



WHELEN AEROSPACE TECHNOLOGIES

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Installation Guide/ICA:

90797()-series

Model(s) 9079703, 9079704

P/N(s): 01-0790797-03, 01-0790797-04

Power Supply Unit (PSU) Assembly

TSO-C30c
TYPE I, II & III;
APPROVED

TSO-C96a
CLASS II;
APPROVED

The conditions and tests required for TSO approval of this article are minimum performance standards. Those installing this article either on or within a specific type or class of aircraft must determine that the aircraft installation conditions are within the TSO standards which include any accepted integrated non-TSO functions. TSO articles and any accepted integrated non-TSO function(s) must have separate approval for installation in an aircraft. The article may be installed only according to 14 CFR part 43 or the applicable airworthiness requirements.

WARNING: This product can expose you to chemicals including Lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SPECIFICATIONS: 3/1 PSU

Nominal Operational Voltage:..... 28 VDC
(Operation from 22-31 VDC)
Nominal with 90792()3
Position Light Current..... 0.2 Amps
White Anti-Collision Current (Pulse@.25 Sec) 3.0 Amps
White Anti-Collision Current (Avg.)..... 0.56 Amps
White Anti-Collision Flash Rate 45 ±5 / Min.
White Anti-Collision On Time..... 250 mSec
White Anti-Collision Flash Rate
@30% Intensity 45 ±5 / DFPM

SPECIFICATIONS: 4/1 PSU

Nominal Operational Voltage:..... 28 VDC
(Operation from 22-31 VDC)
Nominal with 90792()4
Position Light Current..... 0.2 Amps
White Anti-Collision Current (Pulse@.25 Sec) 3.0 Amps
White Anti-Collision Current (Avg.)..... 0.56 Amps
White Anti-Collision Flash Rate 45 ±5 / Min.
White Anti-Collision On Time..... 250 mSec
White Anti-Collision Flash Rate
@30% Intensity 45 ±5 / DFPM
Red Anti-Collision Current (Pulse@.25 Sec)... 1.5 Amps
Red Anti-Collision Current (Avg.)..... 0.28 Amps
Red Anti-Collision Flash Rate 45 ±5 / Min.
Red Anti-Collision On Time 250 mSec
Red Anti-Collision Flash Rate
@30% Intensity 45 ±5 / DFPM

The White and Red ACL will flash in an alternate pattern if both are on.

The White Anti-collision light and position light must be in the 100% mode to comply with the TSO standards.

The Red Anti-collision light is a non-TSO function.

Selecting the 30% Anti-collision function introduces a short secondary flash, as shown in the timing diagram. This acts as a visual indicator that the Anti-collision light mode is not TSO compliant.

EQUIPMENT LIMITATIONS: An approved lighting system consists of two power supply units (PSU), one located on each wingtip. A separate light head such as model 90792() is required for each power supply unit.

Certain types of installations may require additional testing.

The Anti-Collision light is not TSO compliant in the 30% reduced light mode. The position light is not TSO compliant in the 5% or 20% reduced light mode.

AIRWORTHINESS LIMITATIONS: The Airworthiness Limitations section is FAA approved and specifies inspections and other maintenance required under §43.16 and §91.403 of the Federal Aviation Regulations, unless an alternative program has been approved.

No airworthiness limitations are associated with the installation of the power supply assembly.

CONTINUED AIRWORTHINESS: If any bank of LEDs fail the lighthouse assembly should be checked. If the assembly checks good, replace the PSU.

Note: The anti-collision light will automatically shut off after 20 flashes if a failure of a bank is detected.

