

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Electric Power Cable**with type designation(s)
ÖLFLEX® HEAT 125 SC

Issued to

**U.I. Lapp GmbH
Stuttgart, 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.****Rated voltage (kV) 0,3/0,5 up to 1.0mm² and 0,45/0,75 from 1.5mm²
Temp. class (°C) 90**Issued at **Hamburg** on **2019-08-29**for **DNV GL**This Certificate is valid until **2024-08-28**.DNV GL local station: **Augsburg**Approval Engineer: **Carsten Hunsalz**

**Arne Schaarmann
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.



Product description

Halogen free, flame retardant cross-linked polyolefin copolymer insulated single-core cable

Type: ÖLFLEX® HEAT 125 SC

Rated voltage: Up to 1.0mm² U₀/U 300/500 V
 From 1.5mm² U₀/U 450/750 V
 Max. operating conductor temperature: 90 °C acc. to DNVGL-RU-SHIP Pt.4 Ch.8
 Temperature range: -55 °C to +125 °C fixed installation (20.000 h)
 Conductor: Tinned flexible stranded copper class 5
 Insulation/sheath: Cross-linked polyolefin copolymer insulation EI5

Number of cores: 1
 Cross-sectional areas: 0,5 to 240 mm²

Application/Limitation

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.

General power and lighting. Control.

Flame retardant Cat. C+D. Halogen free.

Type Approval documentation

Test report: LAPP KOREA No. LKA-140627-01/02/03/04 dated 27-Jun-14
 VDE 562800-9021-0001/179880-1/2/3/4/5 dated 2013-10-16
 VDE 562800-9021-0001/165344-1/2/3/4 dated 2013-06-04
 TÜV No. R 60024876 25.05.2009

Data sheet: DB1231000gl

Tests carried out

Standard	Release	General description	Limitation
EN 50525-3-41	2011-06	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U ₀ /U) -- Part 3-41: Cables with special fire performance - Single core non-sheathed cables with halogen-free crosslinked insulation, and low emission of smoke	
EN 50363-5	2005-11	Insulating, sheathing and covering materials for low voltage energy cables -- Part 5: Halogen-free, cross-linked insulating compounds	
IEC 60228	2004-11	Conductors of insulated cables	
IEC 60332-1-2	2015-07	Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable -Procedure for 1 kW pre-mixed flame	

Standard	Release	General description	Limitation
IEC 60332-3-24/25	2018-07	Tests on electric cables under fire conditions – Part 3-24/25: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category C/D	
IEC 60754-1	2011-11	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Low Halogen: <0,5% Halogen
IEC 60754-2	2011-11	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 60684-2	2011-08	Flexible insulating sleeving – Part 2: Methods of test.	Fluorine content < 0,1%
IEC 61034-1/2	2013-06	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%

Marking of product

LAPP KABEL **STUTTGART** - ÖLFLEX® HEAT 125 SC – Size

Place of Production

LAPP KOREA CO. LTD. / SOUTH KOREA

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