orga

The way ahead in

Obstruction lighting systems

ICAO AND FAA COMPLIANT OBSTRUCTION LIGHTING SYSTEMS

When safety matters most you can trust in Orga

For over 45 years, Orga has been delivering high quality and efficient solutions to make high-rise structures more visible to passing aircraft and minimize light pollution for the nearby environment, during both day and night-time. Our up-to-date obstruction light system meets the most stringent national and international regulations and has gained the trust of customers around the world.

Our expertise and proven track record in obstruction light solutions, coupled with our in-house research and development department, keeps us at the forefront of emerging technologies. Operational safety underpins the onshore, offshore and aviation industries' licences to operate. At Orga we don't just help you meet these challenges, we help you to stay ahead of them.

Smart & innovative cost-effective obstruction light solutions

Over 45 years experience with more than 100.000 Obstruction lights installed

Full compliance with regulations (ICAO, FAA etc)

High quality products. Easy to install, maintain and repair

'Our dedicated employees have the experience and know-how to deliver you the best and safest innovative solutions onshore and offshore.'

Reliable obstruction lighting systems ensure safe navigations

Challenging weather conditions call for robust, reliable and low maintenance solutions. Orga leads the industry in smart and innovative cost-efficient solutions for marking your wind turbines and high-rise structures such as meteo masts.

With a firm focus on safety, our market-driven obstruction lighting systems bring together a host of innovative features, including power and system-control technologies. Orga's high-quality optics optimise our advanced LED obstruction lights and thus give you the competitive advantage you need.

Do you have specific requirements? No problem, at Orga we work closely with our customers worldwide to develop creative obstruction lighting solutions. In addition, we collaborate with local stakeholders and aviation-related bodies around the world.

Built-in photocell, monitoring & power supply

Lightweight rugged housing

Infrared night-vision output

High-quality optical design with an absolute minimum of light pollution

'Either up in the air or closer to the ground, Orga's obstruction lighting ensures safe navigation around your sites.'

Offshore and Onshore marking systems

for windturbines

L500
High intensity LED obstruction light

Orga's L500 series provides white flashing, white and red steady or white and red flashing LED obstruction lights for reliable day, twilight and night-time marking of wind turbines taller than 150m.

Depending on the model, the L500 series is compliant with the minimum requirements of ICAO Annex 14 – Seventh Edition, July 2016 High Intensity Type A/B and Medium Intensity Type B/ C obstacle light, and various national standards.

The L500 light series features an integrated photocell, solid state power supply, monitoring, automatic flash synchronisation between lights and a temperature controlled internal heater to prevent external ice build-up. Orga proprietary optical design produces a highly accurate uniform light beam for minimal local visual impact. Firmware can be upgraded in situ with new operating parameters.

- **Built-in photocell, power supply, flash-sync & monitoring**
- **InfraRed available**

- **Prism optics reducing light pullution**
- **InfraRed available**
- **Offshore & onshore applicable**

L550
Medium intensity LED obstruction light

Orga's L550 is typically used to mark tall structures between 45–150m height and complies with minimum requirements of ICAO Annex 14 – Seventh Edition, July 2016 Medium Intensity Type A/B/C obstacle light, FAA, German CAA, and various other national regulations.

Providing day-time white flashing and night-time white flashing or red flashing/steady light and optional IR for flying under Night Vision Goggles (NVG) in one unit, Orga's new micropro-cessor-controlled obstruction light boasts an integrated design with built-in photocell, power supply, integrated automatic flash synchronisation and monitoring.

Smart LED technology maximises intensity and colour output while the precision-engineered optical design ensures tightly focused beam spread to limit ground scatter and minimise light pollution.

L240
Low intensity LED obstruction light

Orga's L240 is a low intensity red obstruction light for night time marking on the nacelle of a wind turbine. It complies with minimum requirements of ICAO Annex 14 – Seventh edition, July 2016, Low Intensity obstacle light Type A and B, and national regulations.

The L240 provides night time red steady burning including IR and (optional) flashing light. Ready to be used as a stand-alone light or in a multiple lights system with an Orga CIP controller. The smart LED technology maximises the intensity and colour output, while the precision engineered optical design ensures tightly focused beam spread to limit ground scatter and minimise light pollution.

