DATASHEET

ORIGINALNAi ALS-500-NAI

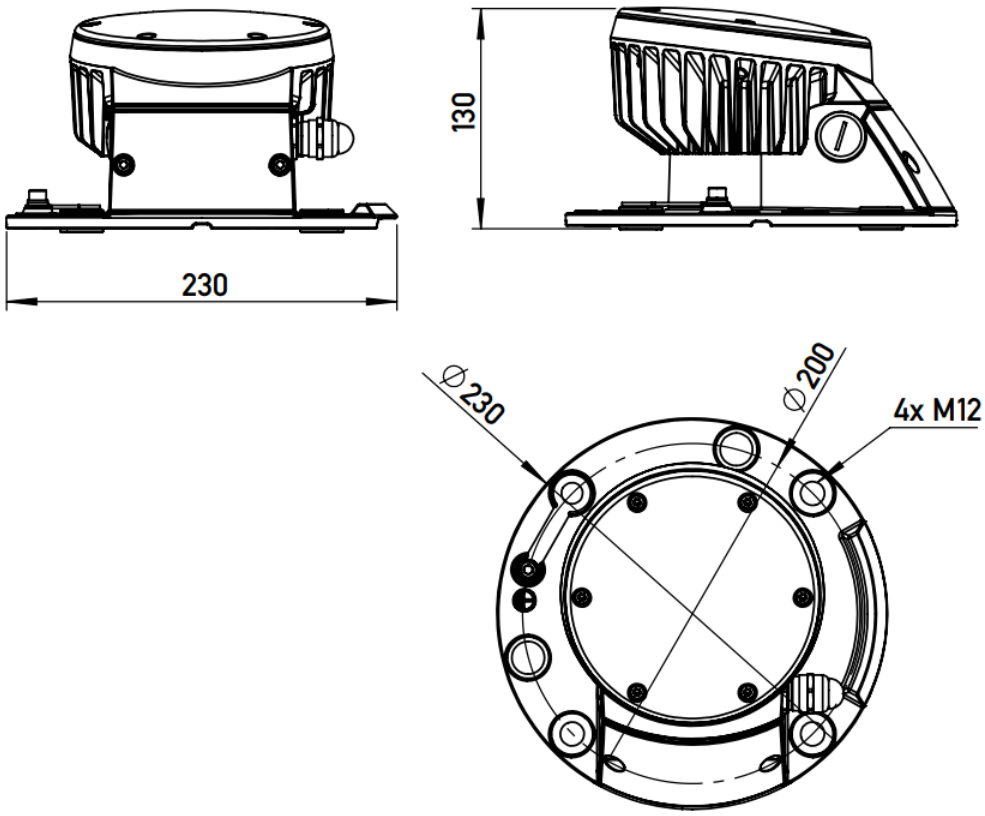
- **Maintenance-free LED technology**
- **Anodised, powder-coated aluminium housing**
- **Power consumption 40 W at maximum operating luminous intensity (70 000 cd)**
- **Beam angle 8° (FWHM)***

The ALS-500-NAI fulfils the WSV's requirements of the technical standard TF11 "helicopter corridors tower illumination in offshore wind farms".

The floodlight illuminates the tower so that a flight path is provided to the helicopter landing platform.

As an NAi product, the floodlight is easily integrated into the NAi bus for power, communication and control. Status and error messages are sent to the central NAi Controller and the information is available through the central SCADA system.

Dimensions & Weight



Diameter	230 mm
Height	130 mm
Diameter Optics	155 mm
Weight	2.72 kg

Material

Housing (Device foot, head, cover for socket)	Anodised, Powder-Coated Aluminium (AlSi12)
Lens	PMMA
Cover LED Insert	Makrolon® AL2647
Cable Gland	Nickel-Plated Brass
Earthing Connection	Stainless Steel 1.4571
Cover Indicator LED	PMMA
Insulation Sleeve	PA
Seals	TPE, Injection-Moulded
Pressure Compensation Valve for Socket and Housing	PTFE Membrane

Optical System

Light Colour	4750 K
Maximum Luminous Intensity (along the optical axis)	70 000 cd
Beam Angle	8° FWHM
Uniformity [E_{min} : E_{max}]	≥ 1 : 10

