



Data sheet
ALS 500 NAI
Tower illumination

- **Maintenance-free LED technology**
- **Anodised, powder-coated aluminium housing**
- **Standard NAI bus interface for power supply and communication**
- **Adjustable intensity**
- **Power consumption 40 W at maximum operating luminous intensity (70 000 cd)**
- **Beam angle 8° (FWHM)¹**

The ALS 500 NAI satisfies the WSV's² requirements of the technical standard "Tower lighting at wind turbines for additional marking of the arrival and departure corridors for helicopters in offshore wind farms". So that the lateral limiting of the corridor to the helicopter landing platform is easily recognisable during approach and take-off, the neighbouring wind turbines are illuminated for a limited period on the side facing the corridor.

The floodlight's integrated NAI bus interface is used to supply power, to control the intensity and switching status, and to transmit status and error messages to the central NAI Controller, so that they are available to the central SCADA system.

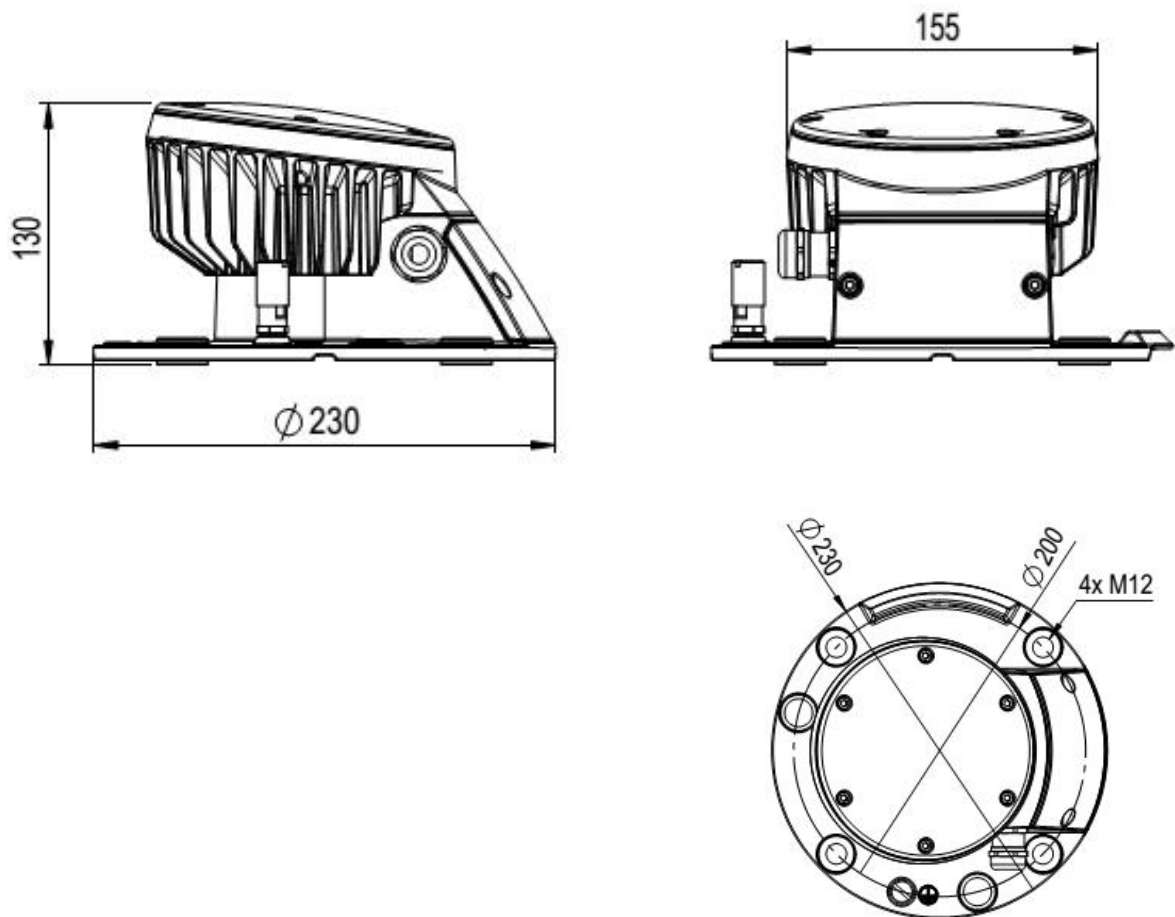
The integrated operational monitoring detects LED failures, errors in the control electronics as well as supply voltage problems, excess temperature and interruptions in communication.

