

TYPE APPROVAL CERTIFICATE

Certificate no.:
TAE00002YM
Revision No:
1

This is to certify:

that the **Electric Power Cable**

with type designation(s)

Flat cable Woertz 5 x 2,5 mm², 49846

Flat cable Woertz 5 x 16 mm², 49606

issued to

WOERTZ AG

Muttenz, BL, Switzerland

is found to comply with

DNV 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.

Rated voltage (kV) 0,6/1

Temp. class (°C) 90

Issued at **Høvik** on **2023-11-08**

This Certificate is valid until **2028-11-07**.

DNV local unit: **Augsburg**

Approval Engineer: **Carsten Hunsalz**

for **DNV**



Digitally Signed By: Elter, Frederik Tore
Location: DNV Høvik, Norway

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.



Form code: TA 251

Revision: 2023-09

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Product description

Halogen free low fuming and flame retardant flat cables

Type: Flat cable Woertz 5 x 2,5 mm², 49846

Flat cable Woertz 5 x 16 mm², 49606

Conductor: Plain flexible stranded Cu conductor

Insulation: Halogen free cross linked polyethylene ,

Sheath: Halogen free thermoplastic polyolefin compound

Application/Limitation

For use of WOERTZ AG quick connection installation systems.

To be installed in accordance with the manufacturer's instructions and DNV rules.

The requirements of SOLAS Amendments Chapter II-1, Part D, Reg. 45, 5.2 (provision to be taken to limit Fire Propagation along Bunches of Cables or Wires) are fulfilled without any additional measures.

Ecobus Power 49846; for fixed installation in dry spaces inside the ship.

Ecofil i 49606; for fixed installation inside the ship.

Type Approval documentation

Test report : VDE Prüf- und Zertifizierungsinstitut, Ausweis Nr. 119173 and
No. 134759; Report 8787-H, page 1-12 + 7443-K, page 1-12, 16.03.2006;
SEV Reg. 070004:2011-05-02; OVE Certificate No.: 11974-001-00;
ETS No.: 17111701-1, dated 2017-12-19

Tests carried out

EN 50214:2006; EN 60228:2005; HD 604 S1:1994; IEC 60502-1:2004; SEV 1011:2009;
EN 60332-3-24:2009; IEC 60332-1-2:2004

Marking of product

Manufacturer - Type designation

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and 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