



Marine & Offshore

Certificate number: 66612/A0 BV

File number: MPA2102522

Product code: 4483H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

MARINER SYSTEMS (UK) Ltd

Wokingham - UNITED KINGDOM

for the type of product

DISPLAY MONITORS / VIDEO SCREENS / TERMINALS

G4 Monitors - HP E23 G4 FHD, HP E24i G4 WUXGA, HP E27 G4 FHD

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

EC Code: 31/41 B

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 06 Sep 2026

For Bureau Veritas Marine & Offshore,

At BV LONDON, on 06 Sep 2021,

Spencer Yule



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

- Product model or type description:

HP G4 Monitors :

Type	HP E23 G4 FHD	HP E24i G4 WUXGA	HP E27 G4 FHD
Model	9VF96AA/9VF96AT	9VJ40AA/9VJ40AT	9VG71AA/9VG71AT
Display	23-in IPS	24-in IPS	27-in IPS
Native Resolution	1920 x 1080 @ 60 Hz	1920 x 1200 @ 60 Hz	1920 x 1080 @ 60 Hz
Power Supply	100 - 240 VAC 50/60 Hz	100 - 240 VAC 50/60 Hz	100 - 240 VAC 50/60 Hz
Operation Temperature	5°C to 35 °C	5°C to 35 °C	5°C to 35 °C

HP E23 G4 FHD 23-Inch Monitor completed with Mariner Systems Mounting Kits MS1610, MS1615 or MS1620

HP E24i G4 WUXGA 24-Inch Monitor completed with Mariner Systems Mounting Kits MS1630, MS1635 or MS1640

HP E27 G4 FHD 27-Inch Monitor completed with Mariner Systems Mounting Kits MS1650, MS1655 or MS1660

The HP Elite Display must be used in conjunction with the appropriate Mariner Systems Kits:

MS1610, MS1630, MS1650- Desk mounted,

MS1615, MS1635, MS1655 - Wall mounted,

MS1620, MS1640, MS1660 - Console mounted

2. DOCUMENTS AND DRAWINGS :

Mariner Systems (UK) Ltd.:

- HP E23 G4 FHD Monitor QuickSpecs No.: c06922715 - DA16765 Version 3, dated 28-02-2021.
- HP E24i G4 WUXGA Monitor QuickSpecs No.: c06922716 - DA16766 Version 4, dated 09-04-2021.
- HP E27 G4 FHD Monitor QuickSpecs No.: c06922718 - DA16768 Version 3, dated 28-02-2021.
- Declaration of Conformity, No. HSD-0053-W-R2 Original/en, dated 06-12-2020.
- Declaration of Conformity, No. HSD-0056-Q-R1 Original/en, dated 03-06-2020.
- Declaration of Conformity, No. HSD-0057-Q-R1 Original/en, dated 19-06-2020.
- Assembly drawing MS1610_A Issue 1, dated 18-02-2021.
- Assembly drawing MS1615_A Issue 1, dated 18-02-2021.
- Assembly drawing MS1620_A Issue 1, dated 04-02-2021.
- Assembly drawing MS1620_DD Issue 1, dated 04-02-2021.
- Assembly drawing MS1630_A Issue 1, dated 18-02-2021.
- Assembly drawing MS1635_A Issue 1, dated 18-02-2021.
- Assembly drawing MS1640_A Issue 1, dated 09-02-2021.
- Assembly drawing MS1640_DD Issue 1, dated 09-02-2021.
- Assembly drawing MS1650_A Issue 2, dated 15-03-2021.
- Assembly drawing MS1655_A Issue 2, dated 15-03-2021.
- Assembly drawing MS1660_A Issue 2, dated 15-03-2021.
- Assembly drawing MS1660_DD Issue 1, dated 16-02-2021.
- Mariner Systems Marine Test Requirements Issue 15, dated Feb. 2021.

3. TEST REPORTS :

MS Testing:

- Test report No.TL21010, dated 13-04-2021.
- Test report No.TL21014, dated 13-04-2021.
- Test report No.TL21023, dated 13-04-2021.

4. APPLICATION / LIMITATION :

4.1 - BUREAU VERITAS Rules and Regulations for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31/41 B.**

4.4 - The equipment fulfils the EMC requirements for installation on the Bridge and Deck Zone.

4.5 - For use in Navigation, Control, Loading Instrument & General Purpose Applications.

4.6 - The minimum safe distance at which the equipment may be mounted from a standard or a steering magnetic compass is:

	HP E23 G4 FHD	HP E24i G4 WUXGA	HP E27 G4 FHD
1 Degree Deflection	500 mm	700 mm	500 mm
0.3 Degree Deflection	700 mm	900 mm	700 mm

4.7 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev 7.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above products are to be supplied by **MARINER SYSTEMS (UK) Ltd.** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **MARINER SYSTEMS (UK) Ltd.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products

5.4 - For information, **MARINER SYSTEMS (UK) Ltd.** has declared to Bureau Veritas the following production site(s):

MARINER SYSTEMS (UK) Ltd.
Oaklands Park
Wokingham
Berkshire
UNITED KINGDOM

6. MARKING OF PRODUCT :

- Maker's name or trade mark.
- Serial number of the unit.
- Equipment type or model identification under which it was type-tested.

7. OTHERS:

It is **MARINER SYSTEMS (UK) Ltd.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*** END OF CERTIFICATE ***