SE/MARK MARINE LANTERN

- **2, 3 or 5 nautical mile marine lantern for marking offshore wind turbines**

- **Smart photocell, water ingress detection, optical feedback and LED monitoring**

- **Standard NAi bus interface for power supply and communication**

- **Bluetooth interface for commissioning and testing**

The SeaMark Marine Lantern is designed for specifically for offshore wind turbines, satisfying IALA G1162 recommendations*. The optical head is integrated into the rugged stainless-steel housing. Optional SeaMark brackets make for easy installation on any railing.
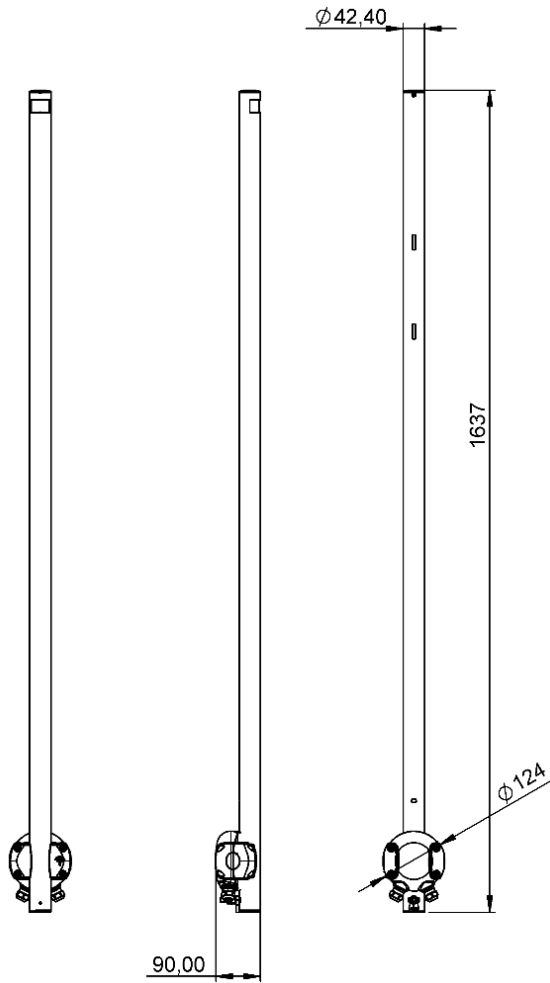
Advanced monitoring technology allows for water ingress detection and LED optical performance feedback in addition to normal monitoring functions.

Available Versions

ML02-NAI
ML03-NAI
ML05-NAI

* IALA G1162, "The marking of man-made offshore structures"

SABIK Offshore GmbH · Wilhelm-Maybach-Straße 3 · 19061 Schwerin · Germany
Tel. +49 385 676700-0 · info@sabik-offshore.com · www.sabik-offshore.com

Datasheet: ML-NAI
Revision 01 · 18.05.2022   Page 1 of 6

Dimensions & Weight

Diameter of Junction Box	124 mm
Diameter of Stainless-Steel Enclosure	42 mm
Height	1637 mm
Weight	4.62 kg

SABIK Offshore GmbH · Wilhelm-Maybach-Straße 3 · 19061 Schwerin · Germany
Tel. +49 385 676700-0 · info@sabik-offshore.com · www.sabik-offshore.com

Datasheet: ML-NAI
Revision 01 · 18.05.2022

Page 2 of 6

Material

Tube	Stainless Steel 316 L / 1.4404
Housing Junction Box	LEXAN™ Resin EXL5689
Housing Optical Head	LEXAN™ LS2
Gasket	THERMOLAST® K TC3GPZ

Optical System

	ML02-NAI	ML03-NAI	ML05-NAI
Light Colour	Yellow (according to IALA Recommendation R0201 (E-200-1) Marine Signal Lights – Colours)		
Mean Light Intensity (along the optical axis)	12 cd (± 6 %)	30 cd (± 6 %)	149 cd (± 3 %)
Beam Angle (vertical)	5° FWHM		
Beam Angle (horizontal)	182° ±2°		

