



Certificate No:
TAE00004EY

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Control Panel

with type designation(s)
Dali based lighting control system

Issued to

DAEYANG ELECTRIC CO., LTD.
Busan, Korea, Republic of

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product approved by this certificate is accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2022-03-28**

This Certificate is valid until **2027-03-27**.

for **DNV**

DNV local station: **Gimhae Station**

Approval Engineer: **Nicolay Horn**

.....
Trond Sjøvåg
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2021-03

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Page 1 of 2

Product description

Dali Based Lighting Control Panel

Attribute	Value
Nominal voltage	110 to 220 ± 10 %
Rated frequency	50 / 60 Hz ± 2 %
Power consumption	
Bus-ch Comfort touch 0	< 16 W
Bus-ch Comfort touch 12	< 18W
KNX connection	Bus connection terminal screw on
Audio out connection	(L CN R) Plug-in terminal 1 V _{rms} 10 k Ω
Multimedia card / SD card	SD SDHC and micr0 SD. SDHC with appropriate adapter
USB Stick connection	USB 2.0 USB socket type A 5 V / 100 mA
LAN connection	RJ 45
Protection type	IP 20 / IP44
Material of LCP	
Dimension (W x H x D)	760 x 760 x 210

Application/Limitation

Installation and operating instruction of the manufacturer to be followed.

Location classes:

Temperature:	B
Humidity:	B
Vibration:	A
EMC:	A
Enclosure:	A

When the additional class notation HELDK with qualifier (H) applies to vessels, the actual arrangement of helideck lighting shall comply to Pt.6 Ch.5 Sec.5 [6].

Type Approval documentation

Tests carried out

Applicable tests according to DNV Class program DNV-CP-0572, November 2021.

Marking of product

Manufacturer – Product type designation – Serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE