



Type Approval Certificate

[Marine Monitors]

Initial Approval 24th December, 2021
Manufacturer Mariner Systems (UK) Ltd.
 Oaklands Park, Wokingham, Berkshire, RG41 2FD, United Kingdom

Product Description Monitor for Marine Computer

- Model : HP E23 G4 FHD 23,
 HP E24i G4 WUXGA 24,
 HP E27 G4 FHD 27

" See Appendix 1 "

Approval Condition " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 23rd December, 2026

Issued at Busan, Korea on 24th December, 2021



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME21032027564) and certificate No.(LDN04977-AC119).



KOREAN REGISTER

*General Manager of
Marine & Ocean Equipment Team*

Note : 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 24th December, 2021

A. Product Description

1. Product Specification

- 1) Model : HP E23 G4 FHD 23
 - Power Supply : 100 ~ 240 VAC, 50/60 Hz
 - Screen Opening (W X H) : 509.18 x 286.42 mm
 - Aspect Ratio : 16:9
- 2) Model : HP E24i G4 WUXGA 24
 - Power Supply : 100 ~ 240 VAC, 50/60 Hz
 - Screen Opening (W X H) : 527.04 x 296.46 mm
 - Aspect Ratio : 16:10
- 3) Model : HP E27 G4 FHD 27
 - Power Supply : 100 ~ 240 VAC, 50/60 Hz
 - Screen Opening (W X H) : 597.89 x 336.31 mm
 - Aspect Ratio : 16:9

2. Approved Drawings and Documents

- 1) Drawings for mariner kit
 - MS1650 Assembly, Dwg. No. MS1650_A, Issue No. 2, dated 2021-03-15
 - MS1655 Assembly, Dwg. No. MS1655_A, Issue No. 2, dated 2021-03-15
 - MS1660 Assembly, Dwg. No. MS1660_A, Issue No. 2, dated 2021-03-15
 - MS1660 Drilling detail, Dwg. No. MS1660_DD, Issue No. 1, dated 2021-02-16
 - MS1640 Assembly, Dwg. No. MS1640_A, Issue No. 1, dated 2021-02-09
 - MS1640 Drilling detail, Dwg. No. MS1640_DD, Issue No. 1, dated 2021-02-09
 - MS1635 Assembly, Dwg. No. MS1635_A, Issue No. 1, dated 2021-02-18
 - MS1630 Assembly, Dwg. No. MS1630_A, Issue No. 1, dated 2021-02-18
 - MS1620 Assembly, Dwg. No. MS1620_A, Issue No. 1, dated 2021-02-04
 - MS1620 Drilling detail, Dwg. No. MS1620_DD, Issue No. 1, dated 2021-02-04
 - MS1615 Assembly, Dwg. No. MS1615_A, Issue No. 1, dated 2021-02-18
 - MS1610 Assembly, Dwg. No. MS1610_A, Issue No. 1, dated 2021-02-18

3. Test Reports, etc.

- 1) Test Reports
 - Test Report No. TL21010 issued by MS Testing, dated 2021-04-13
 - Test Report No. TL21014 issued by MS Testing, dated 2021-04-13
 - Test Report No. TL21023 issued by MS Testing, dated 2021-04-13

B. Approval Condition

1. Application & Limitation

- 1) This Approval is granted on the basis of the test reports and the approved documentation.
- 2) The manufacturer should inform this Society of all kinds of revisions of the equipment including software. If the changes are recognized to affect functionality of the approved equipment, type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.
- 3) The product is to be installed as manufacturer's instructions.
- 4) When this product is installed in the vicinity of a standard or a steering magnetic compass, it should have the minimum safe distance stated in Product Description or more at which it may be mounted from such compasses.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is not required.
- 2) Drawing Approval is not required.

3. Marking

- 1) The product or packing is to be marked with manufacturer name and type designation on a suitable position.

4. Others

- 1) Test condition (IACS UR E10 Rev.8)

Test	Condition	Remark
EMC	All locations including the bridge and deck zone	-

Product Description and/or Approval Condition

Date of Issue : 24th December, 2021

Test	Condition	Remark
Temperature	-25 ~ +70°C	-
Vibration	Acceleration $\pm 0.7g$	-

2) Compass Safety Distance

Type	1 degree deflection (Steering)	0.3 degree deflection (Standard)
HP E23 G4 FHD 23	500mm	700mm
HP E24i G4 WUXGA 24	700mm	900mm
HP E27 G4 FHD 27	500mm	700mm

< End of certificate >