Based on long life LED technology, the L240 does not use electrolytic capacitors, has an extremely low power consumption, and requires no maintenance during its service life. Optionally the light can be executed with an integrated heater for de-icing functionality.

- **Integrated photocell & GPS receiver**
- **Integrated health monitoring**
- **InfraRed available**
- **Offshore & onshore applicable**

L240
German 'Feuer W, rot ES' LED obstruction light

The L240 'Feuer W, rot ES' is Orga's nacelle light for the German market. This steady burning red obstruction light for night time marking fully complies with the German Hindernisfeuer AVV-ES, and its Anhang 3 and Anhang 6 for BNK (Bedarfgesteuerte Nachtkennzeichnung von Windenergieanlagen).

The L240 incorporates the benefits of advanced LED, optical and system control technologies to meet the most demanding applications. It is easy to install, has low power consumption, and does not require maintenance during its service life. This makes the L240 a reliable and cost efficient obstruction light.

The L240 'Feuer W, rot ES' will be available in summer 2020.

- **Aircraft Detection Lighting System proof (BNK)**
- **Integrated photocell & GPS receiver**
- **Integrated health monitoring**
- **Offshore & onshore applicable**

L92

Low intensity LED obstruction light

Orga's L92 red steady and flashing low intensity obstruction light is used for marking the tower of wind turbines. The light complies with the minimum requirements of ICAO Annex 14 - Seventh edition July 2016, Low Intensity type A, B & E obstacle light, as well as German Hindernisfeuer AVV-ES, and other national regulations.

It incorporates the benefits of LED lighting including IR as well as optical and system control technologies to meet the most demanding applications. For offshore purposes the L92 is available with main and standby LED's resulting in reduction of external maintenance.

Smart LED technology maximises the intensity and colour output while the precision engineered optical design ensures a tightly focused beam spread to limit ground scatter and minimise light pollution.

- **Available from 10 to 50Cd**
- **InfraRed available**
- **Offshore & onshore applicable**

- **Complies with CAA-UK CAP437**
- **SRO-InfraRed available**
- **Offshore applicable**

L550-HHS/SRO

Helicopter Hoist Status / Search and Rescue Operations light

The Orga L550-HHS/SRO light combines the Helicopter Hoist Status light (HHS) and the Search and Rescue Operations light (SRO) in one fixture. The light for helicopter hoist operations is a green status light which is flashing or steady burning to indicate the hoist status. The SRO is a steady burning red light to indicate target turbines during emergencies.

Separate HHS or SRO lights are also available. To comply with Maritime Coastguard Agency – OREI SAR Requirements v2.0, we provide the SRO light with IR.

CIP402

Obstruction light system controller

The CIP402 is an obstruction light system controller designed for today's wind industry. The smartly re-designed controller features the same functionalities as its predecessors, with new housing, new backplane and prefixed connections, it thereby eliminates (potential) wiring errors, and is ready for cyber security implementation. This makes the CIP402 more reliable and cost efficient.

Orga's CIP402 controller enables improved communication with and between all Orga obstruction marking products through a webserver interface. It is easy to connect to your own communication system. Implemented Cyber Security protects the software components and secures access from a Client LAN. It requires no maintenance during service life, and is available in different housing sizes (200, 300 and 400 width).

- **No (internal) wiring**
- **Communication via Modbus over TCP/IP**
- **Integrated Over Voltage Protection**
- **Base module with Input & Output (I/O) for dedicated functions**

- **No (internal) wiring**
- **Communication via Modbus over TCP/IP**
- **Integrated Over Voltage Protection**

MLC402

Marker light controller

The MLC402 is a marker light controller designed for today's wind industry. Its new backplane with wiring interface terminals on a Printed Circuit Board (PCB) and dedicated modules are creating an easy to install and configure controller setup. The prefixed connections are improving reliability and the new housing delivers a compact and flexible marker light controller. The ML402 is ready to connect up to 4 compatible tower lights, including IR functionalities.

SWS050-N-AC

Visibility sensor

Compact and well proven, the SWS050-N-AC visibility sensor operates in combination with Orga obstruction light systems which are required to adjust the operating intensity of the obstruction light in accordance with present visibility conditions.

