



Marine &amp; Offshore

Certificate number: 50067/A1 BV

File number: AP1

Product code: 4483H

*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*

**Beijer Electronics AB**

Malmö - SWEDEN

*for the type of product*

**DISPLAY MONITORS / VIDEO SCREENS / TERMINALS**

X2 Extreme family HMI Touch Panels

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 33B/43B

*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: 10 Apr 2023**

**For Bureau Veritas Marine & Offshore,**

At BV GOTHENBURG, on 08 May 2018,

Magne MOLLER



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](http://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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1.PRODUCT DESCRIPTION:

Human Machine Interface **X2 extreme family** with TFT-LCD with LED backlight display and touch screen.

#### **1.1 - Models Identification:**

Model Names	Display size	Standard compass safe distance	Steering compass safe distance
X2 extreme 7	7"	40 cm	25 cm
X2 extreme 7 12V		40 cm	25 cm
X2 extreme 7 HP		30 cm	20 cm
X2 extreme 7 HP SC (*)		30 cm	20 cm
X2 extreme 7 HP SM (*)		30 cm	20 cm
X2 extreme 12	12.1"	70 cm	50 cm
X2 extreme 12 HP		80 cm	55 cm
X2 extreme 12 HP SC (*)		80 cm	55 cm
X2 extreme 12 HP SM (*)		80 cm	55 cm
X2 extreme 15	15.4"	80 cm	60 cm
X2 extreme 15 HP		70 cm	50 cm
X2 extreme 15 HP SC (*)		70 cm	50 cm
X2 extreme 15 HP SM (*)		70 cm	50 cm

Legend: 12V= 12 Volt; HP= High Performance

(\*) indicates software option: SC= Soft Control; SM= Soft Motion

#### **1.2 - Specification:**

- Display: TFT-LCD with LED backlight
- Degree of protection: IP66 (front panel) / IP20 (rear panel)
- Power supply: +24 VDC (or 12VDC for X2 extreme 7 12V)
- Frame material: Powder-coated aluminium
- Operating system: Windows Embedded Compact 2013 Runtime
- Software: iX Runtime Version 2.30.

### 2. DOCUMENTS AND DRAWINGS:

#### **ETC:**

- Type Approval Document No TD-TA-130218-03 Rev.0, dated 18 Feb 2013.

#### **Beijer Electronics:**

- DDOC-00025, X2 extreme 7 Final Assembly Instruction Rev A, dated 28 Mar 2017.
- DDOC-00026, X2 extreme 12 Final Assembly Instruction Rev A, dated 31 Mar 2017.
- DDOC-00027, X2 extreme 15 Final Assembly Instruction Rev A, dated 06 Avr 2017.
- DDOC-00028, X2 extreme 7 UL Terminal Dimensions Rev A, dated 03 Avr 2017.
- DDOC-00029, X2 extreme 12 UL Terminal Dimensions Rev A, dated 03 Avr 2017.
- DDOC-00030, X2 extreme 15 UL Terminal Dimensions Rev A, dated 10 Avr 2017.
- DTSCRN-00001, Touchscreen T7BR-2 res 4w 3H Rev C, dated 06 Nov 2015.
- DTSCRN-00002, Touchscreen T12BR-2 res 5w 3H Rev C, dated 10 Nov 2015.
- DTSCRN-00003, Touchscreen T15BR-2 res 5w 3H Rev C, dated 23 Nov 2015.
- MS-Z4201-001, Front Gasket 7 B Rev E, dated 18 Jun 2014.
- MS-Z4281-001, Front Gasket iX Panel T12B Rev B, dated 16 Jun 2011.
- MS-Z4301-006, Beijer,Front Gasket 15.4 OPT Rev D, dated 16 Jun 2011.
- X2 extreme Installation Manual, MAEN239, dated May 2017.

### 3. TEST REPORTS:

#### **Electronic Testing center:**

- Power supply variation Test report No.: 17-04-MAS-029-01/02, dated 08 Jun 2017.
- Dry Heat, Damp Heat & Cold, No.: 17-06-EAT-006-E00, dated 01 Jun 2017.

#### **CAL-TECH Technology Co, Ltd**

- High Voltage & Insulation Resistance Test, Report No.170418001T, dated 22 May 2017.
- Compass Safe Distance Test, Report No.170418001T-1, dated 03 Jun 2017.

#### **Universal testing Inc.:**

- Inclination Test Report No.: UT106095, dated 28 Jun 2017.

#### **Vibration Source Technology Co.,Ltd:**

- Vibration Test Reports N° VS-TV-060509-01/02/03/04/05/06/07, dated 21 May 2017.

- Shock Test Reports N°VS-TS-060522-01/02/03/04/05/06/07, dated 22 May 2017.

**PAL Acoustics:**

- Acoustic noise test report, report No.TH2\_17\_0136-1, dated 05 May 2017.

**Compliance Certification Service Inc.:**

- EMC Test Report N° T170428D05-E, dated 24 May 2017
- EMC Test Report N° T170428D08-E, dated 24 May 2017
- EMC Test Report N° T170428D10-E, dated 24 May 2017
- EMC Test Report N° T170428D11-E, dated 24 May 2017
- EMC Test Report N° T170428D12-E, dated 24 May 2017
- EMC Test Report N° T170428D13-E, dated 24 May 2017
- EMC Test Report N° T170428D14-E, dated 24 May 2017

**4. APPLICATION / LIMITATION:**

4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - BUREAU VERITAS Environmental Category, **EC Code: 33B/43B.**

4.4 - Equipment fulfils the EMC requirements for installation on the Bridge and Deck Zone.

4.5 - Only Hardware and Firmware successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.

4.6 - Compass safe distance and environmental tests according to IEC 60945 4th Edition (2002).

**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - The above products are to be supplied by **Beijer Electronics AB** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **Beijer Electronics AB** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - **Beijer Electronics AB** has declared to Bureau Veritas the following production sites:

**Beijer Electronics AB**  
**Box 426**  
**Stora Varvsgatan 13A**  
**201 24 Malmö**  
**SWEDEN**

**Beijer Electronics**  
**4F, No.501-15, Zhongzheng Rd.,**  
**Xindian Dist.,**  
**New Taipei City,**  
**Taiwan 23148**

**6. MARKING OF PRODUCT:**

- Trade name.
- Date of manufacture and serial number.
- Equipment type or model identification under which it was type-tested.

**7. OTHERS:**

7.1 - It is **Beijer Electronics AB's** 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. 50067/A0 BV issued on 10/04/2018 by the Society.

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