

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Peripheral Equipment**with type designation(s)  
**EW112AA., EW112AB., EW112AC..**

Issued to

**Esa Elettronica S.P.A.**  
**MARIANO COMENSE CO, Italy**is found to comply with  
**DNV GL rules for classification – Ships, offshore units, and high speed and light craft****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

<b>Temperature</b>	<b>A</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>C / IP66 (panel front)</b>

Issued at **Hamburg** on **2018-02-21**for **DNV GL**This Certificate is valid until **2023-02-05**.  
DNV GL local station: **Milan**Approval Engineer: **Dariusz Lesniewski**.....  
**Joannis Papanuskas**  
**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: **262.1-025703-1**  
Certificate No: **TAA00001MT**  
Revision No: **1**

## Product description

Type designation:  
EW112A/B/COSP/DP/CN

Possible variants:

EW	1	12	A	A/B/C	0	SP/DP/EC
	<i>Series:</i> <b>1</b> =100	LCD: <b>12</b> =12" wide	<i>Front:</i> <b>A</b> =AluTeflon Resist	<i>Type:</i> <b>A</b> =HMI <b>B</b> =HMI+CoDeSys <b>C</b> =HMI+CoDeSys+I/O		<i>Second Port:</i> <b>SP</b> =Serial Port <b>DP</b> =Profibus <b>CN</b> =CAN

## 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.

## Application/Limitation

Mounting in separate metallic cabinet only.  
For installation on the bridge distance to compass to be not less the 5m.

## Type Approval documentation

Test Report: Nemko No. 338832TRFEnvEx, dated 2017-11-21  
Test Report: Nemko No. 338832-1TRFEMC, dated 2017-12-20  
Test Report: Nemko No. 338832-1TRFSAF, dated 2017-09-18  
Test Report: Nemko No. 257587TRFEMC, dated 2014-05-27  
Test Report: Nemko No. 280445-4TRFEnvEx28, 2015-06-12  
Test Report: CENTROTECNICA No. VR1801001ESSE.docx, dated 2018-01-18  
HW Schematic Drawings: Code 29015.843.002 Rev. B  
HW Construction Drawings  
Series EW100AA/AB/AC Data Sheets  
Product Description No. 31 EW1xx, Rev.0  
Type Approval Assessment Report issued at Milan on 2017-11-24

## Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

## Marking of product

The products to be marked with:


- manufacturer name
- model name
- serial number
- power supply ratings

## 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



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- 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