Optionally, a model is available that measures present weather conditions, such as fog, haze, smoke, sand, drizzle, rain, snow and general precipitation giving instantaneous and averaged visibility outputs.

- **Works with Orga CIP controller**
- **Selectable measurement range 10m-75km**
- **Offshore & onshore applicable**

- **Effective range 2NM to 5NM**
- **Directional visual coverage**
- **Robust & corrosion free design**

Marine Lights

Marine lights for offshore wind energy facilities

The SeaMark marine light (Sabik Offshore) is built for the harsh offshore environment with smart technologies such as self-check diagnostics and integrated battery back-up. The lantern is configurable to meet international and project specific requirements.

UPS

Battery backup system

Orga battery back-up systems provide emergency battery backup for one or two Orga medium and low intensity obstruction lights in the event of power loss.

It accepts all commercial AC power between 90V and 230V. Upon failure, the battery back-up system switches to battery power automatically. The duration of battery back-up may vary depending on client specifications. The battery charges automatically under normal AC power.

- **Uninterruptible power supply**
- **Rugged and compact design**
- **Easy to operate**

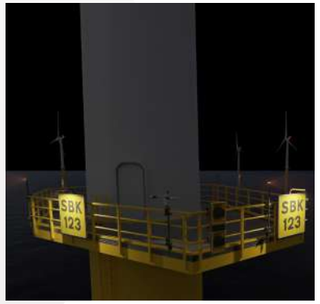
Strong & reliable partnership for safe sea and air navigation

'Orga's complete offshore lighting and marking system of wind turbines, gets your job done - anywhere in the world, whatever the environment.'

At Orga, we believe in helping you do what you do best. By combining forces with Sabik Offshore, the marking of your offshore wind turbine site could not be in safer or more reliable hands. Demanding applications at remote locations in the harshest of environments?

At Orga we know all about the challenges that you face. Our cooperation with Sabik Offshore has enabled us to offer the best-possible offshore wind farm solutions.

It's through close communication with our clients and years of experience, that we are able to offer a significant cost reduction in the entire supply chain. We can guarantee that our highly reliable and advanced obstruction light package is your safest and most cost efficient solution.



Highly reliable and fully integrated system

Energy-optimized LED solutions

Significant savings for our customers

Optimum performance

One-stop shop
for excellent service

Orga has a sound reputation for smart, reliable and robust lighting and marking solutions for offshore and onshore wind farms. Our high-, medium- and low-intensity lights use advanced LED optical technology to meet international and national regulations, including those imposed by the ICAO, FAA and the UK's CAA. In doing so they deliver optimum performance and they lower the total cost of ownership.

Do you need to meet special national requirements? We have a product version that will comply with your country-specific regulations.

Our top-to-bottom service will take care of all your peripheral devices for your obstruction lighting solution and guarantees optimum communication with and between all Orga obstruction marking products. Any questions? Our fully certified and skilled service team is always on hand to expertly deal with your queries, and always to your full satisfaction.

Advanced LED optical technology

Modular system integration related to country & project-specific requirements

Optimum performance results in low cost of ownership

A highly dedicated, trained & experienced service team

Why make business complicated when the solution is just one call away?

The successful, long-term use of the Orga obstruction lighting system is our key focus. We take care of a total service, from regulatory requirements, engineering and design to delivering the equipment on site. To assure that the product has been safely and correctly installed, we can also deliver a commissioning on your site.

Our dedicated project, engineering and service teams have a very close interest in the practical requirements for Orga's obstruction lighting system. We have locally based support teams and work with international partners to deliver the right solutions and services.

Over 45 years of experience in innovation
Since 1973, Orga has been delivering high quality and efficient obstruction light lighting systems to ensure safe operations.

Orga the way ahead in obstruction lighting, where ever you are.

For optimum obstruction marking, call us +31 (0)10 208 5511

Design, production, quality control & commissioning

100% regulatory compliance guaranteed worldwide

Locally based support teams & international partners

The right solutions & services around the world

'Orga is not just a trusted partner, with solutions that always meet the necessary safety regulations, they give me the innovation and service that I need to make my business work!'

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