

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Electronic record book (ELRB)**

with type designation(s)

TelScope

Issued to

Telko AS

TJØME, Norway

is found to comply with

DNV GL rules for classification – Ships

ISO 21745:2019 Electronic record books for ships – Technical specifications and operational requirements

IEC 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results

IEC 62288 Ed. 2.0 (2014-07) Maritime navigation and radiocommunication equipment and systems –

Presentation of navigation-related information on shipborne navigational displays – General requirements, methods of testing and required test results

IEC 61162-1 Ed. 5.0 (2016-08) Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 1: Single talker and multiple listeners

IEC 61162-2 Ed. 1.0 (1998-09) Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 2: Single talker and multiple listeners, high-speed transmission

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2022-01-06**

for **DNV**

This Certificate is valid until **2027-01-05**.

DNV local station: **Norway CMC, East-South**

Approval Engineer: **Frederik Tore Elter**

Trond Sjøvåg
Head of Section

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

TelScope Electronic Record Book (ELBR) for Deck, Radio GMDSS and Engine, comprises of the following:

Description	Type designation	Location
Computer	HT B30GI STC-A2T-M10010	Protected
Display	HD 24T22 TID-MA4-FAGA	Protected
Keyboard	NSI RKCT92S1969 W MC1	Protected
Trackball	ELK rev.1.0	Protected

Software: TELSCOPE, SW version 1.x (x – revisions for minor updates and fixes of version included in certification)
Operating system: Linux version: Ubuntu 20.04

Application/Limitation

- TelScope may provide electronic records and logs for Deck, Radio GMDSS and Engine.
- TelScope is to be installed in accordance with manufactures documentation.
- This certification of TelScope is for stand-alone installation. Connections to external network interfaces are to be in accordance with ISO 21745, 4.2.1.1 Tampering avoidance, as applicable for the installation onboard. Network installations may be part of third-party scope, and to be certified as required for the installation.
- TelScope may interface to the VDR in accordance with IMO Resolution MSC.333(90), and IEC 61162-1 or -2, as described in manufacturers documentation. EUT is not tested to support interface to VDR in accordance with recommendation in ISO 21475 clause 4.2.1.5.
- Depending on vessel installation; interfaces, presentation and recorded data may be adapted for the vessel, in accordance with manufactures documentation referenced in this certificate.
- TelScope may provide functionality for onboard electronic checklists, integrated with electronic records and logs as an additional function. Checklists templates may be defined by the vessel’s management, in accordance with manufactures documentation referenced in this certificate, hence checklist content is not part of certification.
- The final acceptance of the ELRB is subject to the decision of the Flag state Administration under which the vessel sails.
- TelScope is tested for listed standards and record functions. When installed onboard, a “Declaration of electronic record book” shall be issued to the ship by the Flag Administration or on behalf of the Flag by a Recognized Organization.

Type Approval documentation

DNV No.	Document No.	Rev.	Title
58	21st December 2021	Rev.4	Report: TELSCOPE Test Report ISO 21745-2019 for Deck, Engine and Radio Books (inc. testing: IEC 62288:2014, IEC 60945:2002, IEC 61162-1:2016 incl. Corr.1 (2008), IEC 62923-1:2018 and IEC 62923-2:2018) Draft 21-12-21
57	857710-TelScope-Dashboard*		Manual: TelScope Dashboard (inc, Alert Description)
56	343149-Server-setup*		Manual: TelScope Server setup (inc, Alert Description)
55	194063-Network-Setup--Security*	2021-12-17	Manual: Instalation Manual Network Setup & Security
54	857710-TelScope-Dashboard*	2021-12-17	Manual: User Manual TelScope Dashboard
48	E12134.04		Report: NEMKO, IEC 60945, Including Trackball EUT
43	DOC205967-1	Rev. 1	Report: IEC62288 flicker test report HD24T22
42	DOC102352	Rev. 2	Report: IEC 62288 Conformance test report HD 24T22 MMD-MA1-FAGA-ES
41	DOC102352	Rev.1	Report: IEC 62288 Conformance test report HD 24T22 MMD-MA1-FAGA-ES
40	T208006-5-DANAK - 19/14501		Report: Delta IEC 60945 Keyboard-NSI bvba-RKCT92S0001-W-MC1
39	MRA0000016	Rev. 3	Certificate: IEC60945 Display

DNV No.	Document No.	Rev.	Title
38	MRA000003D	Rev. 0	Certificate: IEC60945 Computer
37			Delta: Attestation of Conformity Marine type approval test - Certificate no. 1339
31	09.09.2001	Rev. 1	Report: TELKO, Conformance test of TELSCOPE with: SOLAS Chapter V, regulation 28, as amended by res.MSC99(73), IMO guidance A 22/Res.916 (Testing of recording of specific ELRB functions and data storage)
29	2013-3135	REVISION NO. 00	Report: EMC AND ENVIRONMENTAL TESTING OF MARITIME COMPUTER HT B22GE STC-C4K-M100
28	20178	Revision: 0	Report: Applica IEC 60945 , HD 24T21 MEC-M3K-AAB9-ES
26	170905002TR1	2018/04/09	Report: CAL IEC 60945: HT B30KH STC-A37-EB3G00-ES-3 Technical Report
25	21110	Revision no.: 0	Report: Applica IEC 60945: EMC and Environmental testing of HT B30KH STC-A37-EB3G00-ES Compact Fan-less Computer
24	21111	Revision no.: 01	Report: Applica IEC 60945: EMC and Environmental testing of Compact Fan-less Computer HT B30GH STC-A3x-M13200-ES
23	2012-3081	REVISION NO. 01	Report: IEC 60945 EMC and Environmental testing of Maritime Multi Display HD 15T21 STD-MA1-FAGA
8	852507-Work-with-Electronic-Logbooks*	1.7	Manual: TELKO TelScope, Work with Electronic Logbooks
7	055105-Work-with-Checklist*	1.7	Manual: TELKO TelScope, Work with Checklist
6	839090-The-Logbook-Entry*	1.7	Manual: TELKO TelScope, The Logbook Entry
5	857710-TelScope-Dashboard*	1.7	Manual: TELKO TelScope, TelScope Dashboard
4	108013-Introduction*	1.7	Manual: TELKO TelScope, Introduction
3	187699-Get-Started*	1.7	Manual: TELKO TelScope, Get Started
2	549088-Checklist-Editor*	1.7	Manual: TELKO TelScope, Checklist Editor

Note: Document from: <https://telko.liveagent.se/><>.

Tests carried out

- Environmental testing: IEC 60945 (2002) (inc. corr.1:2008)
- Performance testing: ISO 21745 (2019)
- Presentation testing: IEC 62288 (2014)
- Interface: IEC 61162-1 (2016)
- Interface: IEC 61162-2 (1998)
- BAM: IEC 62932-1 (2018) and IEC 62932-2 (2018)
- Compliance with applicable parts IMO resolution A.916(22).

Marking of product

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

Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

The scope of the periodical/renewal assessment is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.