LANTHAN

Obstacle Light Retrofit

When Retrofit Matters

Lanthan Might be the Answer

Integrating a Lanthan obstruction lighting system into your wind turbine is a smart decision for several reasons. First of all, Lanthan offers sustainable support and a reliable repair process that ensures your systems remain functional in the long term.

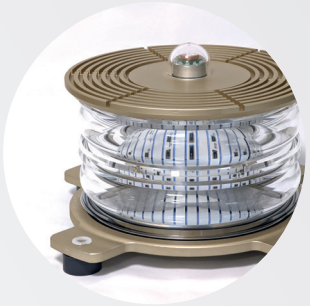
Unfortunately, it often happens that spare parts are no longer available for a system, but with Lanthan, no systems are discontinued. This means that you always have access to necessary components and can therefore minimize downtime. In addition, Lanthan's products are characterized by flexible adaptations in terms of installation and connectivity, allowing them to be seamlessly integrated into existing structures while being adaptable to future requirements. These features make Lanthan obstacle lights a sustainable and future-proof investment for your wind turbine.

No Matters which Requirement

Lanthan has the Perfect Light

Made In EU

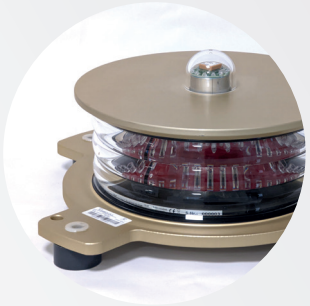
- Production sites in Germany Bremen and Gefrees, Frankonia
- Short supply chain
- Deep inhouse production



Design for Quality

We are familar with your requirements.

- Company Member of APQP
- ISO 9001
- Remote FAT



Designed for Ecologic and Economic Sustainability

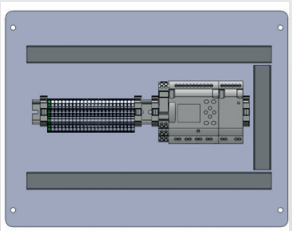
- All our products are planned for a WEC lifetime.
- No discontinuation without adequate replacemen
- All products are repairable and retrofittable

Retrofit Installations

Flashtube Systems: Honeywell / Orga

Early wind energy lighting systems were primarily based on flash tubes. These systems are no longer supported by the manufacturers. Typical systems include the Orga L303, all Honeywell (formerly DASA) Systems FT2000, or even LED2000.

We have developed several one-to-one replacement systems that require minimal installation time. The picture on the right is an example of what we developed in collaboration with Enercon, and it is available there. If you are outside Enercon maintenance, you can contact us.



Retrofit ORGA L303 for Enercon

Retrofit Installations

Discontinued Systems

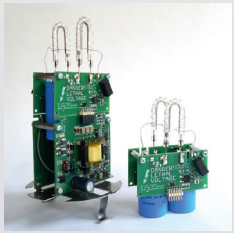
Many manufacturers of obstacle light systems have discontinued support for old products over time, meaning that spare parts are no longer supplied. For example, Reetec MLGF 2.2 or Reetec Slimline x86 systems.

One-to-One Replacement

Our Approach is to replace these systems by adopting the previous configuration by using same form factor, brackets, or connectors to minimise installation time.

WEC-Lifetime Support

All our systems are supported over the WEC lifetime. We repair and refurbish any light or controller.



Reetec MLGF 2.2

Lanthan manufactures MLGF 2.2 spare parts. Our solution significantly reduces e-waste and costs by separating wear parts from the device.

Retrofit for new Requirements

France

It is required in France to have systems repaired within 21 days after failure. This regulation has an impact for systems which are out of production or service by their manufacturers.

We provide support for all our systems and ensure fast delivery.

Sweden

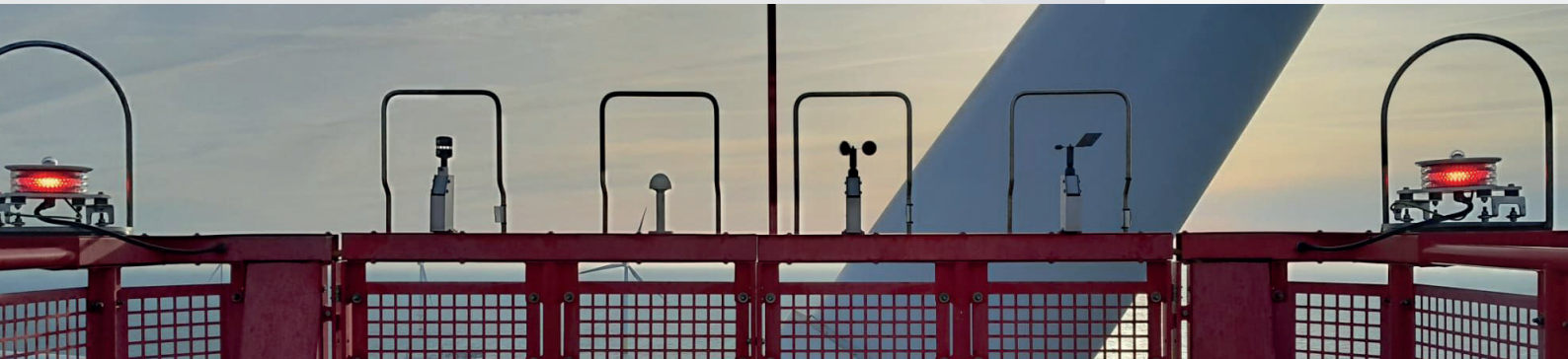
Sweden requires to update all systems on windturbines according to swedish Regulation TSFS2020:88k. Is is now required to have Medium Intensity Lights Type B including infrared. The swedish regulation is more strict than the ICAO since they define an upper intensity limit.

Lanthans R2kIR500 completely fulfills this requirements.

ADLS - Aircraft Detection Lighting Systems

Aircraft Detection Lighting Systems are mandatory in germany and will play a significant role in many more countries. Many obstacle light systems do not support the integration of ADLS and need to be exchanged.

Lanthan systems are able to communicate over the windfarm by network or LTE-Mesh and integrate ADLS functionality.



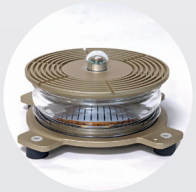
Retrofit for Acceptance

... not Everyone Likes Red Lights at Night

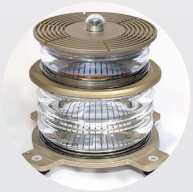
French +4° Modified Beam Medium Intensity

Flashing obstacle lights at night have a great influence on the acceptance of wind energy.
The French authorities have approved a special version of the ICAO Medium Intensity Type B light with an elevated beam. The centre of gravity has been moved to +4° above the horizon.

Lanthan has implemented this feature and is in proces of certification with the french authorites.



W20kR2k(FR)



R2k(FR)

The areas in this graph visualise the area where the intensity of the lights is brighter than the night sky.
It is simulated for a clear night with an atmospheric visibility of 20 km and for a dark night.
At an installation height of 150m, the lower boundary is approximately 25m above the ground. For smaller wind turbines, it will be more visible, but still significantly darker than a standard ICAO light.

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