID START AC BALLAST



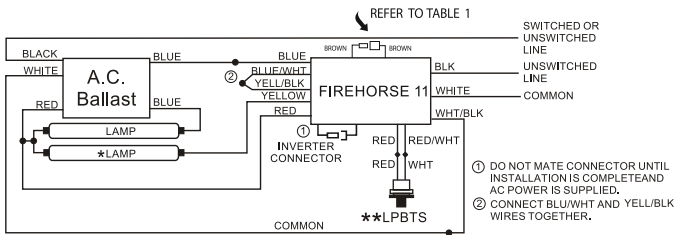
3. THREE (3) LAMPS RAPID START AC BALLAST



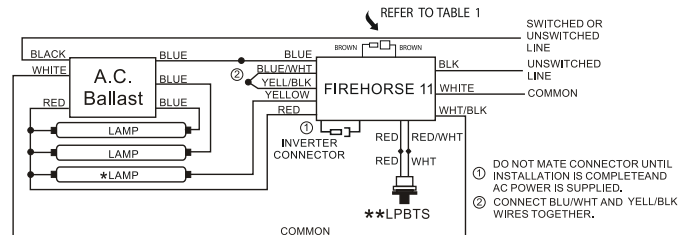
4. ONE (1) LAMP INSTANT START AC BALLAST



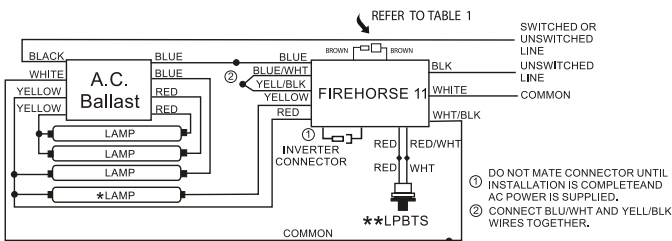
5. TWO (2) LAMPS INSTANT START AC BALLAST



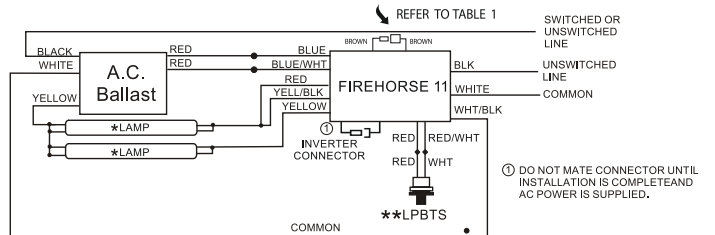
6. THREE (3) LAMPS INSTANT START AC BALLAST



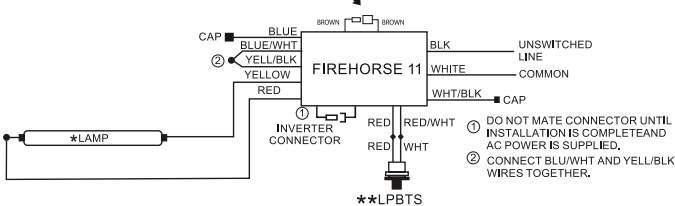
7. FOUR (4) LAMPS INSTANT START AC BALLAST



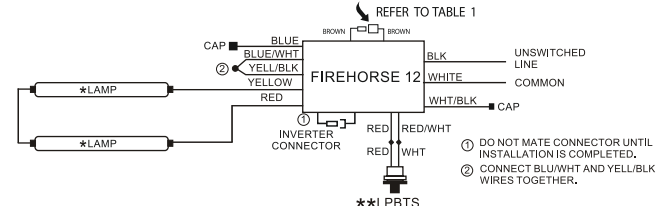
8. TWO (2) LAMPS INSTANT START AC BALLAST TWO LAMPS IN EMERGENCY



9. ONE (1) LAMP WITHOUT AC BALLAST EMERGENCY ONLY



10. TWO (2) LAMPS WITHOUT AC BALLAST TWO LAMPS IN EMERGENCY



*AC / EMERGENCY

**LIGHTED PUSH BUTTON TEST SWITCH (LPBTS)

NOTE: THIS PRODUCT WILL NOT OPERATE MORE THAN ONE LAMP IN BATTERY (EM) MODE

USE PROPER WIRENUTS TO CAP UNUSED LEADS WITH A RAPID/PROGRAM START BALLAST.

WIRING DIAGRAMS

TABLE 1

Model Designation	Lamp Designation	WATTS (W)	# of lamps	Brown Connector
FH11-UNV-750L-CEC	F96T12HO	110	1	Open
	F96T12HO	95	1	Open
	F54T5HO	54	1	Closed
	F35T5	35	1	Open
	F54T5HO	49	1	Closed
	F72T8HO	65	1	Open
	FT50W	50	1	Closed
	FT40W	40	1	Closed
	F84T12HO	100	1	Open
	F39T5HO	39	1	Closed
	F28T5	28	1	Open
	F60T12SL	50	1	Closed
	F60T12HO	75	1	Closed
	CFTR42W	42	1	Closed
	40WCRT9	40	1	Closed
	2D38W	38	1	Open
	CFTR32W	32	1	Closed
	F70T8	70	1	Open
	FT55W	55	1	Open
	F40T8	40	1	Open
	F60T8HO	55	1	Open
	F40T12	40	1	Closed
	F96T12SL	60	1	Open
	FT36/39W	36/39	1	Closed
	F58T8	58	1	Open
	CFQ26W	26	1	Closed
	22WCRT5	22	1	Closed
	55WCRT5	55	1	Open
	F48T12HO	60	1	Closed
	F32T8(30W)	30	1	Open
	F32T8	32	1	Open
	F32T8(28W)	28	1	Open
	F21T5	21	1	Closed
F24T5HO	24	1	Closed	
32WCRT9	32	1	Closed	
2D28W	28	1	Open	
F14T5	14	1	Closed	
FT24/27W	24/27	1	Closed	
F32T8(25W)	25	1	Open	
F25T8	25	1	Open	
FH11-UNV-750L-CEC	CFQ13W	13	2	Closed
	CFTR26W	26	2	Open
	CFTR13W	13	2	Closed
	2D38W	38	2	Open
	FT24/27W	24/27	2	Closed
	F40T12	40	2	Open
	F25T8	25	2	Open
	CFTR18W	18	2	Open
	2D28W	28	2	Open
	FT18W	18	2	Closed
	F30T12	30	2	Open
	F17T8	17	2	Open
F20T12	20	2	Open	