



Lloyd's
Register

Type Approval Certificate Extension

This is to certify that Certificate No. 13/20035 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 Flame retardant, halogen free, crosslinked polyethylene insulated, polyolefine sheathed, power and control cable.

TYPES	LKMM-HF	Unarmoured
	LKMM-SHF2	
	LKMSM-HF	Cu- or CuSn-wire braid Armoured
	LKMSM-SHF2	

Certificate No. 13/20035 (E1)

Issue Date 29 June 2015

Expiry Date 21 May 2020

Sheet 1 of 3


Jochen Körner
Hamburg Technical Support Office

 Lloyd's Register

Lloyd's Register EMEA

LR031.1.2013.12

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Lloyd's Register EMEA
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APPLICATION

Fixed wiring on ships, offshore and industrial installations.

SPECIFIED STANDARDS

Construction:	IEC 60092-353: 2011 and IEC 60092-350: 2014
Conductor:	IEC 60228: 2004 Plain or tinned to class 2 or class 5
Insulation:	IEC 60092-360: 2014 XLPE
Armour:	Copper wire braid plain or tinned
Sheathing:	IEC 60092-360: 2014 SHF1 or SHF2

ADDITIONAL TESTS

Flame retardant	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

Helkama Bica Oy specification:	HBKQ-9
LKMM-HF	38
LKMM-SHF2	106
LKMSM-HF	19
LKMSM-SHF2	107

RATINGS

Rated voltage: $U_o/U (U_m)$: 0.6/1 (1.2) kV
Maximum conductor temperature: 90°C
Minimum installation temperature: -15 °C

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RANGE

Number of conductors		Conductor cross section
1*,2, 3, 4, 5,	LKMM-HF LKMM-SHF2 LKMSM-HF LKMSM-SHF2	1.0, 1.5, 2.5, 4, 6, 10, 16, 25, 35, 50, 70, 95, 120, 150, 185, 240, 300
7x	LKMM-HF LKMM-SHF2 LKMSM-HF LKMSM-SHF2	1.0, 1.5, 2.5, 4, 6, 10, 16, 25
10, 12, 14, 16, 19, 24, 27, 37x	LKMM-HF LKMM-SHF2 LKMSM-HF LKMSM-SHF2	1.0*, 1.5, 2.5

* -only for cable types LKMSM-SHF2 and LKMM-SHF2.

"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 31999-15 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 13/20035 to which this extension should be attached.

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Marine Design Appraisal Document

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E-mail: hamburg-technical-support@lr.org

Date
29 June 2015

Please quote this reference number on all future communications
HPC1562034/31999-15/JK/ND/SC

**THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2002
ISSUED TO: HELKAMA BICA OY, FINLAND
FOR: FLAME RETARDANT, HALOGEN FREE, CROSSLINKED POLYETHYLENE INSULATED,
POLYOLEFINE SHEATHED, POWER AND CONTROL CABLE.
TYPE APPROVAL CERTIFICATE EXTENSION NO. 13/20035 (E1)**

The additional undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register's Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

ADDITIONAL APPROVAL DOCUMENTATION

Form 2571	Application for Type Approval Certification	19.01.2015
W04097854	Production Quality Assessment Form China	22.05.2015
HEL1501308/1	Production Quality Assessment Form Kaarina Finland	07.05.2015
HEL1501308/02	Production Quality Assessment Form Hanko Finland	07.05.2015
HBKQ9.SPEC.38	Data Sheet LKMM-HF 0,6/1 (1,2) kV	30.12.2014
HBKQ9.SPEC.106	Data Sheet LKMM-SHF2 0,6/1 (1,2) kV	03.06.2013
HBKQ9.SPEC.19	Data Sheet LKMSM-HF 0,6/1 (1,2) kV	30.12.2014
HBKQ9.SPEC.107	Data Sheet LKMSM-SHF2 0,6/1 (1,2) kV	19.08.2014
Unnumbered	Statement of compliance	22.04.2015
Unnumbered	Statement of compliance	25.06.2015
Unnumbered	Statement of compliance	24.06.2015
Unnumbered	Certificate of Product Conformity LKMM-SHF2 0,6/1kV	24.06.2015
Unnumbered	Certificate of Product Conformity LKMSM-SHF2 0,6/1kV	24.06.2015
Unnumbered	Certificate of Product Conformity LKMM-HF 0,6/1kV	24.06.2015
Unnumbered	Certificate of Product Conformity LKMSM-HF 0,6/1kV	24.06.2015

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.

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