

WHELEN[®]

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Installation Guide Halogen/Strobe Power Supply Model 12H4S140

Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this product is mounted with tape or Velcro™, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.**
- **Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.**
- **For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post.**
- **If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.**
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

The 12H4S140 Halogen/Strobe Power Supply can be installed in many different types of vehicles. The guidelines for the installation of this product are written so that no matter what vehicle is being used, the installation and operation of the unit will be simple and straight forward.

Selecting a Mounting Location...

The following guidelines will help the installer determine an acceptable mounting location:

- **The power supply should be mounted on a metal surface to aid heat dissipation. Be sure that this surface is not one that either generates or is exposed to excessive heat during normal operation of the vehicle.**
- **Do not select a location where the unit will be exposed to potential damage from any unsecured or loose equipment in the vehicle.**
- **Be sure the area selected will not allow the unit to be exposed to water!**
- **When routing the power supplies wires, it is important to choose a path that will keep these wires away from excessive heat and from any vehicle equipment that could compromise the integrity of the wires (ex. trunk lids, door jams, etc.).**
- **When the best mounting location has been determined, securely fasten the unit to it's mounting surface using the supplied hardware.**

WARNING! The Strobe Light Power Supply is a high voltage device. Do not touch or remove tube assembly in strobe light head assemblies while in operation. Wait 10 minutes after disconnecting the unit from its power source before starting work or troubleshooting on power supply or system.

Caution: As it will be necessary to drill holes into the mounting surface, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins!

Mounting your 12H4S140...

1. Position the 12H4S140 in its proposed mounting location to ensure that it fits properly. With the unit in place, insert an awl or other suitable tool into the mounting screw area of the power supply and scribe the areas to be drilled.
2. Remove the unit from its mounting area and, using a drill bit sized for a #10 sheet metal screw, drill a hole in each of the areas scribed in the previous step.
3. Return the power supply to its mounting location and using the supplied #10 sheet metal screws, mount the unit onto its mounting surface.

Wiring your 12H4S140...

1. Locate the 2 screw terminals on the strobe end of the 12H4S140. Using appropriately sized, customer supplied wires and connectors, connect the NEGATIVE (-) terminal to the vehicles chassis ground. This is typically adjacent to the NEGATIVE (-) battery terminal (see table on page 3 for wire sizing guidelines).

WARNING! All customer supplied wires, that connect to the positive (+) terminal of the battery, must be sized to supply at least 125% of the maximum operating current, and fused "at the battery" to carry the load!

2. Connect the POSITIVE (+) terminal to a fuse block (customer supplied) and then to the POSITIVE terminal on the battery. There should not be more than two (2) feet of wire between the fuse block and the battery terminal.

Note: Although a 50 amp fuse (customer supplied) is required to be used in the fuse block, do not install the fuse until *all* wire connections are completed.

3. Refer to diagram on page 3 for wiring information for control input wire functions.
4. Refer to the following page for dip switch functionality information.

Flash Sequences...

See "Flash Sequences" table on page 3.

Dip Switch Functionality...

The default setting for each dip switch is the "off" position. The functions of the dip switches are as follows:

Dip Switches #1 & #2 (Pattern Control)

#1	#2	
Off	Off	Comet Flash
On	Off	Triple Flash
Off	On	Double Flash
On	On	Action Flash

Dip Switches #3 & #4 (Mode control)

#3	#4	
Off	Off	H11 & H12 are inactive in both modes.
On	Off	H11 & H12 are active in Primary mode only.
Off	On	H11 & H12 are active in both modes.
On	On	H11 is active in both modes. H12 is inactive in both modes.

Dip Switch #5 should remain in the off position.

Control Input Connector...

Applying +12VDC to the control input wires will effect the operation of the 12H4S140 in several ways. See the "Control Input Table" on page 3.

Running Light mode (optional)...

