SELC 2000 HID SMART BALLAST (35watt -100watt) FITTING INSTRUCTIONS

General:

Ensure that the Ballast is the correct power rating and lamp type, dimming option and photo-detector or on/off control option. Ensure there is no visible damage to either the Ballast or to the filters on the mains and load cables.

Installation

(Please refer to the wiring diagram on SELC 2000 Housing):

1) Fasten the Ballast securely to a metal base using the holes provided on the housing flanges. Ensure good metal-to-metal contact and good thermal contact with the surface, free of rust, thick paint or dents
2) Connect up the lamp, photocell and mains wires as shown on the accompanying wiring diagram. It is important to observe the following clearances
   a) Keep the lamp red wire bare-end (ignition pulse conductor) at least 9mm away from all Earthed metal and all other bared wires.
   b) Maintain at least 4mm clearance between the live and neutral bare-ends and 9mm between live or neutral and all earthed metal.
   c) Keep the mains leads at least 20mm away from all other leads.
   d) Keep the lamp lead bare-ends 8mm apart and 9mm from earthed metal.

NOTE: The clearance distance refers to the total conduction path length.

3) Recheck wiring.
4) Apply power. The lamp should light within 20 seconds and remain lighting. It should reach full power within 3 minutes. If the Ballast has a sensor head then the lamp should light within 20 seconds it will remain lighting for 35 seconds approx. Normal operation is then resumed.

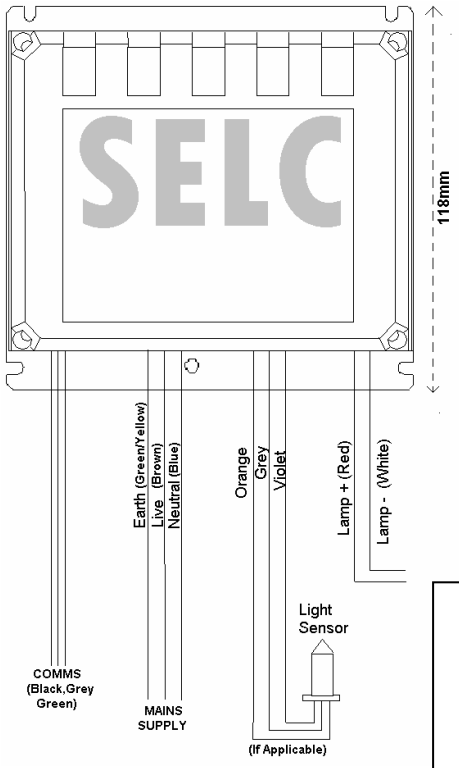
Precautions:

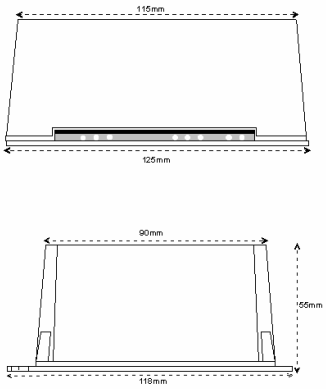
1) Ensure that no bare copper is visible outside the connector shell.
2) Air should be allowed to circulate around the back and sides of the housing. The back and sides should be clear of thermally insulating materials such as polystyrene foam, rubber wood etc. While the Ballast will operate at case temperatures up to 75℃, for long life the temperature should be maintained at or below 60℃ on average.
3) A reliable earth connection must be brought to the Ballast connector.
4) Protect the Ballast unit and surrounding wiring from rain, water splashes or spray.

