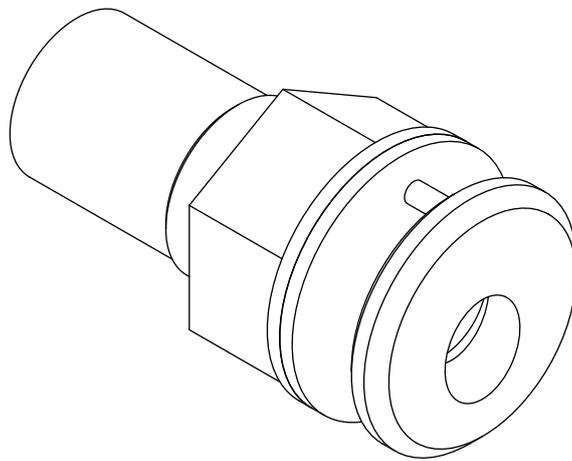


**STOANE LIGHTING**

EQUIPMENT DESIGN + MANUFACTURE

# Bulwark Mini Module

## Installation and Maintenance Instructions



**IMPORTANT: All wiring connections must be made before switching on mains power.**

 MSL Type S 2.85V<sub>F</sub> 1.4W @ 500mA

 Class III - Extra Low Voltage

 This product should not be disposed of in your general waste

**IP66** Dust tight and protected against powerful jets of water.

 Please retain these instructions for future reference

 European Conformity

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## Electrical Supply

Installation must be carried out by a qualified electrician in accordance with BS 7671:2008 Wiring Regulations. 230/240V AC 50/60Hz mains supply to a suitable SELV LED Driver.

Site conditions: LED equipment is more susceptible to static damage and overvoltage than previous technology. Before handling or connecting to the mains supply ensure that all MSL products are protected from static discharge and that the mains supply is to regulation. (230V +10 -6%)

Mains cables must be double insulated, strain relieved and separated from E.L.V output cables.

**This unit requires a constant current driver. 500mA Max.**

**Observe polarity:**  
Positive (+) is marked as RED.  
Incorrect supply or reverse polarity can cause irreparable damage.

**All connections must be made before switching on mains.**  
If the supply is energised prior to making the connections to the fitting then the resulting surge will damage the LED.

Multiple LEDs should be wired in series, refer to driver instructions for minimum/maximum load.

All lighting equipment is delicate and easily damaged through misuse or inappropriate installation (mechanical or electrical). Repairs and replacements may cause delays and will be chargeable. Contact MSL for support if required. For full warranty terms & conditions please visit our website.

The IP rating stated is applicable only when the fitting has been installed as per these instructions.

The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.

The entire dimming control circuit source must be of SELV insulation class.

Ensure supply driver and connectors are housed indoors OR in a suitably IP rated enclosure. Cable ends must be suitably waterproofed. Inspect supply cables before installation to ensure there is no damage which will allow water to enter the fitting.

**WARNING: Do not look at exposed LED lamps in operation. Eye injury can result.**

## Installation

Check that the mounting surface is suitable for the installation of this fitting.

A suitable sealant should be used to provide ingress protection and to seal the fitting in the mount hole.

A 23.5 mm diameter hole is required for mounting with a smaller 3.5mm diameter hole above for the indexing pin.

**Step 1** Insert the first fix sleeve into the cut-out. Align the indexing pin so that it fits securely into the 3mm hole.

**Step 2** Secure the first fix sleeve in place by attaching the silicon gasket, washer and the nut in this order to the first fix sleeve. This will secure the first fix sleeve in place.

**Step 3** Ensuring the indexing pin is aligned correctly, insert the fitting into the first fix sleeve. Secure the fitting to the first fix sleeve by tightening the fitting with the supplied socket.

**Step 4** Clip and snap-on the bezel to the fitting ensuring the indexing pin in the fitting is aligned to the bezel.

**Step 5** Make mains connections to SELV LED driver and extra low voltage connections to the fitting.

After opening the sealed portion of the luminaire for any reason, MSL recommends running the fitting for 15 minutes with the lid open to expel moisture before closing it up. This will prevent condensation on the lens and protect the fitting from corrosion.

Care must be taken when handling any ingress protection seals, glands or "O" rings to ensure they are kept clean, unblemished and replaced exactly in their required location and suitably fastened home.

## Cleaning:

Fully isolate the fitting and allow to cool.

Clean the fitting with a slightly damp lint free cloth from a mild solution of soap and water. The fitting must be completely dry before reconnecting power.

Incompatible or abrasive chemicals can damage the fitting, contact MSL for advice if required.

1

Indexing pin hole should be positioned directly above larger hole.

Ø3.5

13.5

Ø23.5

Insert first fix sleeve into Ø23.5mm cut out.

23.5mm

Min - 7mm  
Max - 25mm

2

Attach the silicon gasket, acetal washer and acetal nut.

← Silicon Gasket

← Washer

Tighten the nut to secure the fitting in place

← Nut

Silicon Gasket

Washer

Nut

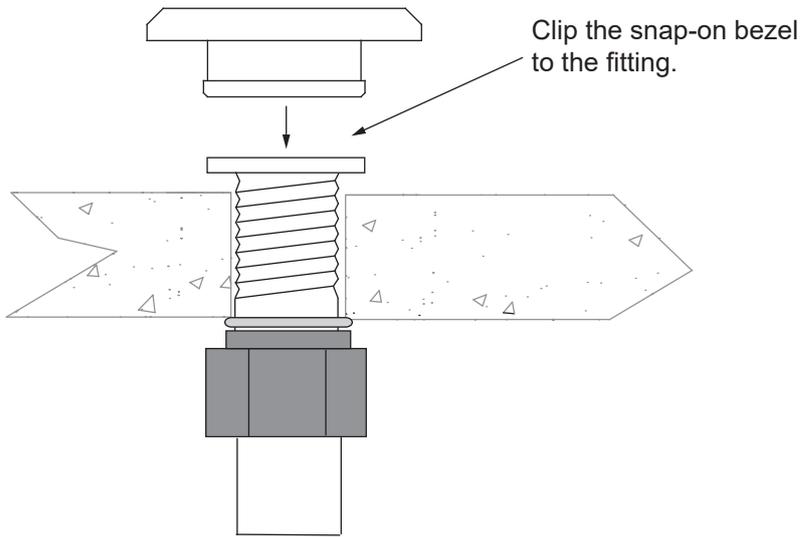
3

Insert the fitting into the first fix sleeve.

Use the supplied socket to tighten the fitting.\*

\*Note - If the fitting has not been fully tightened home then the snap on bezel will not locate correctly.

4



5

