



CERTIFICATE NUMBER	21-2179946-PDA
EFFECTIVE DATE	18-Nov-2021
EXPIRY DATE	17-Nov-2026
ABS TECHNICAL OFFICE	Hamburg Engineering Department

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

ELTHERM PRODUCTION GMBH

located at

ERNST-HEINKEL-STR. 6-10, D-57299 BURACH, Germany

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Cable, Heat Trace
Model: ELSR-H-x, -LS-x, -N-x; ELK-AG-N, -MI-VA; ELP/PFA-x.
Endorsements:
Tier: 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 17/Nov/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Efstratios Maliatsos, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

ELTHERM PRODUCTION GMBH

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D-57299 BURACH

Germany

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Tier: 2 - PDA Issued

Product: Cable, Heat Trace

Model: ELSR-H-x, -LS-x, -N-x; ELK-AG-N, -MI-VA; ELP/PFA-x.

Endorsements:

Intended Service:

Marine and Offshore Application for safe and hazardous locations used for frost protection and maintaining constant temperatures on vessels, pipes, valves and associated equipment.

Description:

Electrical self-regulating heating cable and matching accessories (junction box ELAK-Ex-3, -Ex-it-R, -Ex-R, end termination kit EL-ECN/L/H-Ex, temperature sensor ELTF-PTEEx, capillary thermostat EL-CT, ex-glands, splice connector kit Ex-Con, mounting post, end cap EL-ECN, -ECL, -ECH).

Rating:

Nominal output: 10 - 60 W/m for ELSR-H-x, -LS-x, -N-x; ELK-AG-N; ELP/PFA-x and up to 250 W/m for ELK - MI-VA.

Nominal voltage: 230 V for ELSR-H-x (Certified Safe Type, Marking: Ex 60079-30-1 IIC Gb, Cert. No: IECEx EPS 12.0004U),

LS-x (Certified Safe Type, Marking: Ex e IIC Gb/Ex tb III C Db, Cert. No: IECEx EPS 12.0006U),

N-x (Certified Safe Type, Marking: Ex e IIC Gb/Ex tb III C Db, Cert. No: IECEx EPS 12.0006U),

ELP/PFA-x (Certified Safe Type, Marking: Ex 60079-30-1 IIC Gb/Ex 60079-30-1 IIIC Db, Cert. No: IECEx EPS 12.0009U)

up to 500 V for ELK -MI-VA (Certified Safe Type, Marking: Ex 60079-30-1 IIC Gb/Ex tb III C Db, Cert. No: IECEx EPS 14.0013U) and up to 550 V for ELK-AG-N (Certified Safe Type, Marking: Ex eb IIC T6...T3 Gb/Ex tb III C TX Db, Cert. No: IECEx IBE 13.0053X).

Service Restriction:

Unit Certification is not required for this product.

If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:

See Attached File.

Terms of Validity:

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This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

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STANDARDS

ABS Rules:

2021 Rules for Condition of Classification: 1-1-4/7.7, 1-1-A3 and 1-1-A4, which covers the following:

2021 Rules for Building and Classing Marine Vessel Rules: 4-8-3/1.1/ 1.3/1.7/1.11.1/1.17/13, 4-9-8/13.1.

2021 Rules for Conditions of Classification - Offshore Units and Structures: 1-1-A2, 1-1-A3, 1-1-4/9.7, which covers the following:

2021 Rules for Building and Classing Mobile Offshore Units: 4-3-3/5.21/ 9.1.

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA

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Attachment to 21-2179946-PDA covering
Cable, Heat Tracer

ELTHERM PRODUCTION GMBH

Models: ELSR-H-x, -LS-x, -N-x; ELK-AG-N, -MI-VA; ELP/PFA-x.