Components

| 1.	Optical Head
2.	Stainless Steel Housing
3.	Earthing
4.	Junction Box
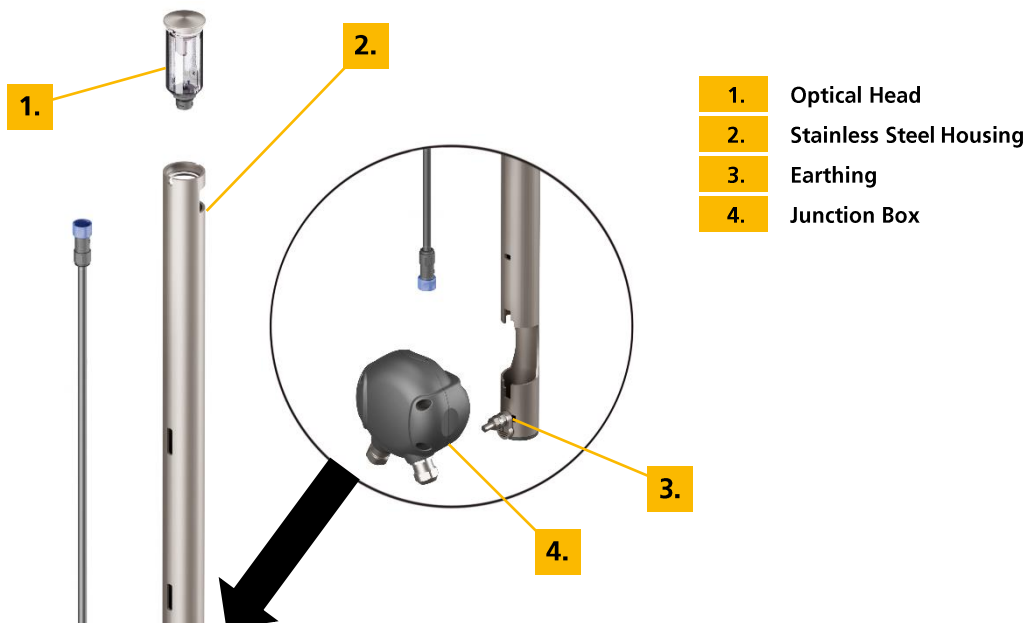
Note: All housing components including the cable glands satisfy the IP67 degree of protection requirements according to IEC 60529. During connection and assembly, ensure that no moisture or dirt penetrates into the open socket.

	Size	For Cable Diameter	Key Width
EMC Cable Gland	M20 x 1.5	8.0 – 15.0 mm	24 mm

SABIK Offshore GmbH · Wilhelm-Maybach-Straße 3 · 19061 Schwerin · Germany
Tel. +49 385 676700-0 · info@sabik-offshore.com · www.sabik-offshore.com

Datasheet: ML-NAI
Revision 01 · 18.05.2022
Page 3 of 6

Electrical Connection

	ML02-NAI	ML03-NAI	ML05-NAI
Electrical Connection	Spring terminal block, max. 2.5 mm^2		
Operating Voltage V_{IN}	DC 24.0 V (-25 % / +25 %)		
Power Consumption (Peak, V_{IN} = DC 24 V)	1.6 W	1.8 W	2.0 W
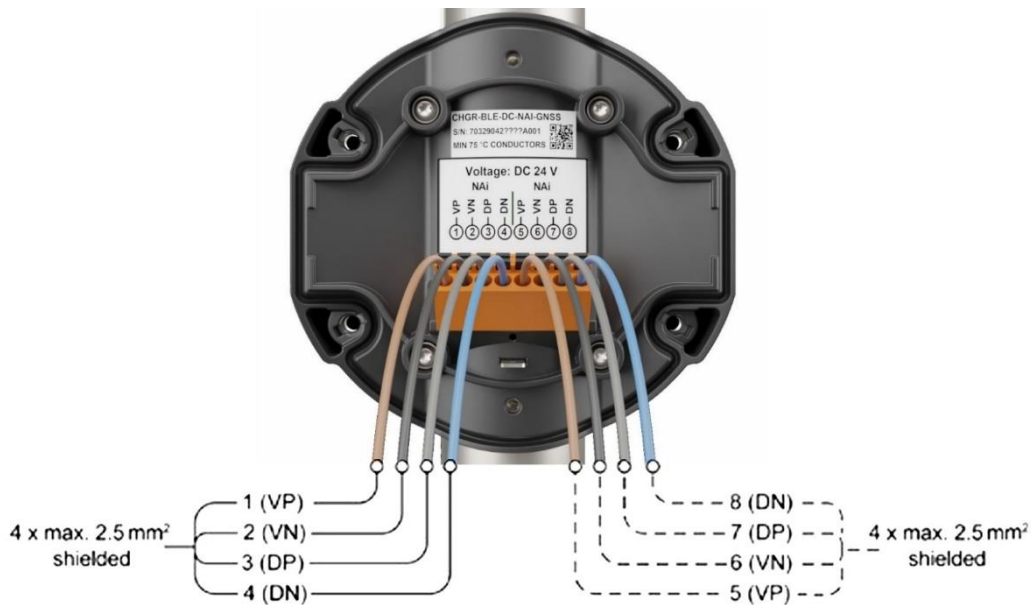
1	VPI	Power Supply Input (Positive)
2	VN	Power Supply Input (Negative)
3	DP	NAi Data (Positive)
4	DN	NAi Data (Negative)
5	VPO	Power Supply Output (Positive – to next device)
6	VN'	Power Supply Output (Negative – to next device)
7	DP'	NAi Data (Positive – to next device)
8	DN'	NAi Data (Negative – to next device)

