



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-8827**

This is to certify that the
Echo-sounding equipment

with type designation(s)
Skipper GDS102

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

Notified Body No.: **0575**

DNV local office:
Oslo Maritime and CAP

Steinar Kristensen
Steinar Kristensen
Surveyor

Marianne Strand Valderhaug
Marianne Strand Valderhaug
Head of Department



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-8827
Item No.: A.1/4.6
Job Id.: 344.1-001682-3

Product description

Hardware modules:

- Echo sounder operator unit GDS102
- 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 1.8.x and 1.9.x

Application/Limitation

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

Type Examination documentation

- See Appendix

Tests carried out

- Environmental Tests, EN 60945 (2002)
- Performance Tests, ISO 9875 (2000)
- Serial Interface Tests, IEC 61162-1 (2010)
- 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. 0 (Page 1 of 1)

Applications/Limitations

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

- Raytheon GDS102
- Kelvin Hughes GDS102

Type Examination documentation

- Skipper GDS102 Dual Channel Graphic Depth Sounder (10-250 kHz) Operation and Installation Manual
- Skipper GDS102 Graphic depth Sounder (2 channel) Service Manual
- Skipper Mechanical Installation Manual
- Performance test report for GDS102, rev. 1
- NEMKO Test Report – EN 60945 Environmental tests, No 24983
- NEMKO Test Report – Electromagnetic Compatibility, No 19023, 21401 and E08581.00
- DANAK Test Report – No.196857
- Integration test for SAM 4900, October 2006
- Test reports for SAM 4900
- Performance test report IEC 62288, February 2009

Marking of product

- Skipper GDS102, or
- Raytheon GDS102, or
- Kelvin Hughes GDS102

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:	Type:	Marking:
▪ Remote dimming control:	IR30DIM	IR30DIM
▪ Transducer selector fore/aft:	ENS518	ENS518
▪ Digital depth repeater: SW version 2.x	IR301	Skipper IR301, or Raytheon IR301, or Kongsberg Maritime RD301
▪ Digital depth repeater:	UDD SAM 4900	UDD SAM 4900

Place and date
HØVIK, 2014-02-24

Steinar Kristensen

Steinar Kristensen



END OF CERTIFICATE