

# Type Approval Certificate



This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 84 483 - 93 HH

Company Helkama Bica Oy  
Lakimiehenkatu 4  
20780 Kaarina, FINLAND

Product Description Halogen free, flame retardant, shipboard power and control cable

Type LKM-HF and LKSM-HF

Environmental Category None

Technical Data / Range of Application  
Rated voltage: 0,6 / 1 kV  
Max. operating conductor temperature: 90°C  
Conductor: Stranded, plain annealed copper cond. (class 2 or 5)  
Core insulation: HF XLPE  
Screen / braid: LKM without and LKSM with copper wire braid  
Outer sheath: Halogen free FR-Polyolefine SHF 1

Number of cores:	Cross-sectional area:
1	1,5mm <sup>2</sup> to 300mm <sup>2</sup>
2 and 4	1,5mm <sup>2</sup> to 95 mm <sup>2</sup>
3	1,5 mm <sup>2</sup> to 185 mm <sup>2</sup>
5	1,5 mm <sup>2</sup> to 25 mm <sup>2</sup>
7 to 37	1,5 mm <sup>2</sup> and 2,5 mm <sup>2</sup>

Additional places of production:  
Helkama Bica Oy, Hanko FINLAND  
Helkama Bica (Shanghai) Co., Ltd, Shanghai China

Test Standard IEC 60092-350:2001; IEC 60092-351:2004; IEC 60092-359:1999; IEC 60092-353:1995;  
IEC 60754-1 /-2:1997; IEC 61034:1997; IEC 60332-3-22 :2000

Documents Helkama Specification HBKQ 9.Spec.3 and 5, dated 01.11.2006/dk  
Test Report: LKM-HF/1TT3X...and LKSM-HF/STT3X...dated 25.02.1999  
SP report 99R2 3461 and 98R2 3404; FIMKO report No. 2758  
and 2759, dated 15.12.1998 and report no. CT07-0310-1

Remarks None

Valid until 2013-01-23

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Type Approval Symbol



File No. I.N.01

Hamburg, 2008-05-05

Germanischer Lloyd

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Reinhard Fenster

This certificate is issued on the basis of "Guidelines for the Performance of Type Approvals Part 1, Procedure".