

# Recommendations for Installation

**Obstruction lights are usually installed in remote location with hard environments for electronic devices. In order to assure reliability and long lifetime in any circumstance, OBSTA has chosen high performance technologies for the lights. Installation procedures must also follow some precautions of installation that depends on the local environments where those lights are installed. Base on our experience, there are 3 major constraints :**

- climatic,
- mechanical,
- electrical.

## Mounting of the lights

The hoisting of the lights is a complex and delicate operation. During the set up operation, the lights must be protected and if possible keep their original packing. The cables must be unrolled carefully to avoid damaging their protection.

The brackets of the lights have to be adapted to resist the constraints of weight. Wind, overloads due to snow or white frost have also to be considered. Some obstacles generate important vibrations that brackets may have to damp, or at least not to amplify them by resonance phenomena.

Junction boxes must be located so that entries of cables must always be on the lower face in order to avoid water penetrations. For installation with RFI risk or under electromagnetic fields, it is necessary to avoid making loop of cable.

Some of the lights do have very precise optics and it is important to install them perfectly on a horizontal base.

The choice of cable has to be adapted to climatic environment : UV, temperature and humidity.

When installed on a chimney, ambient temperature may be very high. The lights should be installed at a certain distance of it. The temperature should be lower than 55°C or 60°C as defined in the datasheets of the lights.

## Power Supply

For the cable, the section of the wires must be adapted to the number of lights, the voltage, the power consumption and the total length.

The obstacles can be source of electromagnetic fields. This is the case of broadcasting towers (TV, FM, GSM, etc...) but also on all kinds of high obstacles by induction from lightning strike, industrial transients coming from disturbances caused by switching and commutating of electrical motors or discharge lighting. The operation of such devices can cause abrupt shifts in the ground potential that can generate a current flow through the power cables in order to equalize the ground potential.

Electrostatic discharge (ESD) is another form of electrical surge that can be included in this group. For all those cases, we recommend to use shielded cables for power supply and alarms. The shield has to be connected to the ground the nearest possible to the lights. This shielding cannot in no case be ensured by armored cable which is ineffective to filter high frequencies.

The protection against over currency is only necessary for the protection of the cables, the lights do have already their own protections.

## First run of the installation

When switched on for the first time, it is strictly recommended not to test the circuit with high voltage generating tester. Before switching on, make sure that the line voltage is within the prescribed tolerances of the lights.

Some lights are very powerful and contain some ultraviolet radiation.

Do not look directly at them without eye protection.

## Maintenance

For all kind of lights, it is recommended to do a yearly visit to check wiring connection and corrosion of the materials. To ensure optimum performance and reliability of your OBSTA system, it is strongly advised that only components and modules manufactured by OBSTA be used.

## Protection of installation against lightning risks

Obstruction lights are very often installed in very constraining EMI environments. OBSTA lights are designed to resist to these constraints. However, installation procedures are also essential to obtain a optimal lifetime of the all installation. It can also be necessary to install surge and lightning voltage protector against lightning risks.

The range of lightning surge protectors which we propose offer an efficient protection of the power supplies against lightning strikes and industrial transient overvoltages.

These lightning protectors are available for DC power supplies 24V or 48V and for AC power supplies 110VAC up to 240VAC, single or 3-phase. They come either in DIN rail or in complete panels ready to be to install.

Several configurations are possible according to the voltage, the power supply sensitivity and can include alarm signal, as an option. Contact us and we will help you to optimize protection of your installation.



AC surge protector  
Type I



DC power supply surge  
protector



AC surge protector panel