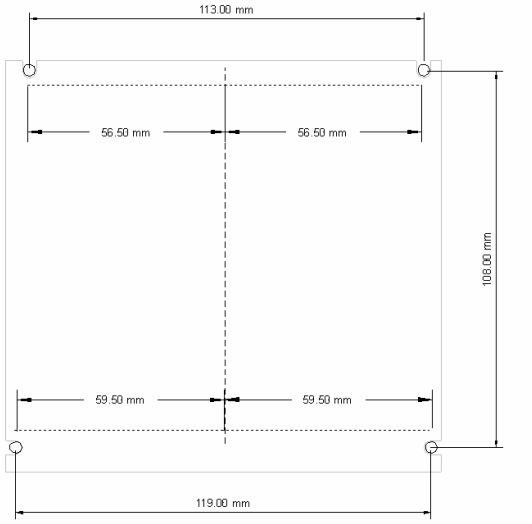
Avoid applying force to the in-line filters located on the mains and load leads. Do not carry the Ballast by the cables.

Communications Wires:

Most SELC ballasts come complete with communication wires. These wires are used in the Candelon Communication System. If the SELC 2000 is being wired into the Candelon System then you should use the Candelon Installation Guide. If however the ballast is being installed as a stand alone unit then these wires should be terminated and insulated correctly.







FIXING HOLES DIMENSIONS

WARNING

4.9kV Peak – Connect HID lamp before connecting Mains Supply.

ISOLATE from Supply before Making Connections.

Do not subject to Insulation Test.

All installations should be carried out by qualified personnel.

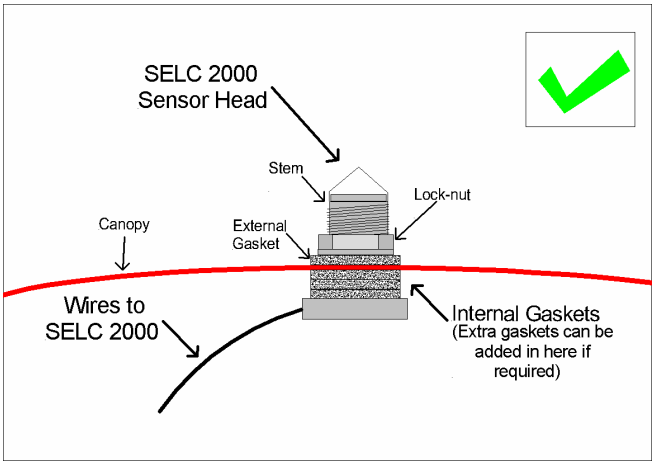
NOTE: Tampering or carrying out any modifications to this product will affect the guarantee and reliable operation.

Do Not Modify the SELC 2000 Enclosure or Cabling apart from any necessary shortening of L, N, Earth or Lamp Cables. Ensure that the filters on the Mains and Lamp cables are not removed from the Ballast. Do not attempt to cut the sensor wires. The cutting or alteration of the sensor wires will void the guarantee.

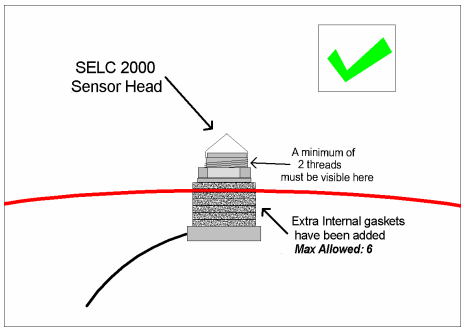
Fitting the Sensor Head (If Applicable)

An IP67 seal is easily achievable on the sensor head if the following method is followed correctly:

1) Decide where on the canopy the SELC 2000 sensor head is to be positioned. The sensor head should be facing upwards when installed. The area where the sensor head is to be positioned should be flat and smooth on both sides. Drill a 20mm hole in the Canopy.



2) Place the 3 Internal gaskets on the stem and push the stem through the hole in the canopy.
3) Place the External gasket on to the stem
4) Whilst holding the base of the Sensor head screw the locknut onto the stem and tighten securely. The locknut should be tightened to a torque of approximately 2 foot/lb (See torque section below)
5) If the sensor head is protruding through the canopy to far then extra internal gaskets can be added and this will reduce the amount of sensor head protruding. Conversely the sensor head can be made protrude further by removing some on the internal Gaskets. *If extra gaskets are required please contact your SELC sales representative.*



NOTE: Enough of the sensor head must be protruding so as at least 2 threads on the stem can be seen. This is to prevent water from forming pools in the top of the Lock nut. Maximum number of Internal Gaskets allowed is 6. However depending on the thickness of the canopy 6 may be too many.

