

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)

LUMIA110P02; LUMIA115P02; LUMIA122P02; LUMIA127P02; LUMIA210P02; LUMIA215P02; LUMIA222P02; LUMIA227P02

Issued to

ESA S.P.A.

Mariano Comense, CO, Italy

is found to comply with

DNV 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.

Location classes:

Temperature	B
Humidity	B
Vibration	A
EMC	B
Enclosure	IP66 Front Panel

Issued at **Hamburg** on **2023-08-10**

This Certificate is valid until **2028-08-09**.

for **DNV**

DNV local unit: **Italy/Malta CMC**

Approval Engineer: **Heinz Scheffler**

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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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

LUMIA1 EDGE HMI

LUMIA110P02:

- Display Size: 10,1" (1280 x 800)
- Display technology: TFT
- Display Backlight: Led
- Touch Technology: Capacitive
- RAM – HMI: 2G DDR4
- Mass storage – HMI: 16GB eMMC
- Ethernet Port – HMI: 1*1Gb+1*100Mb

LUMIA115P02

- Display Size: 15,6" (1366 x 768)
- Display technology: TFT
- Display Backlight: Led
- Touch Technology: Capacitive
- RAM – HMI: 2G DDR4
- Mass storage – HMI: 16GB eMMC
- Ethernet Port – HMI: 1*1Gb+1*100Mb

LUMIA122P02

- Display Size: 21.5" (1920x 1080)
- Display technology: TFT
- Display Backlight: Led
- Touch Technology: Capacitive
- RAM – HMI: 2G DDR4
- Mass storage – HMI: 16GB eMMC
- Ethernet Port – HMI: 1*1Gb+1*100Mb

LUMIA127P02

- Display Size: 27" (1920 x 1080)
- Display technology: TFT
- Display Backlight: Led
- RAM – HMI: 2G DDR4
- Mass storage – HMI: 16GB eMMC
- Ethernet Port – HMI: 1*1Gb+1*100Mb

LUMIA2 OPEN

LUMIA210P02 10"

- Display Size: 10,1" (1280 x 800)
- Display technology: TFT
- Display Backlight: Led
- Touch Technology: Capacitive
- RAM – HMI: 2G DDR4
- Mass storage – HMI: 16GB eMMC
- Ethernet Port – HMI: 1*1Gb+1*100Mb

LUMIA215P02 15"

- Display Size: 15,6" (1366 x 768)
- Display technology: TFT
- Display Backlight: Led
- RAM – HMI: 2G DDR4
- Mass storage – HMI: 16GB eMMC
- Ethernet Port – HMI: 1*1Gb+1*100Mb

LUMIA222P02 21.5"

- Display Size: 21.5" (1920x 1080)
- Display technology: TFT
- Display Backlight: Led
- Touch Technology: Capacitive
- RAM – HMI: 2G DDR4
- Mass storage – HMI: 16GB eMMC
- Ethernet Port – HMI: 1*1Gb+1*100Mb

LUMIA227P02 27"

- Display Size: 27" (1920 x 1080)
- Display technology: TFT
- Display Backlight: Led
- Touch Technology: Capacitive
- RAM – HMI: 2G DDR4
- Mass storage – HMI: 16GB eMMC
- Ethernet Port – HMI: 1*1Gb+1*100Mb

Application/Limitation

Location class EMC B: Equipment not for installation within a distance of 5 m from magnetic compass.

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Type Approval documentation

Test Reports: REP013450ENV; REP013724_ENV; REP013725_ENV; REP014181_EMC; REP445804-1TRFEMC
Documents: HARDWARE USER AND INSTALLATION MANUAL, Rev.1, Part lists and Marking of products, dated 24-08-2023.

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

Periodical assessment

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE