

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Peripheral Equipment**

with type designation(s)

**DuraMON 19 GLASS, DuraMON 24 GLASS, DuraMON 26 GLASS, DuraMON 27 GLASS**

Issued to

**ISIC A/S**  
**BRABRAND, Denmark**

is found to comply with

**DNV GL rules for classification – Ships and offshore units**  
**IEC 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:****Temperature A**  
**Humidity B**  
**Vibration A**  
**EMC B**  
**Enclosure A / IP20,**  
**B / IP65\*****\* IP65 when sealed to console**This Certificate is valid until **2018-12-31**.Issued at **Høvik** on **2017-01-02**DNV GL local station: **Aalborg**Approval Engineer: **Nils Jarem**for **DNV GL**

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**Odd Magne Nesvåg**  
**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.

Job Id: **262.1-017543-3**  
Certificate No: **TAA00000AZ**  
Revision No: **1**

## Product description

ISIC 19", 24" 26" and 27" Marine Monitor Build in w/Glass front panel, comprising the following models:

Model name	Part No.	Description
DuraMON 19 GLASS	07019-XXX	19" (5:4) Marine Monitor Build in w/Glass front panel
DuraMON 24 GLASS	07024-XXX	24" WS (16:10) Marine Monitor Build in w/Glass front panel
DuraMON 26 GLASS	07026-XXX	26" WS (16:10) Marine Monitor Build in w/Glass front panel
DuraMON 27 GLASS	07027-XXX	27" WS (16:9) Marine Monitor Build in w/Glass front panel

XXX designate OEM variants of the products. The variants will include PSU option and optional OEM logo.

Options for all models:

- Power 100-240 VAC 50/60 Hz (marine approved for 115-230 VAC nominal voltage)
- Power supply 24 VDC (marine approved for 24VDC nominal voltage)
- Power supply 24 VDC and 100-240 VAC 50/60 Hz (redundant)  
(marine approved for 24VDC and 115-230 VAC nominal voltage)
- VESA Table stand 150x280 mm
- VESA Wall mount 150x280 mm
- The monitor comes with either Display Port or HDMI as third input signal. DVI and VGA are standard.
- Built-in buzzer
- PCAP touch option

Compass safe distance measurements:

DuraMON 19 GLASS: Standard 165 cm. Steering 105 cm.  
DuraMON 24 GLASS: Standard 225 cm. Steering 135 cm.  
DuraMON 26 GLASS: Standard 190 cm. Steering 115 cm.  
DuraMON 27 GLASS: Standard 220 cm. Steering 135 cm.

Overview of tested hardware/firmware including name and versions are listed in ISIC's statement "ISIC statement no. 2017-01".

## Place of manufacture

ISIC A/S  
Edwin Rahrs Vej 54  
DK-8220 Brabrand

## Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

## Type Approval documentation

User Reference Manual: 07052-050 rev. C

Data Sheets: DuraMON Glass 19" RADAR / ECDIS 2 page flyer rev. 13.12.2015,  
DuraMON Glass 24" / 26" Radar / ECDIS 2 page flyer rev. 14.12.2015.  
DuraMON Glass 27" Radar / ECDIS 2 page flyer rev. 22.12.2016.

Drawings: 07317-000 rev.A - (DuraMON VESA 150x280 stand),  
07317-001 rev.A - (DuraMON VESA 150x280 wall).

Test Reports: SP Report 4P01898, dated 2014-05-22 - (DuraMON 19/24/26 GLASS),  
SP Report 5P05962 rev.1, dated 2015-12-16 - (DuraMON 19/24/26/27 GLASS),  
Delta Test Report DANAK-19/14817 rev.A - (Vibration test of Table Stand),  
SP Report 6P08031, dated 2016-12-14 - (DuraMON 27 Glass).

Statements: Product declaration acc.to EN60945 ed.4 section 8.12.1 (Corrosion),  
dated 2014-05-15 - (DuraMON xx GLASS),  
Product declaration acc.to EN60945 ed.4 section 12.4.1 (X-radiation),  
dated 2014-05-15 - (DuraMON xx GLASS),

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Additional comments / document overview – DNV certificate on DuraMON 19 / 24 / 26 GLASS dated 2014-09-25,  
Additional comments / document overview – certificate update, dated 2016-01-27,  
Additional comments / document overview – update and new certificate, dated 2016-12-22,  
ISIC statement no. 2017-01, dated 2017-01-02.  
Assessment report: EU RO MR type approval PQA scheme periodical assessment checklist, DNV GL Aalborg 2014-06-20.

### Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.  
Applicable tests for protected equipment according to IEC 60945, 4<sup>th</sup> edition (2002).

### Marking of product

Manufacturer's name: ISIC  
Type No.: Model name as listed under product description  
Unique serial No.  
Year of manufacture: YYYY  
(Additionally to the year of manufacture, year and week of production is included in the serial No.)  
Power supply ratings: Mains voltage as listed under product description + Mains current

### Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE