Certificate no.:
TAE000050Z

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Electric Power Cable

with type designation(s)
CXT1/NFS - 0.6/1kV or 1.8/3 kV Series

issued to
POLYCAB INDIA LIMITED
Halol, Gujarat, India

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 (kV)	**0,6/1 and 1,8/3**
Temp. class (°C)	**90**

Issued at **Hamburg** on **2025-02-28**

This Certificate is valid until **2030-02-27**.

for **DNV**

DNV local unit: **India CMC MES**

Approval Engineer: **Carsten Hunsalz**

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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 USD 300 000.

Product description

Type: CXT1/NFS - 0.6/1kV or 1.8/3 kV Series

Construction:

Conductors:	Plain or tinned, stranded copper class 2 or class 5
Core insulation:	XLPE
Metal covering:	Tinned copper wire braid
Outer sheath:	SHF1

Number of cores	Cross section [mm²]	Overall Diameter [mm]
1	6	8,00
1	10	8,50
1	16	9,50
1	25	11,00
1	35	12,50
1	50	14,00
1	70	16,00
1	95	18,00
1	120	20,00
1	150	21,50
1	185	23,50
1	240	26,50
1	300	29,00
2	6	13,00
2	10	15,50
2	16	17,00
2	25	20,00
2	35	22,50
2	50	25,50
2	70	29,00
2	95	32,50
2	120	36,00
2	150	40,50
2	185	44,50
2	240	50,00
2	300	55,00
3	6	13,50
3	10	16,50
3	16	17,50
3	25	21,50
3	35	24,00
3	50	27,00
3	70	31,00
3	95	34,50
3	120	39,00
3	150	43,50
3	185	48,00
3	240	53,50
3	300	59,00
4	6	15,50
4	10	18,00
4	16	19,50
4	25	23,50
4	35	26,00
4	50	30,00
4	70	34,00
4	95	39,00
4	120	43,00
4	150	48,50
4	185	53,00
4	240	60,00
4	300	66,00

Number of cores	Cross section [mm²]	Overall Diameter [mm]
5	6	17,00
5	10	19,50
5	16	21,00
5	25	26,00
5	35	29,00
5	50	33,00
5	70	38,50
5	95	43,00
5	120	47,50
1	1	6,00
2	1	9,00
3	1	9,50
4	1	10,00
5	1	11,00
6	1	12,00
7	1	12,00
9	1	14,50
10	1	15,00
12	1	16,00
14	1	16,50
16	1	17,50
19	1	18,00
21	1	19,00
22	1	20,00
24	1	21,00
26	1	21,00
28	1	22,00
30	1	22,00
32	1	23,00
34	1	24,00
36	1	24,00
37	1	24,00
1	1,5	6,50
2	1,5	10,00
3	1,5	10,00
4	1,5	11,00
5	1,5	12,00
6	1,5	13,00
7	1,5	13,00
9	1,5	16,00
10	1,5	16,50
12	1,5	17,00
14	1,5	18,00
16	1,5	19,00
19	1,5	20,00
21	1,5	21,00
22	1,5	22,00
24	1,5	23,00
26	1,5	23,00
28	1,5	24,00
30	1,5	24,00
32	1,5	25,00
34	1,5	26,00

Number of cores	Cross section [mm²]	Overall Diameter [mm]
36	1,5	26,00
37	1,5	26,00
1	2,5	7,00
2	2,5	10,50
3	2,5	11,00
4	2,5	12,00
5	2,5	13,00
6	2,5	14,00
7	2,5	14,00
9	2,5	17,50
10	2,5	18,00
12	2,5	19,00
14	2,5	20,00
16	2,5	21,00
19	2,5	22,00
21	2,5	23,00
22	2,5	24,50
24	2,5	25,50
26	2,5	25,50
28	2,5	27,00
30	2,5	27,00
32	2,5	28,00
34	2,5	29,00
36	2,5	29,00
37	2,5	29,00
1	4	7,50
2	4	12,00
3	4	12,50
4	4	13,50
5	4	15,00
6	4	16,50
7	4	16,50
9	4	20,00
10	4	21,00
12	4	21,50
14	4	22,50
16	4	24,00
19	4	25,00
21	4	26,50
22	4	28,00
24	4	29,50
26	4	29,50
28	4	31,00
30	4	31,00
32	4	32,50
34	4	34,00
36	4	34,00
37	4	34,00

1,8/3kV variants

Number of cores	Cross section [mm²]	Overall Diameter [mm]
1	10	12,00
1	16	12,50
1	25	13,50
1	35	15,00
1	50	16,50
1	70	18,00
1	95	20,00
1	120	21,00
1	150	23,00
1	185	24,50
1	240	27,00
1	300	29,00
1	400	32,00
1	500	36,50
1	630	41,00

Number of cores	Cross section [mm²]	Overall Diameter [mm]
3	10	22,50
3	16	23,50
3	25	26,50
3	35	29,00
3	50	31,50
3	70	35,00
3	95	39,00
3	120	42,50
3	150	46,00
3	185	50,00
3	240	55,00

Application/Limitation

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

General power and lighting.
Flame retardant in bunch Cat. A. Halogen free. Low smoke.

Type Approval documentation

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 60092-353	2024-06	Electrical installations in ships - Part 353: Power cables for rated voltages 1 kV and 3 kV	
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 and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable –Procedure for 1 kW pre-mixed flame	
EC 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 60754-1	2019-11	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Low Halogen: <0,5% Halogen
IEC 60754-2	2019-11	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 60684-2	2011-08	Flexible insulating sleeving – Part 2: Methods of test.	Fluorine content < 0,1%
IEC 61034-1/2	2019-11	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%

Marking of product

Example

POLYCAB INDIA LIMITED – CXT1/NFS - size - 0,6/1kV or 1,8/3kV - IEC 60332-3-22 Cat.A - Lot no.

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