DATASHEET
ORIGINALNAi ALS-410-NAI

- **Fulfills the German TF13 requirements**
- **Optimized optical head for 1:10 uniform illumination**
- **Anodized & powder-coated housing for better corrosion protection**
- **Class III over voltage protection**
- **60,000 hours minimum LED lifetime**

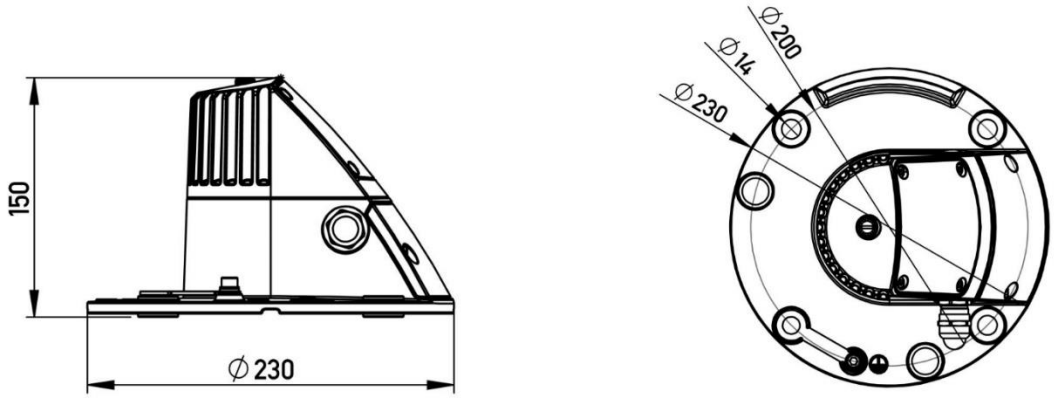
The ALS-410-NAI is used for short range illumination of the daytime marking on the turbine tower or transition piece. It fulfills the German TF13 requirements for color, illumination uniformity and intensity.

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.

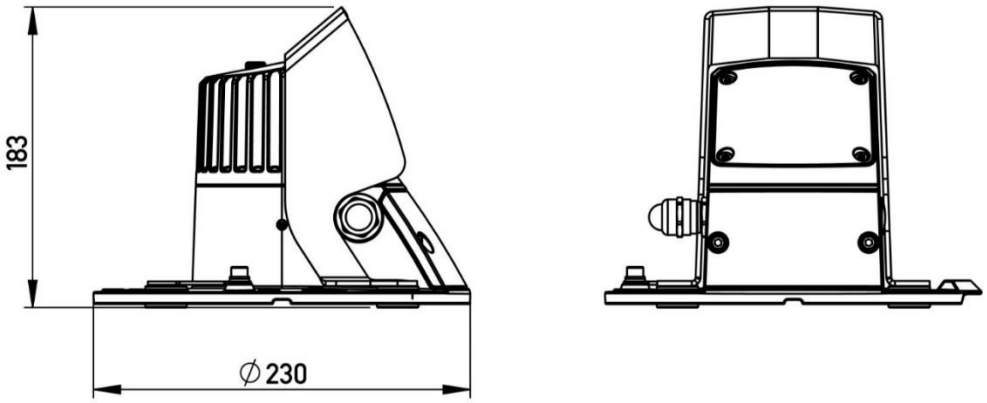
Internal monitoring allows for detection of LED failure, errors in electronic control as well as supply voltage problems, excess temperature and interruption in bus communication.

In the case of interrupted bus communication, the integrated ambient light sensor triggers the light to turn on when the environmental brightness falls below a minimum brightness level. (configurable)

Dimensions & Weight



Dimensions ALS-410-NAI, ALS-410-NAI MR, ALS-410-NAI LR



Dimensions ALS-410-NAI OH, ALS-410-NAI MR-OH, ALS-410-NAI LR-OH

ALS-410-NAI variant	Dimensions (diameter x height)	Weight
ALS-410-NAI, ALS-410-NAI MR, ALS-410-NAI LR	230 mm x 150 mm	2,1 kg
ALS-410-NAI OH, ALS-410-NAI MR-OH, ALS-410-NAI LR-OH	230 mm x 183 mm	2,6 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-molded
Pressure compensation valve for socket and housing	PTFE membrane
Shield (OH variants only)	Stainless steel 1.4571, powder coated