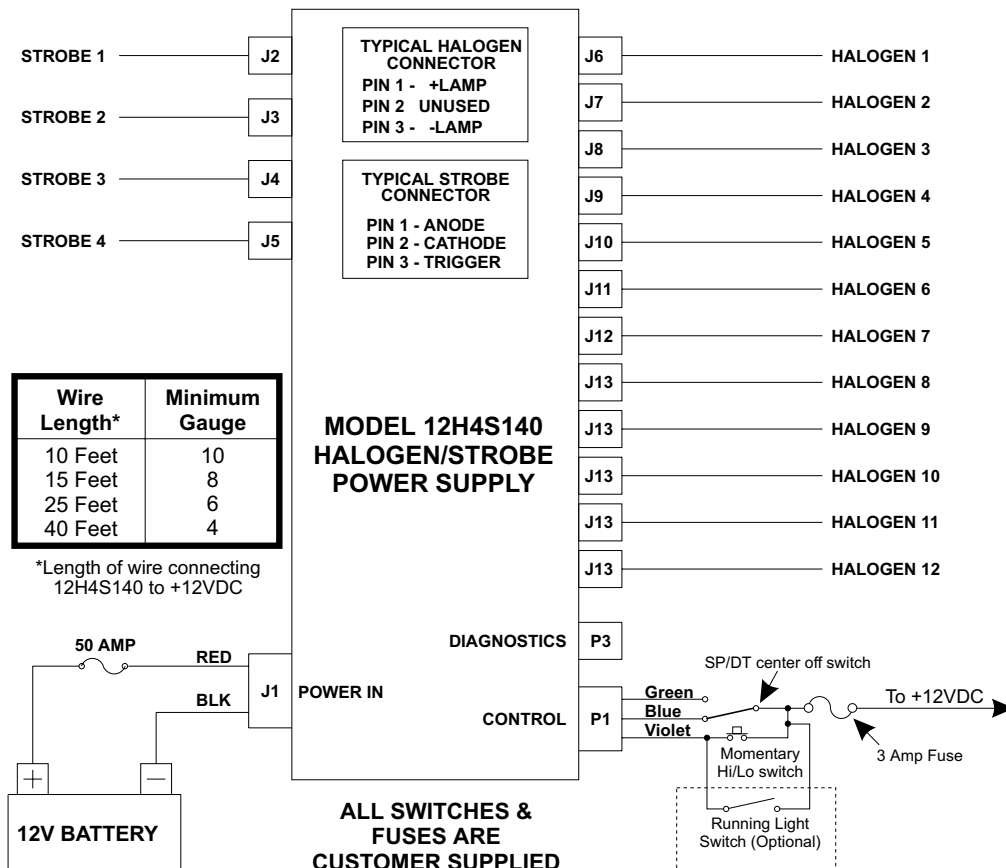
Activating the Running Light mode results in all 16 outlets to operate at 25% duty cycle without flashing. Refer to the schematic on page 3 for this optional connection.

Hi/Lo Power...

To enable Lo power operation, +12VDC is applied to control wire 9 *via* a customer supplied, normally off, momentary switch. To restore Hi power operation, turn the 12H4S140 off and then on again. Placing the 12H4S140 into Primary mode will also restore normal Hi power operation.

Diagnostix™...

The optional Diagnostix™ serves a dual purpose. It not only offers a visual indication of the current operating mode of the 12H4S140, but will also indicate a malfunction within the system. Refer to the "Diagnostic Indicator Table" on page 3 for information on diagnostic display characteristics.



STROBE SPECIFICATIONS	
INPUT VOLTAGE	14.2 VDC ±20%
INPUT CURRENT (AVE)	12 AMPS AVG.
ENERGY (PER FLASH)	16 / 5 / 5 / 5 JOULES
FLASHRATE	75 FPM (TYP)
OUTPUT POWER (PER OUTLET)	30 WATTS (MAX)

DIAGNOSTIC INDICATOR TABLE		
○ 1	FUNCTION	MODE STATUS
○ 2	LED 1:MODE 1	STEADY — OK
○ 3		FLASH — FAULT
○ 4	LED 2:MODE 2	STEADY — OK
		FLASH — FAULT
	LED 3:HI/LO POWER	STEADY — HI POWER
		FLASH — LO POWER
	LED 4:RUNNING LIGHTS	STEADY — OFF
		FLASH — ON

NOTE: If the diagnostic indicator shows a fault condition, immediately confirm that all of the lights connected to the 12H4S140 power supply are functioning properly!

HALOGEN SPECIFICATIONS	
INPUT VOLTAGE	14.2 VDC ±20%
OUTPUT CURRENT	5 AMPS PER OUTLET
TOTAL OUTPUT CURRENT (AVE)	MODE 1 - 30 AMPS MODE 2 - 22.5 AMPS
OUTPUT VOLTAGE	INPUT VOLTAGE - 1V
FLASHRATE	75 FPM
OUTPUT POWER (PER OUTLET)	65 WATTS (MAX)

FLASH SEQUENCES			
Primary Mode		Secondary Mode	
SIMULT.	SIMULT.	SIMULT.	SIMULT.
H1	S1	H1	H10 H11 H12
H2	S2	H2	
H3	S3	H3	
H4	S4	H4	
H5	H9	H5	
H6	H10	H6	
H7	H11	H7	
H8	H12	H8	