Components

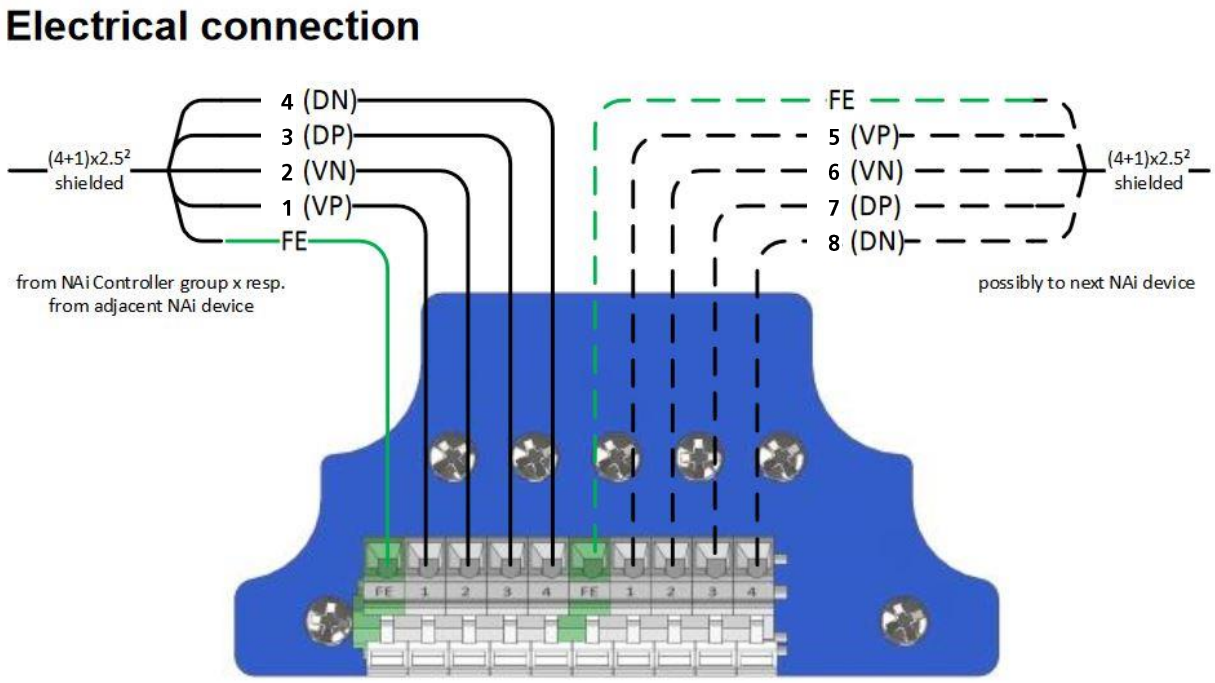
1. Device head
2. Second cable gland M20 or blanking plug
3. Housing cover for socket with spring terminal block
4. Cable gland M20
5. Device foot with integrated socket and third cable gland M20 or blanking plug on the bottom side
6. Earthing connection

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.

	Size	For Cable Diameter	Key Width
EMC Cable Gland	M20 x 1.5	7.5 – 14.0 mm	24 mm

Electrical Connection

Electrical Connection	Spring Terminal Block, max. 2.5 mm²
Operating Voltage V_{IN}	DC 19 to 30 V DC
Power Consumption (V_{IN} = 24 V DC – max. intensity)	40 W



1	VPI	Power Supply Input (Positive)
2	VN	Power Supply Input (Negative)
3	DP	NAi Data (Positive)
4	DN	NAi Data (Negative)
5	VPO	Power Supply Output (Positive – to next device)
6	VN'	Power Supply Output (Negative – to next device)
7	DP'	NAi Data (Positive – to next device)
8	DN'	NAi Data (Negative – to next device)

Environmental Conditions

Regulations	IEC 60945, device type 'exposed'
Ambient Temperature (operation)	-40 °C to 55 °C
Ambient Temperature (storage / transport)	-40 °C 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

Electrical Safety and Health

Protection Class	Class III
Overvoltage Protection	Class III
Pollution Degree	3

Reliability

MTBF (Electronics and LEDs) (acc. To SN 29500-1)	480 000 h
Minimum LED Lifetime	100 000 h

Mechanical Requirements

Vibration Testing Sinusoidal Vibrations	acc. to IEC 60945

EMC Compliance

EMC Requirements		Applied Standard
Emission	Radiation Emission	EN 60945:2002
Interference Immunity	Electrostatic Discharge (ESD) Electromagnetic Fields Fast Transients (burst) Conducted Disturbances	EN 60945:2002
	High Energy Transients (surge)	EN 61000-6-2:2005

Ordering Information

Item Number	Product ID	Details
30230001	ALS-500-NAI	NAi version for connection to NAi bus systems