



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-10414
This Certificate consists of 3 pages

This is to certify that the
Peripheral Equipment

with type designations
HP 17"/19" TFT Display L1740/ L1940/ L1940T

Manufactured by
Mariner Systems (UK) Ltd.
WOKINGHAM RG41 2FD, United Kingdom

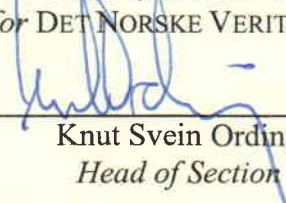
is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and
Det Norske Veritas' Offshore Standards

Application
Location classes:

Type	L1740/ L1940/ L1940T
Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	Required protection according to the Rules to be provided upon installation on board

Approved **only** together with Mariner Kits shown on page 2

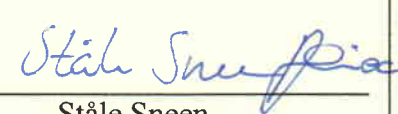
Place and date
Høvik, 2007-08-03
for DET NORSKE VERITAS AS


Knut Svein Ording
Head of Section



Local Office
DNV Newcastle-upon-Tyne

This Certificate is valid until
2009-06-30


Ståle Sneen
Surveyor

Notice: 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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: A-10414
File No.: 899.60
Job ID: 262.1-003773-1

Product description

Color TFT Display Monitors HP17"/19" Models L1740, L1940 and L1940T.

Application / Limitation

Approval **ONLY** applies when used in conjunction with Mariner Systems (UK) Ltd:

Monitor	Mariner kit
L1740	MS960, MS965, MS1050
L1940	MS970, MS975, MS1060
L1940T	MS970, MS975, MS1060

Approval conditions

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

Internet presentation (for information only):

<http://marinersystems.com/>

<http://www.hp.ca/products/static/monitors/l1740/index.php>

<http://www.hp.ca/products/static/monitors/l1940/index.php>

Test reports: TL900 dated 2005-02-28, TL903 dated 2005-03-15,
TL1008 dated 2006-05-11

Descriptions: Quickspecs DA-12127/29 both dated 2004-12-20,
Quickspecs DA-12414 dated 2006-04-10

Drawings: MS960_A, MS965_A, MS970_A, MS975_A, MS1050_A, MS1060_A

DNV Newcastle certificate retention survey report for A-10154 dated 2007-08-03.

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.
For the bridge mounted components the 'Acoustic noise and signals' was measured according to IEC60945 section 11.1.



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Certificate retention survey

The scope of the retention/renewal survey 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 survey 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

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE