



Certificate No:
TAE00004SH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Low Voltage Cable

with type designation(s)
LI2XCH

Issued to

BizLink Special Cables Germany GmbH
Friesoythe, Niedersachsen, Germany

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Rated voltage (V) 150/250

Temp. class (°C) 90

Issued at **Høvik** on **2023-06-26**

This Certificate is valid until **2028-06-25**.

for **DNV**

DNV local unit: **Hamburg – CMC North/East**

Approval Engineer: **Carsten Hunsalz**

Frederik Tore Elter
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2022-12

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Product description

XLPE insulated and SHF1 sheathed shipboard control and instrumentation cables

Construction

Conductor: Plain or tinned stranded copper, class 2 or 5
Insulation: XLPE
Individual screen: overlapped aluminum laminated foil with optional plastic tapes and a stranded drain wire
Screen: Tinned stranded copper wire with optional plastic tapes
Outer sheath: SHF1

No. of pair units: Nominal cross section mm²
1, 2, 3, 4, 5, 6, 7, 8, 9, 10 0.5

Application/Limitation

Control and instrumentation.

The requirements of SOLAS Amendments Chapter II-1, Part D, Reg. 45, 5.2 (provision to be taken to limit Fire Propagation along Bundles of Cables or Wires) are fulfilled without any additional measures.

Flame retardant Cat. A.

Environmental temperature: -35°C up to 90°C

Type Approval documentation

Specification: Version 2022-02-18 / F45052-F8200

Test report: BizLink Type Test dated 2023-02-22

Tests carried out

Standard	Release	General description	Limitation
IEC 60092-350	2020-01	General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	
IEC 60092-376	2017-05	Cables for control and instrumentation circuits 150/250 V (300 V)	
IEC 60092-360	2021-01	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables.	
IEC 60332-1-2	2015-07	Tests on electric cables under fire conditions. Test for vertical flame propagation for a single insulated wire or cable.	
IEC 60332-3-22	2018-07	Tests on electric and optical fibre cables under fire conditions – Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category A	Charred portion of sample does not exceed 2,5m above bottom edge of burner.
IEC 60092-350	2020-01	General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	Annex E Cold bend: -35°C
EN 50290-2-27	2021-04	Communication cables - Part 2-27: Common design rules and construction - Halogen free polyolefin based sheathing compounds for cables having improved flame and fire properties (HFFR)	Sheath material Type 2 Max. operating temperature 90°C

Marking of product

"sequential length in meter" BizLink SeaLine SCG * nomenclature (type designation) * 150V/250V * "internal lot number"

Example:

00020m * BizLink SeaLine SCG * LI2XCH 5X2X0.5 * 150V/250V * 221800

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE