

## Low intensity and Medium intensity: how to choose the Aircraft Warning Lights

Aircraft Warning Lights are light signaling equipment designed to make tall structures more visible, both day and night.



In general, there is no single standard that defines the mandatory minimum requirements governing the design and installation of obstruction lighting.

The most common and widespread regulations are the ICAO (International Civil Aviation Organization, a United Nations agency) and the FAA (Federal Aviation Administration, an agency of the United States Department of Transportation).

In the Oil & Gas sector, three types of signaling lamps are mainly used for the extension and height of obstacles: the low intensity type B and the medium intensity type A and B.

Type B low intensity obstacle warning lights ([Cortem XLFE-4 ../ 1 series](#)) are intended for buildings with low extension and height above the ground below 45 meters. When the use of low intensity obstacle warning lights, type B, is inadequate and a special warning is required, medium intensity obstacle signals should be installed.

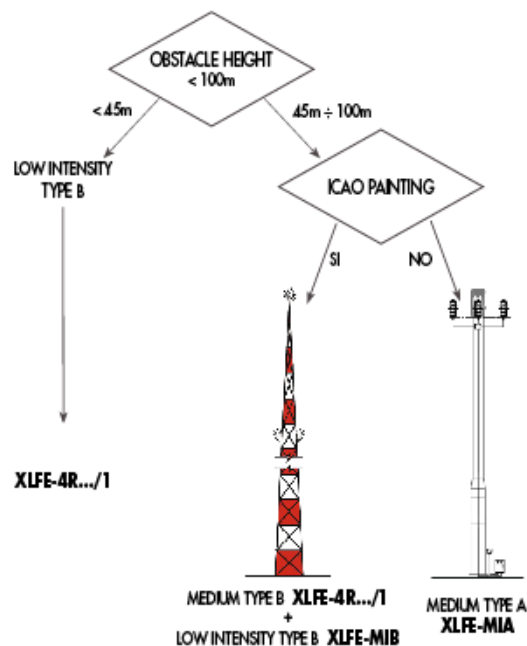
# TECHNICAL NEWS



To be sure to be safe.

Medium intensity obstacle warning lights, type A ([Cortem XLFE-MIA series](#)), B ([Cortem XLFE-MIB series](#)) should be used where the object is of great extension or its height above the level of the surrounding territory is greater of 45 meters. Medium intensity obstacle warning lights, type A should be used alone, while medium intensity warning lights, type B, should be used alone or in combination with low intensity obstacle warning lights, type B.

The following flow chart visually represents what we have just explained: medium intensity type B Aircraft Warning Lights are only turned on at night because during the day the obstacle is highlighted by the ICAO painting. Medium intensity type A are intended for lighting obstacles without ICAO painting, during the day they remain on with maximum power (20,000 cd) to highlight the obstacle with the daylight background.



## 1. The signaling levels and the number of signaling lights for each level

When one or more obstacle warning lights are apical, they must be positioned as close as possible to the top of the obstacle.

In the case of fireplaces or other structures with a similar function, the upper obstacle warning lights should be positioned sufficiently under the upper part in order to minimize smoke contamination etc.

Where an obstacle is signaled by medium intensity aircraft warning lights, type A and the upper part of the obstacle is more than 105 meters above the surrounding ground level or the elevation of the tops of neighboring buildings (if the obstacle to be signaled is surrounded by buildings), additional signal lights must be provided at intermediate levels.

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Questi livelli intermedi aggiuntivi devono essere distanziati, per quanto possibile, tra le luci superiori e livello del suolo o il livello delle sommità più vicine agli edifici, a seconda dei casi, con spaziatura non superiore a 105 metri.

These additional intermediate levels should be spaced, as far as possible, between the upper lights and ground level or the top level closest to the buildings, as appropriate, with a spacing not exceeding 105 meters.

Where an obstacle is indicated by medium intensity aircraft warning lights, type B and the upper part of the object is more than 45 meters above the surrounding ground level or the elevation of the tops of the neighboring buildings (when the object to be marked is surrounded by buildings), additional signal lights must be provided at intermediate levels. These additional intermediate levels must alternately have low intensity obstacle warning lights, type B, and medium intensity obstacle warning lights, type B, and must be spaced as equally as possible between the upper lights and the ground floor or the level of the summits closer to neighboring buildings, as appropriate, with a spacing not exceeding 52 meters.

In the Oil & Gas sector, mainly characterized by lattice structures, smokestacks or large tanks, the number of warning lights required for each level is typically 3 or 4 fair light points spaced in the horizontal plane (every 120° or 90°).

## 2. Dual systems

The requests of the FAA scheme (but not in the ICAO guidelines) include avoiding any interruption of a safety signal which, if it occurs, must be corrected as soon as possible. Beyond the specific regulation, it is common practice to provide for a redundancy of signal lamps. They are the so-called dual systems equipped with a main lamp and an emergency lamp. Fault management is controlled by the control panel of the AWL system.

