

EU RO MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

This Certificate is issued to

ISIC A/S
BRABRAND, Denmark

for

Monitors, Terminals

with type designation(s)

**DuraMON22WS TN, DuraMON22WS, DuraMON24WS, DuraMON27WS, MD 22 TN, MD 22 MKII,
MD 24 MKII, MD 27 MKII, MD 27 KM05 MKII Marine Monitors**

The product is found to comply with

**EU RO Mutual Recognition Technical Requirements for Display Monitors, Video Screens,
Terminals**

Intended service

Display for alarm and monitoring systems subject to classification.

The monitors have been verified for compliance with EU Mutual Recognition Technical Requirements for display monitors, video screens, terminals version 0.3 dated 2016-04-01. Radiated electromagnetic field immunity in the range 2 GHz to 6 GHz at 10 V/m according to IEC 61000-4-3:2006 have additionally been verified. Applicable tests for protected equipment according to IEC 60945 (Fourth edition - 2002) including Corrigendum 1 have additionally been verified, with 8.12 Corrosion test waived.

This Certificate is valid until **2021-06-21**.

Issued at **Høvik** on **2016-06-22**

DNV GL local station: **Aalborg**

Approval Engineer: **Ståle Sneen**

for **DNV GL**

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.

Product description

ISIC DuraMON-WS Marine Monitor series, comprising the following models:

Model name	Description
DuraMON22WS TN	22" WS (HD) Marine Monitor
DuraMON22WS	22" WS (HD) Marine Monitor, Wide Angle
DuraMON24WS	24" WS (HD) Marine Monitor, Wide Angle
DuraMON27WS	27" WS (HD) Marine Monitor, Wide Angle
MD 22 TN	22" WS (HD) Marine Monitor
MD 22 MKII	22" WS (HD) Marine Monitor, Wide Angle
MD 24 MKII	24" WS (HD) Marine Monitor, Wide Angle
MD 27 MKII	27" WS (HD) Marine Monitor, Wide Angle
MD 27 KM05 MKII	27" WS (HD) Marine Monitor, Wide Angle – KM05 front

Options for all models:

- Power supply 90-264 VAC 50/60 Hz (marine approved for 115-230 VAC nominal voltage)
- Power supply 18-36 VDC (marine approved for 24VDC nominal voltage)
- DuraMON WS Bracket standard (aluminium bracket for desktop/ceiling mounting of DuraMON-WS series)
- DuraMON WS Bracket wallmount (aluminium bracket for wall mounting of DuraMON-WS series)
- Built-in buzzer

Compass safe distance measurements:

DuraMON22WS TN / MD 22 TN	– all versions and options: Standard 175 cm. Steering 110 cm.
DuraMON22WS / MD 22 MKII	– all versions and options: Standard 205 cm. Steering 135 cm.
DuraMON24WS / MD 24 MKII	– all versions and options: Standard 215 cm. Steering 140 cm.
DuraMON27WS / MD 27 MKII	– all versions and options: Standard 250 cm. Steering 160 cm.
MD 27 KM05 MKII	– all versions and options: Standard 250 cm. Steering 160 cm.

Overview of tested hardware/firmware including name and versions are listed in ISIC's statement "Additional comments / document overview – update and new certificate".

Manufactured by

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

Application/Limitation

The Type Approval covers all hardware listed under Product description. The display monitors are intended for use in alarm and monitoring systems subject to classification.

Type Approval documentation

Marking of product

Job Id: **262.4-000045-1**
Certificate No: **MRA000000S**

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

Other Conditions

The monitors have been verified for compliance with EU Mutual Recognition Technical Requirements for display monitors, video screens, terminals version 0.3 dated 2016-04-01. Radiated electromagnetic field immunity in the range 2 GHz to 6 GHz at 10 V/m according to IEC 61000-4-3:2006 have additionally been verified. Applicable tests for protected equipment according to IEC 60945 (Fourth edition - 2002) including Corrigendum 1 have additionally been verified, with 8.12 Corrosion test waived.

Environmental test parameters

Temperature: -15°C and 55°C
Vibration: ±1mm / 0.7g
EMC: All locations including bridge and open deck
Enclosure: IP2X standalone, IP65 when console mounted (IP ratings according to IEC 60529)

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 annually and at renewal of this certificate.

END OF CERTIFICATE