



Certificate no.:
TAE0000534

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Electric Power Cable**

with type designation(s)
CJPJ/NC, CJPF/NC

issued to

Guangzhou OUSSEA Photoelectric Transmission Technology Inc., Ltd.
Guangzhou, Guangdong Province, China

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
Temp. class (°C) 90

Issued at **Hamburg** on **2025-10-09**

This Certificate is valid until **2030-10-08**.

for **DNV**

DNV local unit: **China South NB**

Approval Engineer: **Carsten Hunsalz**

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: CJPJ/NC, CJPF/NC

Conductor: Tinned, stranded copper class 2 or class 5
Insulation: Mica tape + XLPE
Outer sheath: PF - (SHF1) or PJ - (SHF2)

CJPJ/NC, CJPF/NC 0,6/1kV

Number of cores x conductor cross- section	Overall diameter nom.
mm ²	mm
1x1	5,4
1x1,5	5,6
1x2,5	6,1
1x4	6,6
1x6	7,2
1x10	8,1
1x16	9,4
1x25	11,3
1x35	12,5
1x50	14,2
1x70	16,2
1x95	18,3
1x120	20,3
1x150	22,4
1x185	24,9
1x240	27,9
1x300	30,8
2x1	8,7
2x1,5	9,2
2x2,5	10,2
2x4	11,4
2x6	12,5
2x10	14,6
2x16	16,9
2x25	20,5
2x35	23,2
2x50	26,3
2x70	30,7
2x95	34,7
2x120	38,7
2x150	42,8
2x185	47,8
3(2+E)x1	9,2
3(2+E)x1,5	9,8
3(2+E)x2,5	10,8
3(2+E)x4	12,1
3(2+E)x6	13,3
3(2+E)x10	15,5
3(2+E)x16	18,0

Number of cores x conductor cross- section	Overall diameter nom.
mm ²	mm
3(2+E)x25	22,1
3(2+E)x35	25,0
3(2+E)x50	28,3
3(2+E)x70	33,0
3(2+E)x95	37,3
3(2+E)x120	41,6
3(2+E)x150	46,0
3(2+E)x185	51,4
3(2+E)x240	58,1
4(3+E)x1	10,0
4(3+E)x1,5	10,6
4(3+E)x2,5	12,0
4(3+E)x4	13,2
4(3+E)x6	14,8
4(3+E)x10	17,3
4(3+E)x16	20,0
4(3+E)x25	24,4
4(3+E)x35	27,8
4(3+E)x50	31,5
4(3+E)x70	36,7
4(3+E)x95	41,7
4(3+E)x120	46,5
4(3+E)x150	51,4
4(3+E)x185	57,5
5(4+E)x1	10,9
5(4+E)x1,5	11,8
5(4+E)x2,5	13,1
5(4+E)x4	14,7
5(4+E)x6	16,2
5(4+E)x10	18,9
5(4+E)x16	22,1
5(4+E)x25	27,0
5(4+E)x35	30,7
5(4+E)x50	34,8
5(4+E)x70	40,6
5(4+E)x95	46,4
5(4+E)x120	51,4
5(4+E)x150	57,3
5(4+E)x185	63,9

Number of cores x conductor cross- section	Overall diameter nom.
mm ²	mm
6x1	11,4
7x1	12,0
10x1	15,3
12x1	15,8
14x1	16,8
16x1	17,7
19x1	18,6
24x1	22,1
27x1	22,6
30x1	23,4
33x1	24,3
37x1	25,4
6x1,5	12,1
7x1,5	12,8
10x1,5	16,4
12x1,5	17,1
14x1,5	18,0
16x1,5	19,0
19x1,5	20,2
24x1,5	23,7
27x1,5	24,3
30x1,5	25,3
33x1,5	26,3
37x1,5	27,5
6x2,5	13,5
7x2,5	14,4
10x2,5	18,5
12x2,5	19,1
14x2,5	20,3
16x2,5	21,4
19x2,5	22,8
24x2,5	26,8
27x2,5	27,6
30x2,5	28,6
33x2,5	29,7
37x2,5	31,1

Number of cores x conductor cross- section	Overall diameter nom.
mm ²	mm
6x4	15,1
7x4	16,0
10x4	20,7
12x4	21,4
14x4	22,7
16x4	24,0
19x4	25,5
24x4	30,3
27x4	30,9
30x4	32,1
33x4	33,5
37x4	34,9

Application/Limitation

General power and lighting. Control.

This type of cable is fire resistant in accordance with IEC Publication 60331.

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.

Fire resistant. Flame retardant Cat. A. Halogen free. Low smoke.

Type Approval documentation

Tests carried out

Standard	Release	General description	Limitation
DNV-CP-0399	2021-08	Class Programme Electric cables	
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 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 60331-1	2018-03	Fire resistance / Circuit integrity – Test for method for fire with shock at temperature of at least 830°C for cables rated up to and including 0,6/1 kV with an overall diameter exceeding 20 mm	For cables with an overall diameter exceeding 20 mm, 120 min.
IEC 60331-2	2018-03	Fire resistance / Circuit integrity – Test for method for fire with shock at temperature of at least 830°C for cables rated up to and including 0,6/1 kV with an overall diameter not exceeding 20mm	For cables with an overall diameter not exceeding 20 mm, 120 min.
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	Clause 45.2 Methods of determination of low levels of fluorine	HF max 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:

Guangzhou OUSSEA Photoelectric Transmission Technology Inc., Ltd. - CJPJ/NC – 0,6/1kV - size -
IEC 60332-3-22 – IEC 60331-1/2 - 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