Issuance Date: 18-Nov-2021

Expiry Date: 17-Nov-2026

Intended Service:

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Drawing List

Engineering Office:	Hamburg Engineering Department	
Submitter:	ELTHERM PRODUCTION GMBH (432174)	
Drawing No	Revision No	Drawing Title
16-HG1573777-PDA-ActOnForm	-	16-HG1573777-PDA-ActOnForm
IECEX_IBE_13	-	IECEX_IBE_13.0053X_001 ELK-AG-Nx
IECEX_EPS_14	-	IECEX_EPS_14.0013U_000 ELK-MIx
IECEX_EPS_12.0006U_002 ELSR-LSx_Nx	-	IECEX_EPS_12.0006U_002 ELSR-LSx_Nx
IECEX_EPS_12.0009U_002 ELP_PFAx	-	IECEX_EPS_12.0009U_002 ELP_PFAx
IECEX_EPS_12.0004U_005 ELSR-Hx	-	IECEX_EPS_12.0004U_005 ELSR-Hx
DeclarationOfConformity_Eltherm_16-HG157377-PDa signed	-	DeclarationOfConformity_Eltherm_16-HG157377-PDa signed
2021-09-23 2547790_elth_12TH0149_Heizband_DE EPS ExTR12	-	2021-06-28. BV Consumer Products Services Germany GmbH_Tuerkheim, Germany (IECEX TEST)
2021-09-23 2547790_EPS_ExTR12	-	2015-11-05. BV Consumer Products Services Germany GmbH_Tuerkheim, Germany (IECEX TEST)
Data Sheets	-	Data Sheets

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Drawing List as per 16-HG1573477-PDA (November 2016)

- Document No. Data Sheets, Data Sheets, Revision: -, Pages: 25.
- Document No. ExTR ELAK-Ex-R, IECEx Test Report of 14 Jan 2016_ELAK-Ex-R, Revision: -, Pages: 24.
- Document No. IECEx EPS 13.0002, Ex Certificate ELAK-EX, Revision: -, Pages: 3.
- Document No. 02, Description System ELK-AG-N 2.5 Ex, Revision: --, Pages: 2.
- Document No. 03, Overview of products for PDA, Revision: --, Pages: 1.
- Document No. BU-080, Data Sheet Ex-Gland type M25 x 1,5 for flat cable, Revision: 4, Pages: 2.
- Document No. BU-100, Data Sheet Ex-Gland type MICL, Revision: 0, Pages: 2.
- Document No. IECEx EPS 12.0004U_ELSR-H, IECEx Certificate Heating Cables type ELSR--2-BOT, Revision: --, Pages: 4.
- Document No. IECEx EPS 12.0006U_ELSR, IECEx Certificate Heating Cables type ELSR..., Revision: --, Pages: 5.
- Document No. IECEx EPS 12.0009U_ELP-PFA, IECEx Certificate Heating Cables type ELP-PFA..., Revision: --, Pages: 4.
- Document No. IECEx EPS 12.0023U_ELKM-AG, IECEx Certificate Heating Cables type ELKM-AG-N...ELKM-AG-IN...-, Revision: --, Pages: 4.
- Document No. IECEx EPS 13.0002_Junction boxes, IECEx Certificate Junction Boxes type ELAK-EX., Revision: --, Pages: 3.
- Document No. IECEx EPS 14.0013U_ELK-MI, IECEx Certificate Heating Cables type ELK-MI/VA-Ex, Revision: --, Pages: 3.
- Document No. IECEx IBE 12.0001U_Termination parallel heating tapes, IECEx Certificate Termination for Parallel Heating Tapes, Revision: --, Pages: 6.
- Document No. IECEx IBE 12.0002X_Pt 100, IECEx Certificate Pt 100 Temperature Sensor Series ELTF-PTEEx. 1 to ELTF-PTEEx. 4, Revision: --, Pages: 3.
- Document No. IECEx IBE 12.0023X_Cable gland, IECEx Certificate Ex Cable Gland type M25 x 1,5, Revision: --, Pages: 4.
- Document No. IECEx IBE 12.0024U_Mounting assembly, IECEx Certificate Mounting Assembly type Ex-It, Revision: --, Pages: 4.
- Document No. IECEx IBE 13.0012X_Ex-Con, IECEx Certificate Cable Joint Ex-Con 22/4, 22/4 Si, 25/7, 36/4 and SR, Revision: --, Pages: 6.
- Document No. IECEx IBE 13.0053X_System, IECEx Certificate Heating Cable System, Revision: --, Pages: 3.
- Document No. IECEx IBE 14.0069X_Ex-Thermostat, IECEx Certificate Ex-Capillary Tube Thermostat, Revision: --, Pages: 3.
- Document No. IECEx IBE 14.0073X_Ex-Gland, IECEx Certificate Ex Cable Gland type MICL, Revision: --, Pages: 3.