

**POTVRDA O TIPNOM ODOBRENJU**  
**TYPE APPROVAL CERTIFICATE**

Br /No 03-001296/030962

Potvrđuje se da je ovaj proizvod, u skladu s Pravilima za klasifikaciju brodova, Dio 1. - Opći propisi, Odjeljak 3. - Tipno odobrenje proizvoda, odobren za ugradnju na brodove i postrojenja pod nadzorom Hrvatskog registra brodova.

*This is to certify that this product, on the basis of the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products, is approved for use on board ships and installations under supervision of the Croatian Register of Shipping.*

**TIP I OPIS PROIZVODA:***TYPE AND DESCRIPTION OF PRODUCT:***BRODSKI INSTRUMENTACIJSKI, KOMUNIKACIJSKI I KONTROLNI KABEL BEZHALOGENI I VATROOTPORNI***SHIPBOARD INSTRUMENTATION, COMMUNICATION AND CONTROL CABLE HALOGEN FREE AND FIRE RESISTANT***RFE-FRHF / RFE-FRHF(i) 150/250 V (300 V)****PROIZVOĐAČ:***MANUFACTURER:***HELKAMA BICA Oy***Lakimiehenkatu 4**FIN-20780 Kaarina***FINLAND****PROIZVOD UDOVOLJAVA SLIJEDEĆIM PRAVILIMA/PROPISIMA:***THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:***HRB PRAVILA ZA KLASIFIKACIJU BRODOVA: DIO 12 - ELEKTRIČNA OPREMA**  
*CRS RULES FOR THE CLASSIFICATION OF SHIPS: PART 12 - ELECTRICAL EQUIPMENT*

Helkama specification: HBKQ 9 spec.25 and 45

Technical specification:

Design standard:

IEC 60092-376 (2<sup>nd</sup> ed. 2003-05),

Cables for control and instrumentation circuits 150/250 V (300 V)

Other standards:

- testing: IEC 60092-350 (3<sup>rd</sup> Ed. 2008-02), General constructions and testing requirements- insulation: IEC 60092-351 (3<sup>rd</sup> ed. 2004-04), Insulating materials for shipboard power cables- sheathing: IEC 60092-359 (1.2<sup>nd</sup> ed. 1999-08)

Sheathing materials for shipboard power and telecommunication cables

**DETALJI O PROIZVODU I UVJETIMA CERTIFIKACIJE DANI SU NA POLEDINI.***FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.***ODOBRENJE VRIJEDI DO: 2016-02-10***APPROVAL IS VALID UNTIL:***Mjesto i datum: Split, 2012-02-10***Place and date:***M.P.***(Seal)*

Goran Begović, dipl.ing.

**NAPOMENA:** Ova potvrda nije valjana ako se proizvod ili način njegove proizvodnje promijenio u odnosu na tipno ispitani proizvod. Proizvođač treba obavijestiti Hrvatski registar brodova o bilo kojoj izmjeni na proizvodu kako bi ishodio valjanu potvrdu.

*NOTE: This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Croatian Register of Shipping of any modification or changes to the product in order to obtain a valid certificate.*

**PODROBNJI OPIS PROIZVODA:***DETAILED PRODUCT DESCRIPTION:*

Flame retardant, fire resistant, halogen free, crosslinked polyethylene (XLPE) insulated, (armoured) screened, polyolefine sheathed, instrumentation, control cable 150/250 V (300 V)

RFE-FRHF collectively screened  
RFE-FRHF(i) individually and collectively screened

**RFE-FRHF**

<u>No of pairs</u>	<u>Cross sectional area (mm<sup>2</sup>)</u>
1, 2, 4, 7, 8, 10, 12, 14, 16, 19, 24, 32 and 37	0.5, 0.75 & 1.5
1x3, 1x4 (quadruple)	0.5, 0.75 & 1.5

**RFA-FRHF(i)**

<u>No of pairs</u>	<u>Cross sectional area (mm<sup>2</sup>)</u>
1, 2, 3, 4, 7, 8, 10, 12, 14, 16, 19, 24, 27, 30, 32 & 37	0.5, 0.75 & 1.5
1x3, 1x4 (quadruple)	0.5, 0.75 & 1.5

**PODRUČJE PRIMJENE / POSEBNI GRANIČNI UVJETI:***APPLICATION / LIMITATIONS:*

**Fiksna ugradnja na pomorskim brodovima, odobalnim objektima i industriji.**

*Fixed installation in marine, offshore and industrial use.*

**DOKUMENTACIJA ZA TIPNO ODOBRENJE:***TYPE APPROVAL DOCUMENTATION:*

Helkama Application on RFE-FRHF/RFE-FRHF(i)	2012-01-27
Helkama RFE-FRHF 150/250 V (300 V) Cable Data Sheet Specification HBKQ 9. Spec 25 incl. App 2	2011-03-03
Helkama RFE-FRHF(i) 150/250 V (300 V) Cable Data Sheet Specification HBKQ 9. Spec 45 incl. App 2 & 3	2011-03-03

**Izveštaj o ispitivanju/ test report:**

2.MC1\_i\_comp/FR075TT67579;2.MC1\_S/FR075TT67579; 3a.Hotdet\_s/FRO  
755TT67579; 4b.HST\_S/FR075TT67579; 3bCold\_S/FRO  
755TT67579; 4E.IEC 332-1\_S/FR075TT67579  
IEC 60332-3A/FR075TT67579; IEC 61034-2/FR075TT67579  
IEC 331\_i/FR075TT67579; IEC 331\_c/FR075TT67579

**OZNAČAVANJE PROIZVODA:***MARKING OF PRODUCT:*

LOT ##### RFE-FRHF <number of conductors> x <size> mm<sup>2</sup> 250 V + 90°C  
IEC 60092-376, 60331-21, 60332-3-22 HELKAMA "month-year" and "length marking"

LOT ##### RFE-FRHF(i) <number of conductors> x <size> mm<sup>2</sup> 250 V + 90°C  
IEC 60092-376, 60331-21, 60332-3-22 HELKAMA "month-year" and "length marking"

**UVJETI ZA CERTIFIKACIJU:***CONDITIONS FOR CERTIFICATION:*

NON

Raščlana

12.05.01

Zamjenjuje potvrdu

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