



DNV

DET NORSKE VERITAS

EC TYPE EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2012/32/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. MED-B-8828

This is to certify that the
Echo-sounding equipment

with type designation(s)
Skipper GDS101

Issued to
Skipper Electronics AS
OSLO, Norway

is found to comply with the requirements in the following Regulations/Standards:


Annex A.1, item No. A.1/4.6 and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation V/18, V/19 & X/3, IMO Resolution A.224 (VII) & A.694(17), IMO Resolution MSC. 74 (69) Annex 4 & 191 (79) and 2000 HSC Code 13

Further details of the equipment and conditions for certification are given overleaf.

Høvik, 2014-02-24
for Det Norske Veritas AS



This Certificate is valid until
2019-02-24


Marianne Strand Valderhaug
Head of Department

Notified Body No.: 0575

DNV local office:
Oslo Maritime and CAP


Steinar Kristensen
Surveyor



The Certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this Certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended. The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.



Certificate No.: MED-B-8828
Item No.: A.1/4.6
Job Id.: 344.1-000203-4

Product description

Hardware modules:

- Echo sounder operator unit GDS101
- Transducer 50 kHz; TGM60-50-xxL
- Transducer 200 kHz; NGM100-200-xxL and TGM50-200-xxL

xx is a numerical value for the cable length in meters.

Software modules:

- SW version 5.xx

Application/Limitation

- See Appendix

For latest revision of the Appendix, see <http://exchange.dnv.com/tari>

- The echosounding equipment shall be connected to an external alarm unit for power failure alarm.
- The environmental test set-up included the transducer tank ETNST.

Type Examination documentation

- See Appendix

Tests carried out

- Environmental Tests, IEC 60945 (2002)
- Performance Tests, ISO 9875 (2000)
- Serial Interface Tests, IEC 61162-1 (2010)
- Performance tests optional features 2003
- Performance tests. IEC 62288 (2008)

Marking of product

- See Appendix

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

USCG Approval

An U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of certificates of conformity for marine equipment" signed 17 October 2005.





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APPENDIX REV. NO. 1 (Page 1 of 1)

Applications/Limitations

The certificate is also valid for the echosounding equipment with the type designations:

- Kongsberg Maritime EN 250
- Raytheon GDS101
- Kelvin Hughes GDS101

Type Examination documentation

- SKIPPER GDS101 Graphic Depth Sounder Operation And Installation Manual
- SKIPPER GDS101 Graphic Depth Sounder Service Manual
- Performance test program for GDS101 echosounder
- Technical Report No. 2000-1363 from DNV, EMC and environmental testing of Skipper marine electronic units
- Technical Report DANAK-196857
- IR301 Digital Depth Repeater. Operation & Installation Manual
- Performance test program IR301
- Test Report – EN 60945 Environmental tests - Nemko 22185
- Integration test for SAM 4900 UDD, October 2006.
- Test reports for SAM 4900
- Performance test report IEC 62288, February 2009
- Test Report – EN 60945 Environmental tests - Nemko E08580.00
- Report: Skipper, Change report for transceiver module PS-G002 from rev 2E to A2, PS-G002-A

Marking of product

- Skipper GDS101, or
- Kongsberg Maritime EN 250, or
- Raytheon GDS101, or
- Kelvin Hughes GDS101

The Manufacturer and Type Designation to be applied to the equipment in a clearly visible location and in addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/ or supply voltage.

Optional Features

Features:

- Remote dimming control:
- Transducer selector fore/aft.:
- Digital depth repeater:
SW version 2.xx
- Digital depth repeater:

Type:

IR30DIM
ENS518
IR301

UDD SAM 4900

Marking:

IR30DIM
ENS518
Skipper IR301
Raytheon IR301
Kongsberg Maritime RD301
UDD SAM 4900

Place and date
HØVIK, 2014-02-24


Steinar Kristensen



END OF CERTIFICATE