

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Engine Telegraph Systems**with type designation(s)
A067

Issued to

**sm electrics GmbH services & more
Stakendorf, Schleswig-Holstein, Germany**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Temperature	B
Humidity	B
Vibration	A
EMC	B
Enclosure	Required protection according to relevant rules shall be provided upon installation on board

Issued at **Hamburg** on **2020-07-31**for **DNV GL**This Certificate is valid until **2025-07-30**.DNV GL local station: **Hamburg**Approval Engineer: **Jens Dietrich****Joannis Papanuskas
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.



Job Id: **262.1-025570-2**
Certificate No: **TAA000016Y**
Revision No: **3**

Product description

Telegraph system consisting of following components:

Big Engine Order Telegraph A067.2 (Double lever type A067.4)

-PCB E551-3 (SW V1.003)

Small Engine Order Telegraph A067.1 (Double lever type A067.3)

-PCB E551-3 (SW V1.003)

Engine Order Telegraph Transmitter/Receiver Push Button Type A067.5 can be used as Emergency Engine Order Telegraph.

-PCB E554-1, E553-3 (SW V1.001)

Engine Order Telegraph Receiver Pointer Type A067.5

-PCB E551-3 (SW V1.003)

Telegraph Controller with VDR interface A067.74

-PCB E550-3 (SW V3.06)

Functions:

Control lever with and without electrical shaft, relay outputs for system failure, order call and wrong way alarm, input for selection between order telegraph and remote control mode, inputs for selection of control platform, internal failure diagnosis with text messages on controller module.

Application/Limitation

The Type Approval covers hardware and software listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After certification the clause for application software control will be put into force.

Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV GL for evaluation and approval. Major changes in the software are to be approved before being installed in the components.

EMC in the range 2 GHz to 6 GHz according to DNVGL-CG-0339, December 2019 has not been documented. EMC up to 6 GHz must additionally be documented for installation on ships contracted for construction on or after 2022-01-01.

Type Approval documentation

Test report : GEDIS AB-2394-001, Paconsult 10-2933-BE, Rev.2; Paconsult 10-3033-BE, Rev.1;
Software Questionnaire RC3, dated 2010-08-04. Add. Test reports: Paconsult 15-6666, rev.1; TREO 020-15, issue 1, 4010910. Add. Drawings 667.02402/GB, 667.02204/GB.
TA Assessment Report, DNV GL Hamburg, dated 2020-03-09.


Tests carried out

Applicable tests according to DNV GL CG-0339, November 2016.

Marking of product

Manufacturer, type designation, serial number, power supply.

Periodical assessment



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The scope of the periodical assessment 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 assessment 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

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.

END OF CERTIFICATE