6) Each different type of luminaire into which an SELC 2000 is fitted must be checked to ensure a good seal is made. The first luminaire when fitted with the SELC 2000 should be checked at the factory. A simple test is outlined below. If the seal is good and a consistent installation process is implemented there should never be a problem with the seal.

TORQUE

In the fitting instructions above you are required to apply 2 foot/lbs of torque to the lock nut to achieve a good seal. This is best done with a torque wrench, however if a torque wrench is unavailable the following may be useful:

Whilst holding the Sensor head body hand-tighten the lock nut fully. Then using a spanner tighten the nut 1¼ more turns. This approximates to 2 foot/lb torque however this is only a very rough guide.

Installation into a 'Ribbed' Luminaire

Some luminaires have 'ribs' on them running radially from the hole where the stem is to be inserted. These 'ribs' are problematic for achieving a correct seal on the SELC 2000 stem. As can be seen from fig 3 below when the stem is tightened the internal gasket is deformed slightly and can not form an exact seal around the rib.

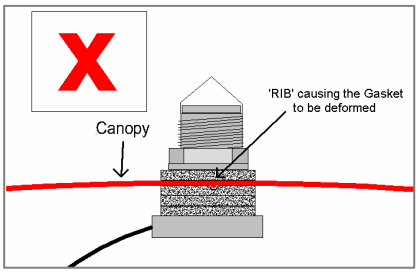
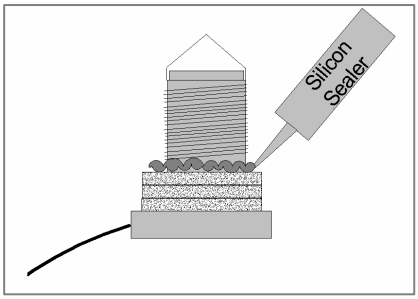


***FIG 3**. A good seal cannot be achieved around the rib.*

It is recommended that a layer of silicon sealer be applied to the top of the internal gasket before the stem is pushed through the luminaire canopy. The installation can then continue as described above. When the lock nut is tightened a good seal will be formed around the rib by the silicon.



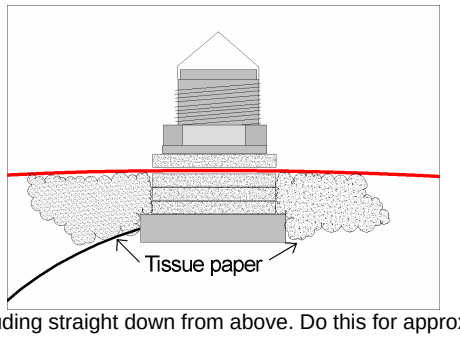
Testing the Seal on the Sensor Head

Every time a SELC 2000 is being installed into a new type of luminaire for the first time the seal on the Sensor head must be checked to ensure a good seal can be achieved. To carry out a simple and quick test on the sensor head do the following:

1) Fit the sensor as described above.
2) Once satisfied that the sensor is correctly located and tightened stuff some tissue paper around the internal gasket between the sensor head housing and the canopy. Ensure the tissue paper is tightly pressed against the gasket as shown in fig 5.

***FIG 5** Push the tissue tight around the gasket*

3) Close and seal the luminaire. Take the luminaire outside and using a water hose with strong pressure (Not a Power Hose!) aim the stream of water directly at the sensor head. Try to get the stream of water to hit the sensor head from all angles



including straight down from above. Do this for approx 10 Minutes.

4) Dry off the outside off the luminaire. Open it up and remove the tissue paper. If the seal is good the tissue should be absolutely dry. If there is any water on the tissue then you will need to start the entire process from the beginning until a good seal is achieved. Once a good seal is achieved ensure that all installations are carried out in the exact same manner to ensure a consistency of seal. An installation Instruction should be made up and a copy given to each installer to ensure the seal is consistent.