



TYPE APPROVAL CERTIFICATE
No. ELE449022CS

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	ELECTRIC CABLES
<i>Type</i>	CAT7 (S/FTP) ,CAT6A(S/FTP), CAT6(S/FTP), CAT5E(F/UTP).
<i>Applicant</i>	HELKAMA BICA OY LAKIMIEHENKATU 4 FIN 20780 KAARINA FINLAND
<i>Reference standards</i>	RINA Rules for the Classification of Ships Pt C, Ch 2, Sec 9; IEC Standards (see Enclosure)

Issued in **Genova** on **December 1, 2022.** *This Certificate is valid until* **February 2, 2026**

RINA Services S.p.A.
Luigi Benedetti

This certificate consists of this page and 1 enclosure

TYPE APPROVAL CERTIFICATE

No. ELE449022CS

Enclosure - Page 1 of 1

CAT7 (S/FTP) ,CAT6A(S/FTP), CAT6(S/FTP), CAT5E(F/UTP).

Materials/Components

Data communication cable , flame retardant, halogen free, for fixed installantions in marine and offshore units.

Rated temperature: + 80°C

Type: CAT7 (S/FTP) ; CAT6A (S/FTP); CATT6 (S/FTP) and CAT5E (F/UTP) optional CAT5E (F/UTP) DS armour.

Marking: HELKAMA LAN Cable 4PR - size of conductor - 60332-3-22 - lot number - month year - lenght marking

Construction:

conductor: solid plain or tinned annealed copper size, AWG 23/1, AWG 24/1 (optional stranded plain or tinned annealed copper, size AWG 24/7, AWG 26/7)

insulation: halogen free foamed polyethylene (Foam PE) or halogen free solid polyethylene (Solid PE)

stranding: cores stranded together and covered by separator tape

pair-shielding: aluminium polyester foil, only for (S/FTP) type

common shield: braid of tinned copper wires for (S/FTP) type and aluminum polyester foil for (F/UTP) type

inner sheath: low smoke, halogen free, thermoplastic (LSZH), optional

armour: braid of galvanized steel wire (optional)

sheath: low smoke, halogen free, thermoplastic (LSZH)

In accordance to rules: IEC 60092-350; IEC 61156-5; IEC 60332-1-2; IEC 60332-3-22; IEC 60754-2; IEC 61034-1; IEC 61034-2; RINAMIL Rules; RINAMIL for FREMM; RINA Rules for FRSU.

Technical specification:

CAT5E (F/UTP) DS Armour HBKQ 9 spec 269 18.12.2020/dk

CAT6 (S/FTP) HBKQ 9 spec 265 18.12.2020

CAT6A (S/FTP) HBKQ 9 spec 266 19.10.2020/dk

CAT7 (S/FTP) HBKQ 9 spec 239 30.4.2020/dk

Test Reports:

CAT7 (S/FTP) ; DANAK-19/20184 DELTA-T925313-01 dated 16 May2019.

CAT6A (S/FTP) ; DANAK-19/20184 DELTA-T925313-01 dated 16 May2019.

CAT6 (S/FTP) ; DANAK-19/21516 FORCE-12032295-02 rev.1 dated 05 Oct 2020.

CAT5E (F/UTP) DS Armour ; DANAK-19/21515 FORCE-12032295-01 rev.1 dated 10 Dec 2020.

Tests Report::

DANAK-19/20184 DELTA-T925313-01 dated 16 May 2019.

DANAK - 19/21516 Report N. 12032295-02 Rev.1.

DANAK - 19/21515 Report N. 12032295-01 rev.1.

Place of Manufacturing:

Datwyler IT Infra AG

Gotthardstrasse 31, 640 Altdorf, Switzerland

Optional place of manufacturing:

Linkz Industries (Souzhu) Limited

88 Huaxun Road

Huagiao Economic Developement Zone

Kunshan, Jangsu Province, Republic of Cina.

TYPE APPROVAL CERTIFICATE

No. ELE449022CS

Enclosure - Page 2 of 2

CAT7 (S/FTP) ,CAT6A(S/FTP), CAT6(S/FTP), CAT5E(F/UTP).

Note/Remarks:

The product is subject to the compliance with RINA Rules and Standards mentioned on the certificates
Type Approval certifies that a representative sample of the products has been found to meet the applicable design
criteria

Any modification of change shall not be valid until approval is granted by RINA as a result of due assessment.

This Type Approval Certificate annuls and replaces the previous N. ELE001521CS dated 02 February 2021.

Genova November 23, 2022

Genova December 1, 2022