



TYPE APPROVAL CERTIFICATE

Certificate No. : LDN04977-AC105 **Initial Approval** : 18th August, 2014
Product : Monitor for Marine Computer
Manufacturer : Mariner Systems (UK) Ltd.
Oaklands Park, Wokingham, Berkshire, RG41 2FD, United Kingdom

Product Description : Monitor for Marine Computer
(Model : HP Elite Display E190i 18.9-inch LED Monitor)

" The HP Elite Display E190i 18.9-inch LED Backlit Monitor must be used in conjunction with one of the Mariner Kit MS1170, MS1175 or MS1180 "

" 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 and entered in the "List of Approved Manufacturers and Type Approved Equipment".

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

This Certificate is valid until 17th August, 2024

Issued at Busan, Korea on 14th November, 2019



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 (ME19032304634) and certificate No.(LDN04977-AC105).



KOREAN REGISTER OF SHIPPING

*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.

Appendix 1

Product Description and/or Approval Condition

Certificate No : LDN04977-AC105

Date of Issue : 14th November, 2019

A. Product Description

1. Product Specification

- 1) Model : HP Elite Display E190i 18.9-inch LED Monitor
- 2) Power Supply : 100 ~ 240 VAC, 50/60 Hz
- 3) Screen Opening(W X H) : 37.47 X 29.98 cm (14.75 X 11.8 inch)
- 4) Aspect Ratio : 5:4

2. Approved Drawings and Documents

- 1) Drawings
 - MS1170_A Issue 1 dated on 2014-03-21, MS1175_A Issue 1 dated on 2014-03-21,
 - MS1180_A Issue 1 dated on 2014-01-31, MS1180_DD Issue 1 dated on 2014-01-31
- 2) Specifications
 - DA-14806 Ver.6 dated on 2014-03-27

3. Test Reports, etc.

- 1) Report TL14017 Issue 4 issued by MS Testing, dated 2019-10-16

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.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification 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

Test	Condition	Remark
EMC	All locations including the bridge and deck zone	Up to 6GHz
Temperature	-25 ~ +70°C	-
Vibration	Acceleration ±0.7g	-

- 2) Compass Safe Distance

Description	1 degree deflection	0.3 degree deflection
E190i 18.9-inch LED Monitor	600mm	700mm

< End of Certificate >