¹ Specification of the half-value angle: Full width at half maximum (FWHM)

² German Federal Waterways and Shipping Administration

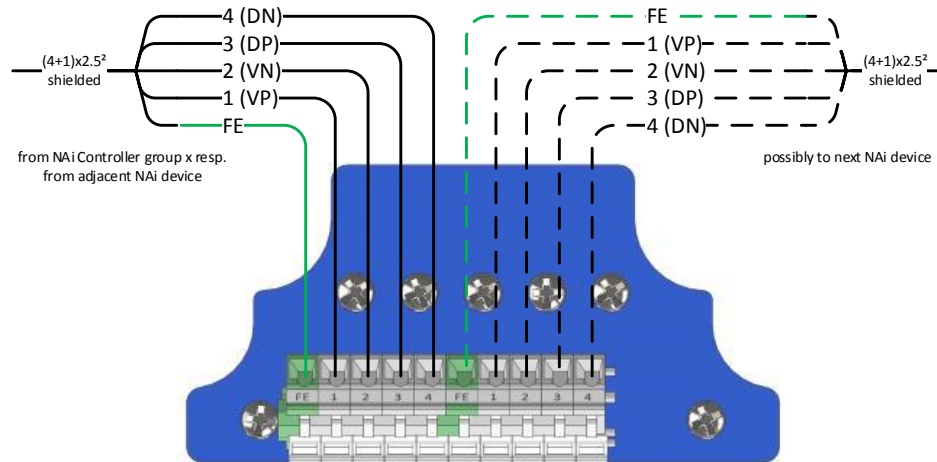
Technical Data

Dimensions, weight



Diameter optics	155 mm
Diameter mounting foot	230 mm
Height	130 mm
Weight	2.72 kg

Electrical connection



Electrical connection	Spring terminal block, max. 2.5 mm ²
Operating voltage V_{IN}	19 to 36 V DC
Power consumption ($V_{IN}=24$ V DC - max. intensity)	40 W

Optical system

Light colour	4750 K
Maximum luminous intensity (along the optical axis)	70 000 cd
Beam angle	8° FWHM

Reliability

MTBF Electronics	2 130 000 h
Minimum LED Lifetime	60 000 h

Environmental conditions

Regulations	IEC 60945, device type 'exposed'
Ambient temperature (operation)	-40 to 55 °C
Ambient temperature (storage / transport)	-40 to 70 °C
Humidity (operation / storage / transport)	max. 95 % acc. to IEC 60945
Atmospheric pressure (operation / storage / transport)	80 kPa to 108 kPa
Degree of protection (acc. to IEC 60529)	IP67
Protection class	Class III

Mechanical requirements

Vibration testing sinusoidal vibrations	acc. to IEC 60945
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EMC compliance

EMC requirements		Applied standard	Test standard / Test criteria
EMC emission	Radiated interference emission	EN 60945:2002	IEC/CISPR 16-2-3:2010 Measuring distance 3 m
EMC immunity	Electrostatic discharge (ESD)	EN 60945:2002	IEC 61000-4-2:2008 Criterion B 8 kV air discharge 6 kV contact discharge
	Electromagnetic fields	EN 60945:2002	IEC 61000-4-3:2010 Criterion A Field strength 10 V/m
	Fast transients (burst)	EN 60945:2002	IEC 61000-4-4:2012 Criterion B All connections: Test voltage 1 kV
	High energy transients (surge)	EN 61000-6-2:2005	IEC 61000-4-5:2005 1 kV on NAI bus line (shield)
	Conducted interference	EN 60945:2002	IEC 61000-4-6:2008 Criterion A All connections: Test voltage 10 kV

Components



Note: All housing components including the cable glands satisfy the IP67 degree of protection requirements according to IEC 60529. During connection and assembly, ensure that no moisture or dirt penetrates into the open socket.

EMC cable gland ¹⁾	Size	for cable diameter	Key width
	M20 x 1.5	7.5-14.0 mm	24 mm

¹⁾ Typ: HELUTOP® MS-EP4

Material

Housing (Device foot, head, cover for socket)	Anodised, powder-coated aluminium (AlSi12)
Lens	PMMA
Cover LED insert	MAKROLON® (PC)
Cable gland	Nickel-plated brass
Earthing connection	Nickel-plated brass
Cover indicator LED	PMMA
Insulation sleeve	PA
Seals	TPE, injection-molded
Pressure compensation valve for socket and housing	PTFE membrane