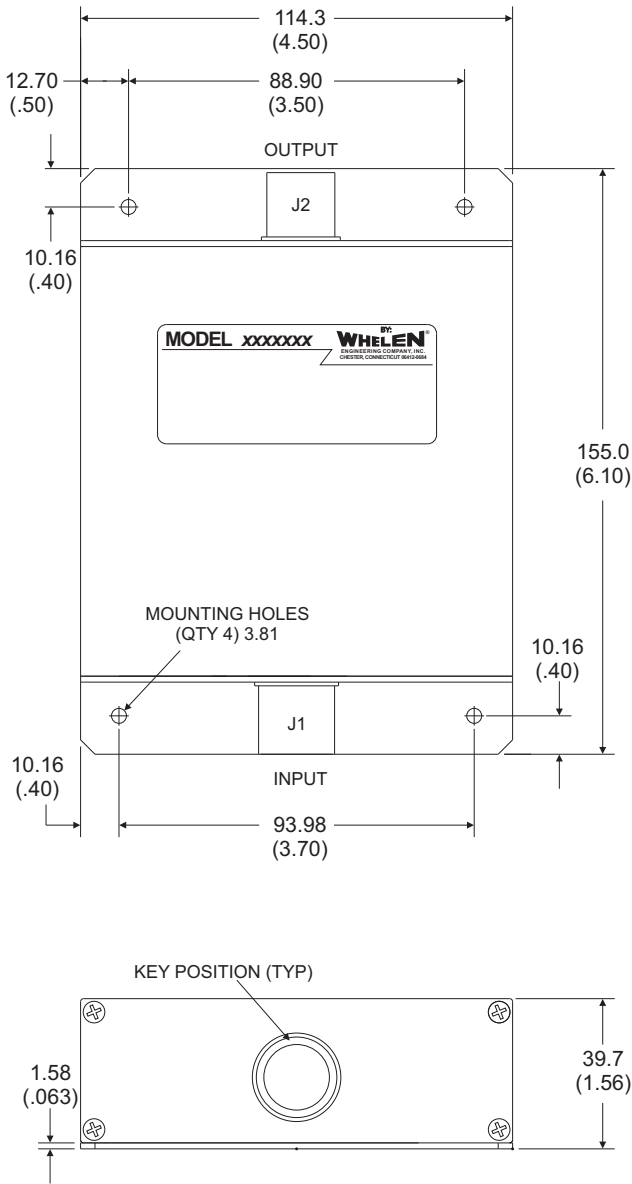
Note: To reduce eye strain use an optical filter such as dark glasses or a blue covering dome during LED inspection.

INSTALLATION PROCEDURES: The following information provides guidelines for the installation of a Whelen Power supply unit. Please refer to the OEM manual for your aircraft for specific removal and installation instructions.

1. Choose the appropriate light assembly.
2. Using the mounting detail information provided, prepare the aircraft for means to secure the light assembly.
3. Using the appropriate hardware install the PSU to the aircraft.
4. Connect the inputs according to the chart shown. Connect the power lead to an appropriately sized breaker. Connections to be in accordance with FAA approved methods. Be sure that all leads are clear of any obstructions and secured as required.

Note: SYNC is a low power, control signal that causes the anti-collision lights to flash at the same time. If synchronization is not necessary, the connection may be left open.

5. Check all avionics systems for interference from this installation.
6. A flight check should be performed by a properly certified pilot.
7. If required, update aircraft records utilizing FAA Field Approval (Form 337) or equivalent.



Model 9079703

J1 D38999/20FC-8PN			
A	ACL 28VDC	WHITE ACL POWER 100%	28VDC POWER
B	30% SELECT	WHITE ACL 30% INPUT	GROUND = DIM
C	ACL GROUND	WHITE ACL RETURN	
D	SYNC	SYNCHRONIZE	5V LOGIC
E	POS 28VDC	POSITION LIGHT 100%	28VDC POWER
F	20% SELECT	POSITION LIGHT 20%	GROUND = DIM
G	5% SELECT	POSITION LIGHT 5%	GROUND = DIM
H	POS GROUND	POSITION LIGHT RETURN	

J2 D38999/20FB99SN	
A	AC1 WHITE ACL CATHODE AFT
B	AC2 WHITE ACL CATHODE FWD
C	NC NO CONNECTION
D	ACV+ WHITE ACL ANODE
E	CTNL SYNC CONTROL
F	POSV+ POSITION LIGHT ANODE
G	POS RETURN POSITION LIGHT CATHODE

Model 9079704

J1 D38999/20FD15PN			
A	ACL 28VDC	WHITE ACL POWER 100%	28VDC POWER
B	30% SELECT	WHITE ACL 30% INPUT	GROUND = DIM
C	ACL GROUND	ACL RETURN	
D	SYNC	SYNCHRONIZE	5V LOGIC
E	POS 28VDC	POSITION LIGHT 100%	28VDC POWER
F	20% SELECT	POSITION LIGHT 20%	GROUND = DIM
G	5% SELECT	POSITION LIGHT 5%	GROUND = DIM
H	POS GROUND	POSITION LIGHT RETURN	
J	RED ACL 28VDC	RED ACL POWER 100%	28VDC POWER
K	RED 30% SELECT	RED ACL 30% INPUT	GROUND = DIM
L	RED ACL GROUND	ACL RETURN	
M	NC	NO CONNECTION	
N	NC	NO CONNECTION	
P	NC	NO CONNECTION	
R	NC	NO CONNECTION	

J2 D38999/20FC-8SN		
A	AC1	WHITE ACL CATHODE AFT
B	AC2	WHITE ACL CATHODE FWD
C	AC3	RED ACL CATHODE AFT
D	AC4	RED ACL CATHODE FWD
E	ACV+	ACL ANODE
F	CNTL	SYNC CONTROL
G	POSV+	POSITION LIGHT ANODE
H	POS RETURN	POSITION LIGHT CATHODE

