



# TYPE APPROVAL CERTIFICATE

**Certificate No.** : CPH06107-AE001                      **Initial Approval** : 9th September, 2020  
**Product** : Electrical Indicators  
**Manufacturer** : DEIF A/S  
Frisenborgvej 33, DK-7800 Skive, Denmark

**Product Description** : Type : XL72, XL96, XL144, XL192,  
BW144, BW192, BRW-2,  
XD<sub>i</sub> 96, XD<sub>i</sub> 144, XD<sub>i</sub> 192,  
XD<sub>i</sub> 96 N, XD<sub>i</sub> 144 N, XD<sub>i</sub> 192 N

" See Appendix 1 "

**Approval Condition** : " See Appendix 1 "

**THIS IS TO CERTIFY** that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 8th September, 2025

Issued at Busan, Korea on 9th September, 2020



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No (ME20032137004) and certificate No.(CPH06107-AE001).



**KOREAN REGISTER**

*General Manager of  
Marine & Ocean Equipment Team*

- Note :**
1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
  2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
  3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
  4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

## Appendix 1

# Product Description and/or Approval Condition

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Date of Issue : 9th September, 2020

## A. Product Description

### 1. Product Specification

- 1) Power supply : 24V DC
- 2) Dimension (WxHxD)
  - XL72 (77x77x96mm), XL96 (102x102x96mm), XL144 (148x148x96mm), XL192 (196x196x96mm)
  - BW144 (148x148x110mm), BW192 (196x196x110mm), BRW-2 (240x415x117mm)
  - XDi 96 (102x102x58.2mm), XDi 144 (148x102x58.2mm), XDi 192 (196x148x60.6mm),
  - XDi 96 N (102x102x87.1mm), XDi 144 N (148x102x87.1mm), XDi 192 N (196x148x89.5mm)
- 3) Interfaces
  - XL/BW/BRW-2 : Analogue interface (voltage/current) or CAN interface
  - XDi/XDi-N : CAN interface, Optional (analogue (AX1 module required), digital (DX1 module required), serial (NX1/NX2 module required))

### 2. Approved Drawings and Documents

- 1) Documents
  - XL/BW/BRW-2 series datasheet No. 4921250057V
  - XDi datasheet No. 4921250067D
  - Test plan Ver.1.1 dated 2020-07-14

### 3. Test Reports, etc.

- 1) Test Reports
  - IPA 0220-06, IPA 0182, IPA 0293, IPA 0340-01, IPA 0375-01, EPC 679 XDi, 4910217502N, 4910217505F, 4910216501M
- 2) Software quality plan for XDi/XDi-N dated 2018-03-19

## B. Approval Condition

### 1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and approved documentation.
- 2) The manufacturer should inform this Society of all kinds of revisions of the equipment. If the changes are recognized to affect functionality of the approved equipment, type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.
- 3) Degree of protection shall be complied with Rule Pt.6 Ch.1 Sec.2 201.2.(5).

### 2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual product certification is not required.

### 3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

### 4. Others

- 1) Test condition

Test	Condition	Remark
EMC	All locations including the bridge and deck zone	Up to 6GHz
Temperature	-25 ~ 70°C	-
Vibration	Acceleration $\pm 0.7g$ Acceleration $\pm 4g$	- Only BRW-2
Salt mist	Applied	-

< End of Certificate >