

TCL

Transponder Controlled Lighting



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THE FUTURE OF AVIATION LIGHTS

Transponder controlled lighting – Aviation lights with integrated transponder-based ADLS functions

Even during the night, wind energy's future can brighten. People are more likely to accept wind turbines when they go dark at night. It's not just about protecting the environment and reducing light pollution; it's also a clear signal of sustainable energy.

ADLS is added in the ICAO recommendation to switch off wind turbine lights when they're not needed. TCL seamlessly integrates this advanced technology into aviation lights. Effortless installation in new and existing wind turbines or other obstacles is possible.

TCL DETAILS

- ▶ Obstacle Lighting and ADLS in one system
- ▶ Integrated infrared identification (if required)
- ▶ No network integration necessary
- ▶ Remote monitoring with mobile communication

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www.dark-sky.com/tcl



BASIC FUNCTIONS OF TCL

The unique installation of one antenna on top of the affected obstacle allows the detection of every transponder signal from where the obstacle lighting can be seen. This correlation combined with the logic of the TCL creates a possible standardized simple site audit.



Versatile to use: The TCL system is designed to be retrofitted to existing wind turbines as well as being factory installed in new turbines. As a result, it provides a comprehensive solution to ADLS requirements for both existing turbines and new projects. The system does not require integration into existing networks or connection to centralized or multilateral ADLS systems.



Cost efficiency and plannability: The combination of obstacle lighting and ADLS in one system enables a cost-efficient production of the hardware. For retrofit purposes, existing obstacle lights can also be used instead of the standard scope of supply, which will reduce the cost of retrofits and maintain sustainability.

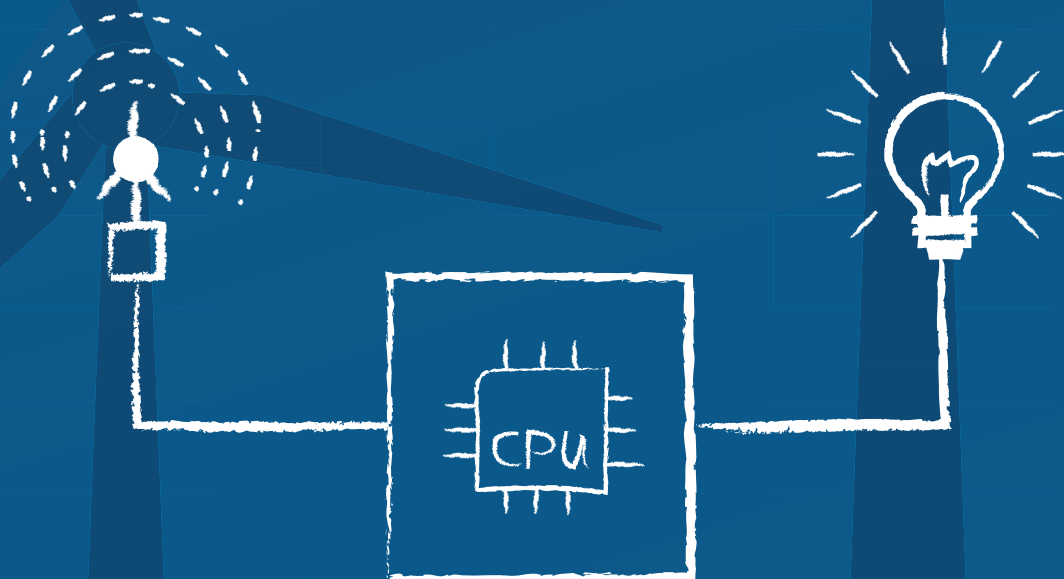


Low complexity: The system combines obstacle lighting and ADLS functions in one package with few components. This allows for easy installation as it does not require major adjustments to the wind turbine manufacturer's processes. This integration can be implemented without major changes, just like a conventional lighting system.



Easy to maintain and monitor: The LED obstacle lights used are from ENERTRAG Systemtechnik's proXS range. The TCL system monitors the luminaires and enables condition monitoring via Dark Sky online tool. A service contract covers the scope of maintenance, ensuring smooth commissioning and long-term support.

Increase the efficiency of your ADLS processes with the TCL system as an alternative to conventional obstacle lighting. We are here to support you!



TECHNICAL DATA	ANTENNA BOX	CONTROL CABINET	OBSTACLE LIGHTING
Measurements (B/H/T)	140 x 120 x 76 mm	max. 500 x 500 x 210 mm	100 x 185 x 100 mm
Weight	1,4 kg	~50 kg (Incl. recargable batteries)	1,1 kg
Power supply	Control Cabinet	230 V AC	Control Cabinet

