

Obstruction light RL30 LED/IR 48 VDC

**Part no.**

11990300

RL30 LED/IR

Type of light: Low intensity, type B

Color: Red

Signal type: Steady

Theoretical Lifespan: 10 Years

Red light intensity: > 32 cd

Operating range: -40°C – +55°C

Light distribution: Horizontal plane 360°

Vertical plane: -10° to +90°

Power consumption: LED 24V: 550 mA ±10% (13.2W)

48V: 330 mA ±10% (15.9W)

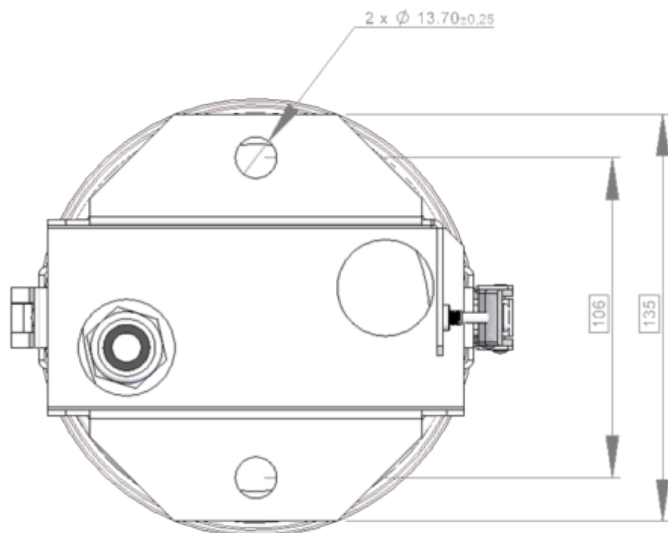
230V: 60 mA ±10% (13.9W)

IP class: 43 (ventilated)

- Easy installation
- High grade nordic stainless steel – Seawater and salt resistant
- Alarm function – with NO and NC
- Optional heating unit inside lamp – de-icing capability
- Redundant LED circuits – limits risk for full blackout
- The **“breathability”** of IP43 helps prevent the accumulation of internal

moisture, protecting the components from damage caused by condensation or trapped humidity, which can be a problem in more tightly sealed units.

- RL30 is a high-quality luminaire that meets both Swedish Civil Aviation Administration and international (ICAO) requirements for safe air traffic.



- Applications: Masts, Towers, Tall buildings, Chimneys, Power line poles, Wind turbines. (2x $\varnothing 13,7$ mm holes with CC 106mm in the built-in bracket)
- The circuit board of the obstruction light is divided into 10 elements, consisting of a total of 9 infrared (IR) LEDs and 29 red LEDs.
- Easy to replace the light unit.

History

Tykoflex AB has been a supplier of the RL30 luminaire and the low-intensity obstruction light application for several years. Through this work, experience and feedback have continuously developed the RL30 into the high-quality and approved product we have today. The RL30 luminaire and the low-intensity obstruction light application have been in operation since the late 1970s and were developed in collaboration between Televerket Radio and Tykoflex AB.



Construction

The **RL30 LED/IR** has a robust construction with minimal service intervals. The luminaire has a base made of electropolished stainless steel of EN 1.4404 quality, which contributes to a long lifespan and good weather protection. The transparent cover is made of UV-stabilized polycarbonate.

Standards

The **RL30** obstruction light unit meets the standards for ICAO (International Civil Aviation Organization) and TSFS (Transportstyrelsen's regulations) 2020:88 listing Series GEN for low-intensity obstruction lighting, with steady red light and for IR light.

(ICAO Annex 14 Volume 1, Eighth Edition 2018 Low Intensity Obstruction Lights type B)

Tykoflex RL 30

Applicable for 24/230 VAC

Meets the following tests and standards:

IR/light according to TSFS 2020.88 & ICAO Annex 14
EN IEC 62471 Photobiological safety
SS-EN 61000-6-3:2021 Emission (EMC)
SS-EN 61000-6-2:2019 Immunity (EMC)
EN 61558-2-6 Safety of transformers
IP 43 according to EN 60529:1991 + A1:2000 + A2:2013.
IEC 60529:1989 + A1:1999 + A2:2013.

RoHS (Exemption 6c.)

Registered in the SCIP database.

Tykoflex RL 30

Applicable for 48 VDC, 24 VDC

Meets the following tests and standards:

IR/light according to TSFS 2020.88 & ICAO Annex 14
EN IEC 62471 Photobiological safety
SS-EN 61000-6-3:2021 Emission (EMC)
SS-EN 61000-6-2:2019 Immunity (EMC)
IP 43 according to EN 60529:1991 + A1:2000 + A2:2013.
IEC 60529:1989 + A1:1999 + A2:2013.

RoHS (Exemption 6c.)

Registered in the SCIP database.

Functionality

The **LED/IR unit** is designed with individual groups of series-connected LEDs. Each LED group is powered by constant current generators. Incoming power is protected at two levels with surge protection. In this way, the RL30 is less likely to fail during overvoltage (lightning strikes).

The circuit boards and components are coated with an electronic lacquer, according to military specifications, to protect components and solder joints from moisture and to ensure a long lifespan of the LED/IR unit.

Delivery specification

All new **RL30 LED/IR** obstruction lights are delivered with Both NO/NC alarm functionality. This allows monitoring and indicating whether the RL30 is operating reliably. The unit detects over and under-voltage on all LED and IR circuits. The alarm conductors are further connected from the obstruction light(s) to a suitable alarm unit on the ground, which may include remote indication, for example, via a mobile network.

With a 5-wire riser cable, alarm functionality is enabled on all our obstruction lights with 24, 48 VDC, and 230 VAC power supply.

Articles

Product	Part no.
Obstruction light RL30 LED/IR 48 VDC	11 990 300

Why have we chosen a breathable solution?

IP43-rated lighting fixtures allow some level of air circulation because they are not fully sealed against dust and water like higher-rated fixtures. This ventilation can be beneficial for a few reasons, particularly when it comes to preventing the buildup of internal moisture:

1. **Breathability:** Since IP43 fixtures are not completely sealed, they can “breathe,” meaning they allow air to flow in and out of the fixture. This helps to regulate temperature and prevents condensation, which can occur when warm air inside the fixture cools down, especially in environments with varying temperatures.
 2. **Moisture Evaporation:** The small openings in an IP43-rated fixture enable any moisture that enters (like minor humidity) to evaporate naturally over time. In contrast, a fully sealed fixture can trap moisture inside if water or humidity somehow gets in, potentially damaging sensitive electrical components.
 3. **Less Risk of Condensation:** In completely sealed units, rapid temperature changes can cause condensation to form inside the fixture. Since IP43 allows for airflow, it reduces the likelihood of condensation, ensuring that the internal components stay dry and free from moisture damage.
 4. **Component Protection:** Protection against dust and rain from the right angles, the airflow helps maintain a more stable internal environment, minimizing the risk of long-term moisture buildup that could corrode or damage sensitive electronic components like circuits or LEDs.
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