SABIK Offshore GmbH · Wilhelm-Maybach-Straße 3 · 19061 Schwerin · Germany
Tel. +49 385 676700-0 · info@sabik-offshore.com · www.sabik-offshore.com

Datasheet: ML-NAI
Revision 01 · 18.05.2022

Page 4 of 6

Environmental Conditions

Ambient Temperature (operation)	-25 °C to 55 °C
Ambient Temperature (storage / transport)	-40 °C to 70 °C
Humidity (operation / storage / transport)	95 % r.h. up to 45 °C 70 % r.h. for T > 45 °C
Atmospheric Pressure (operation / storage / transport)	80 kPa to 108 kPa
Degree of Protection (acc. to IEC 60529)	IP66/IP67
Luminaire Classification (acc. to EN 60598-1:2018)	Rough Service Luminaire
Impact Protection (acc. to IEC 62262-1:2018)	IK08
Lightning Protection Zone (acc. to IEC 62305-4:2010)	$LPZ0_B$

Electrical Safety and Health

Protection Class	Class III
Overvoltage Protection	Class III
Pollution Degree	3

Reliability

IALA Category	1** (assumed MTTR of 96 h)
MTBF Electronics	974 000 h
Minimum LED Lifetime	100 000 h

** IALA Recommendation O-130-Categorisation and Availability Objectives for Short Range AtoN

SABIK Offshore GmbH · Wilhelm-Maybach-Straße 3 · 19061 Schwerin · Germany
Tel. +49 385 676700-0 · info@sabik-offshore.com · www.sabik-offshore.com

Datasheet: ML-NAI
Revision 01 · 18.05.2022

Page 5 of 6

Compliance

Electromagnetic Compatibility	EN 60945:2002, category "exposed" EN 61547:2009 EN 61000-6-2:2005 EN 61000-6-4:2007 + A1:2011 EN 55015:2013 ETSI EN 303 446-2 V1.2.0 (2019-03) ETSI EN 301 489-1 V2.1.1 FCC Part 15 B Bluetooth ETSI EN 301 489-17 V3.1.1 ETSI EN 300 328 V2.1.1 ETSI EN 300 330 V2.1.1 GNSS module ETSI EN 301 489-19 V2.1.0 ETSI EN 303 413 V1.1.1
Environmental	EN 60945:2002, category "exposed" IEC 61892-1:2019 EN 60598-1:2015 + A1:2008
Product Safety	EN 60598-1:2015 + A1:2018
Health	EN 62471:2008
Mechanical	EN 60945:2002, category "exposed" EN 60598-1:2015 + A1:2018 IEC 61892-1:2019 IEC 61892-3:2019

Ordering Information

Item Number	Product ID	Details
30293300	ML02-NAI	SeaMark Marine Lantern for 2 NM
30295400	ML03-NAI	SeaMark Marine Lantern for 3 NM
30291400	ML05-NAI	SeaMark Marine Lantern for 5 NM

SABIK Offshore GmbH · Wilhelm-Maybach-Straße 3 · 19061 Schwerin · Germany
Tel. +49 385 676700-0 · info@sabik-offshore.com · www.sabik-offshore.com

Datasheet: ML-NAI
Revision 01 · 18.05.2022   Page 6 of 6