Optical System

Light colour	3000 K
Uniformity [E_{min} : E_{max}]	≥ 1 : 10

Components

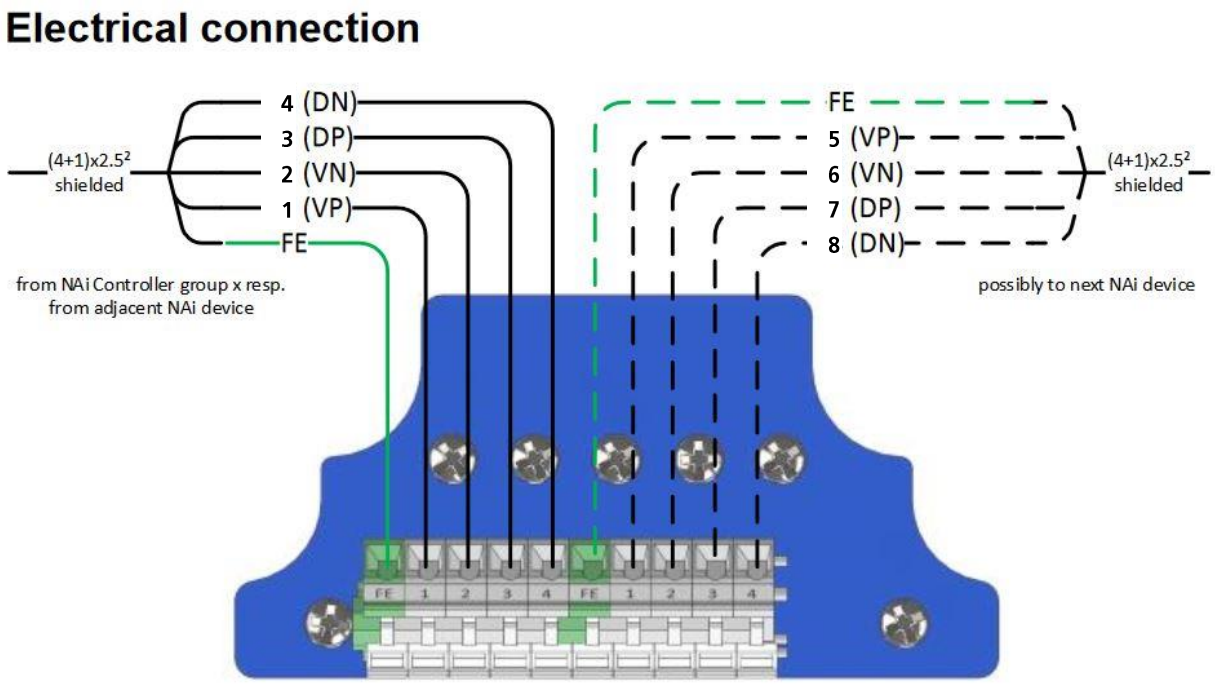
1. Device head with LED insert
2. Light shielding visor (shield); (for OH variants)
3. Indicator LED, light sensor
4. Second cable gland M20 or blanking plug
5. Housing cover for socket with spring terminal block
6. Cable gland M20
7. Device foot with integrated socket and third cable gland M20 or blanking plug on the bottom side
8. Earthing connection
9. Sealing screw or bird spike (not with overhead variants)

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}	19 V DC to 36 V DC
Power consumption (V_{IN} = 24 V DC – max. intensity) ALS-410-NAI, ALS-410-NAI OH ALS-410-NAI MR, ALS-410-NAI MR-OH ALS-410-NAI LR, ALS-410-NAI LR-OH	 14 W 12 W 11 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)	-25 °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)	780 000 h
Minimum LED lifetime	60 000 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	Variant	Distance to the surface to be illuminated
30266521	ALS-410-NAI		1250 – 1500 mm
30266520	ALS-410-NAI	OH	1250 – 1500 mm
30266501	ALS-410-NAI	MR	1700 – 2200 mm
30266500	ALS-410-NAI	MR-OH	1700 – 2200 mm
30266541	ALS-410-NAI	LR	2300 – 2800 mm
30266540	ALS-410-NAI	LR-OH	2300 – 2800 mm