

DATASHEET

ORIGINALNAILED-160-SA

- For use as a 5 nautical mile yellow beacon on an offshore wind turbine
- Maintenance-free LED technology

The LED-160-SA marine lantern is intended for use on offshore wind turbines and can be used without centralised NAI controller. It satisfies IALA recommendation G1162 The Marking of Offshore Man-Made Structures.

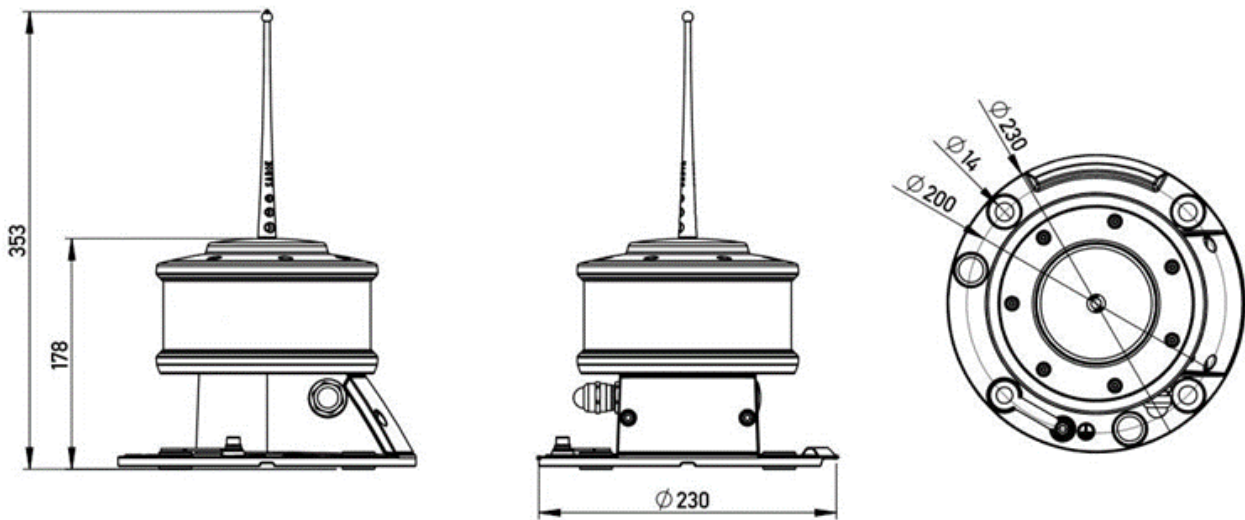
This product is distinguished by its low power consumption, long service life and robust construction. Equipped with light emitting diodes (LEDs) the optical systems is designed for long maintenance intervals. Utilising LED technology also provides the greatest possible light output.

Available Versions

LED-160-SA

LED-160-SA-S

Dimensions & Weight



| | |
|---|---------|
| Diameter Optics | 160 mm |
| Optical Head Diameter | 171 mm |
| Diameter of Optical Head with Segment Panel | 183 mm |
| Diameter Mounting Foot | 230 mm |
| Height without Bird Spike | 178 mm |
| Height with Bird Spike | 230 mm |
| Weight incl. Mounting Foot | 2.55 kg |

Material

| | |
|--|--|
| Housing (Device foot, head, cover for socket) | Anodised, powder-coated aluminium (AlSi12) |
| Lens | PMMA |
| Lens Cover | PC (MAKROLON®) |
| 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 |

Optical System

| LED-160-SA Optical System | |
|---|--|
| Light Colour | Yellow, according to IALA recommendation E-200-1 |
| Light Intensity at +/- 6° Deviation from the horizontal | Approx. 120 cd |
| Beam Angle (vertical) | 8° (FWHM) (= full width at half maximum) |

