



Lloyd's
Register

Type Approval Certificate Extension

This is to certify that Certificate No. 13/20036 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	Helkama Bica Oy, Finland	
PLACE OF PRODUCTION	Helkama Bica Oy Lakimiehenkatu 4 FI- 20780 Kaarina Finland	
	Helkama Bica Oy Lasitehtaankatu 12 FI- 10960 Hanko Finland	
	Helkama Bica (Shanghai) CO., LTD Plot 1-2, Minhang Export Processing Zone No. 3111 Huan Cheng West Road Fengxian District, Shanghai 201401, China	
DESCRIPTION	Halogen free, flame retardant, XLPE insulated, low smoke instrumentation, control and communication cable for fixed installations.	
TYPES	LKM-HF 250V	Unarmoured
	LKM-SHF2 250V	
	LKSM-HF 250V	Cu- or CuSn-wire braid armoured (Collectively screened)
	LKSM-SHF2 250V	Al/ pest-tape collectively screened
	LKAM-HF 250V	
	LKAM-SHF2 250V	
	LKM-FLH 250V	Unarmoured Hybrid cable
Certificate No.	13/20036 (E1)	
Issue Date	7 September 2015	
Expiry Date	26 July 2020	
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Lloyd's Register EMEA
71 Fenchurch Street, London EC3M 4BS


Jochen Körner
Hamburg Technical Support Office

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LR031.1.2013.12

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APPLICATION

Fixed wiring in marine, offshore and industrial installations

SPECIFIED STANDARDS

Construction:	IEC 60092-376: 2003 and IEC 60092-350: 2014
Conductor:	Stranded plain annealed copper wire to IEC 60228: 2004 class 2 or class 5.
Insulation:	IEC 60092-360: 2014 XLPE
Collective screen:	Plastic coated aluminium tape (LKAM)
Armour:	Copper wire braid plain or tinned (LKSM)
Sheathing:	IEC 60092-360: 2014 SHF1 or SHF2

Helkama Bica Oy specification: HBKQ-9 spec

LKM-HF 250V	65
LKM-SHF2 250V	123
LKSM-HF 250V	56
LKSM-SHF2 250V	125
LKAM-HF 250V	66
LKAM-SHF2 250V	129
LKM-FLH	73

ADDITIONAL TESTS

Flame retardance	IEC 60332-1-2: 2004 IEC 60332-3-22: 2009
Acid gas emission	IEC 60754-1: 2011
pH and conductivity	IEC 60754-2: 2011
Fluorine content	IEC 60684-2: 2011
Smoke emission	IEC 61034-1: 2013 IEC 61034-2: 2013

RATINGS

Rated voltage $U_o/U (U_m)$: 150/250V (300V)
Max. conductor temperature: 90°C
Minimum installation temperature: -15°C

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RANGE

Number of conductors	Types	Conductor cross section (mm ²)
2, 3, 4, 5, 7, 10, 12, 14, 16, 19, 20, 24, 27, 32, 37, 61x	LKM-HF LKM-SHF2 LKSM-HF LKSM-SHF2 LKAM-HF LKAM-SHF2	0.5, 0.75
2, 3, 4x	LKM-FLH	0.75, 1.5, 2.5

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The attached Design Appraisal Document No. HTS/ETS 32374-15 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 13/20036 to which this extension should be attached.

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