DNV·GL

Certificate No:
TAA00000BZ

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Navigation Light Controllers

with type designation(s)
TMS-NLC-01

Issued to
TMS Solution Co., Ltd.
Busan, Republic of Korea

is found to comply with
IMO Res. A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids
IMO Res.MSC.253(83) Performance standards for navigation lights, navigation light controllers and associated equipment
MSC.191(79) Performance standards for presentation of navigation-related information on shipborne navigational displays
DNV GL rules for classification – Ships

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2021-10-25**.

Issued at **Busan** on **2016-10-26**

for **DNV GL**

DNV GL local station: **Pusan**

Approval Engineer: **Kwang Whan Cho**

Baeg Soon Choi
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-012075-3**
Certificate No: **TAA00000BZ**

Product description

Navigation Light Control Panel,TMS-NLC-01, consists of two components ;

Components	Software Version	Location
Display Box	TMS-NLC-FW-3.x	Protected
Relay Box	TMS-NLC-FW-3.x	Protected

Application/Limitation

- The systems shall be connected to navigational lights required in COLREG and MSC.253(83)
- The system shall be tested and verified on board in accordance with user manual.

Type Approval documentation

DNVGL No.	Document No.	Rev.No	Document Title
19	RN-FT-16-1	-	Test Report.
18	TMS-SP-DF-03-01	2.0	User Manual
13	RN-FT-11-1	-	Interface Performance Test Report
12	E11NR-031	-	EMC Test Report
11	R11NR-016	-	Environmental Test Report
8	TMS-NLC-11-010	-	Drawing of navigation light controller

Tests carried out

- IEC60945(2002, Ed.4)
- IEC61162-1 (2010, Ed.4)
- IEC62288 (2014, Ed.2)
- IMO Resolution MSC. 253(83)
- DNVGL Rule for classification of ships, Pt.4 Ch.8, (2016 July)

Marking of product

The Manufacture and Type Designation to be applied to the equipment in a clearly visible location and in addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.

Periodical assessment

A retention survey is to be performed at least once every second year, and again upon renewal of this certificate. The second of the retention/renewal survey is to verify that production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.