Components



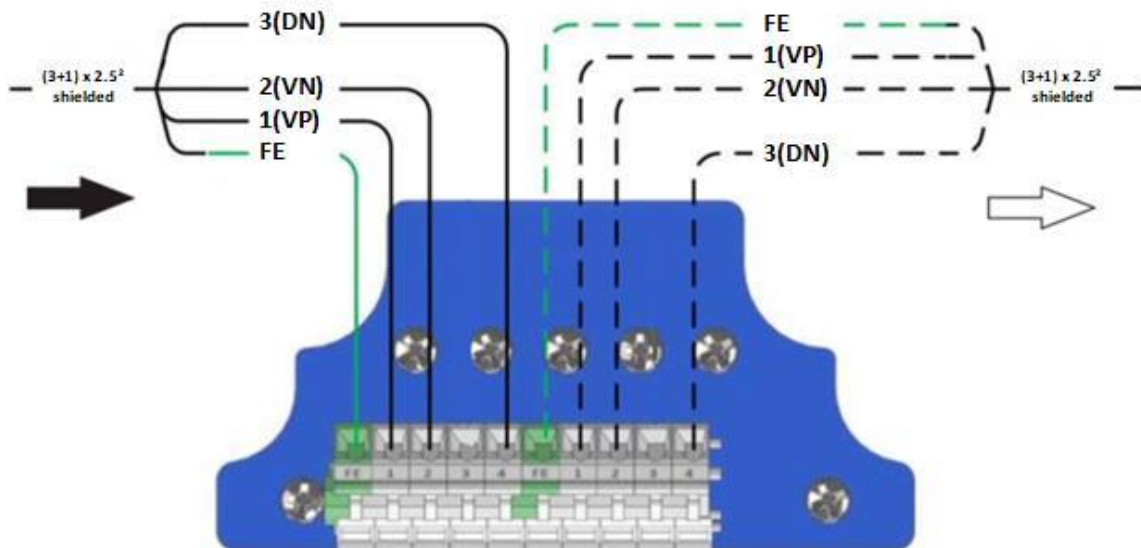
- 1. Device Head with Optics and Bird Spike or Dummy Plug
- 2. Housing Cover for Socket with Spring Terminal Block
- 3. Indicator LED, Light Sensor
- 4. Second Cable Gland M20 or Blanking Plug
- 5. Device Foot with integrated Socket and third Cable Gland M20 or Blanking Plug on the Bottom Side
- 6. Cable Gland M20
- 7. Earthing Connection
- 8. Sector Blind (optional)

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

| LED-160-SA Optical System | |
|---|---|
| Electrical Connection | Spring Terminal Block, max. 2.5 mm ² |
| Rated Voltage | DC 24.0 V (-20 ... +25%) |
| Nominal Voltage | DC 24 V |
| Power Consumption, Maximum, at max. Intensity | 2 W |
| EMC Cable Gland (M20x1.5) | Cable Diameter of 7.5 ... 14 mm |



| | | |
|---|----|---|
| 1 | VP | Power Supply Input (Positive) |
| 2 | VN | Power Supply Input (Negative) |
| 3 | DP | N.C. |
| 4 | DN | Control |
| 1 | VP | Power Supply Output (Positive – to next Device) |
| 2 | VN | Power Supply Output (Negative – to next Device) |
| 3 | DP | N.C. |
| 4 | DN | Control |

Environmental Conditions

| | |
|--|----------------------------------|
| Regulations | IEC 60945, Device Type 'exposed' |
| Ambient Temperature (Operation) | -25 ... 55 °C |
| Ambient Temperature (Storage / Transport) | -40 ... 70 °C |
| Humidity (Operation / Storage / Transport) | Max. 95 % acc. To IEC 60945 |
| Atmospheric Pressure (Operation / Storage / Transport) | 80 ... 108 kPa |
| Degree of Protection (acc. to IEC 60529) | IP66, IP67 |

Electrical Safety and Health

| | |
|------------------------|-----------|
| Protection Class | Class III |
| Overvoltage Protection | Class III |
| Pollution Degree | 3 |

Reliability

| | |
|----------------------|-------------|
| MTBF Electronics | 2 130 000 h |
| Minimum LED Lifetime | 100 000 h |

Compliance

| | |
|-------------------------------|---|
| Electromagnetic Compatibility | EN 60945:2002, category "exposed" EN 61000-6-2:2005 EN 301 489-1 V2.1.1 EN 301 489-19 V2.1.0 |
| Environmental | EN 60945:2002, category "exposed" IEC 61892-1:2019 EN 60598-1:2015 + A1:2008 |
| Product Safety | EN 60598-1:2015 + A1:2018 |
| Mechanical | EN 60945:2002, category "exposed" EN 60598-1:2015 + A1:2018 EN 61892-3:2019 |

Ordering Information

| Item Number | Product ID | Details |
|-------------|--------------|--|
| 30402400 | LED-160-SA | 5 NM Marine Lantern, Stand Alone |
| 30402300 | LED-160-SA-S | 5 NM Marine Lantern, Stand Alone with Sector Blind |