



Marine & Offshore

Certificate number: 28061/B0 BV

File number: AP 1913

Product code: 2842I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

PRAXIS AUTOMATION TECHNOLOGY B.V.
LEIDERDORP - NETHERLANDS

for the type of product

NAVIGATION LIGHT SWITCHBOARDS AND CONTROL PANELS
Mega-Guard NLCS

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships.
IMO Resolution MSC.253(83).

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 22 Nov 2022

For Bureau Veritas Marine & Offshore,
At BV GRONINGEN, on 22 Nov 2017,
John Mondt



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **Mega-Guard NLCS** is a navigation light switchboard panel for the control and monitoring of LED and Bulb type of navigation lights.

1.1 - Main characteristics:

Power supply	19 - 32 VDC - 730W maximum
Installation	Flush Panel
Redundant Ethernet Link	2 Ports RJ45
USB compliance	2 Ports USB 2.0
Software Version	1.28.0.0

1.2 - Components:

Part N°	Description
93.0.930	Navigation Light Control Panel
99.8.029	I/O Cable
98.6.030.800	Navigation Light I/O Module for Bulb Lamps
98.6.030.801	Navigation Light I/O Module for LED Lamps

2. DOCUMENTS AND DRAWINGS:

- 2.1 - Operator Guide, Rev. 1.06, dated 09/09/2010
- 2.2 - Set of Drawings N°91.6.010.8000-A1, rev. C, dated 12/04/2010

3. TEST REPORTS:

- 3.1 - Praxis Test Report N° FAT_NAV-LIGHT_IEC-61162-1, Rev.002, dated 22/12/2012
- 3.2 - Praxis Damp Heat Test Report, Rev. 1.1, dated 09/09/2010
- 3.3 - Praxis Dry Heat Test Report , Rev. 1.0, dated 09/09/2010
- 3.4 - Praxis Environmental Test Report, Rev. 1.2, dated 09/09/2010
- 3.5 - Praxis low Temperature Test Report, Rev. 1.0, dated 09/09/2010
- 3.6 - TNO Test Report N° TNO-034-DTM-2010-00283, dated 25/01/2010
- 3.7 - BICON Test Report N° PRA-20091214-X1, dated 01/04/2010
- 3.8 - Praxis EMC Test Report, Rev. 1.1, dated 09/09/2010
- 3.9 - Praxis Insulation Resistance Test Report, Rev. 1.0, dated 08/09/2010
- 3.10 - BICON Test Report N° PRA-20110906-X1-ANS, dated 23/09/2011
- 3.11 - BICON Test Report N° PRA-20110906-X1-CSD, dated 23/09/2011

4. APPLICATION / LIMITATION:

- 4.1 - BUREAU VERITAS Rules and Regulations for the Classification of Steel Ships.
- 4.2 - BUREAU VERITAS Environmental Category, **EC Code: 31**
- 4.3 - As per MSC253(83)
- 4.4 - Approval valid for ships having to comply with SOLAS 74 Convention, as amended, and for units having to comply with IMO Resolution A649 (The "MODU Code").
- 4.5 - Connection of groundings inside of switching cabinet and the use of feed through capacitors for every lamp line are to be in accordance to tested equipment.
- 4.6 - Interface modules for the external monitoring mode are not covered by the present certificate.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The **Navigation light control panels** are to be supplied by **PRAXIS Automation Technology B.V** in compliance with the type and the requirements described in this certificate.
- 5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.
- 5.3 - BV product certificate is required.

6. MARKING OF PRODUCT:

- Maker's name or trade mark.
- Date of manufacture and/or serial number.
- Equipment type or model identification under which it was type-tested.
- \ or @ conformity marking, as relevant

7. OTHERS:

7.1 - t is **PRAXIS Automation Technology B.V** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No.28061/A0 BV issued on 26 Sept. 2012 by the Society.

***** END OF CERTIFICATE *****