Certificate No: LR26247582TA
Issue Date: 19/04/2026
Expiry Date: 18/04/2031

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**Suzhou Draka Cable Co., Ltd**
Address	No.88 Kangyuan Road, Xiangcheng Economic Development District, Suzhou City, 215131, China
Place of Production	Suzhou Draka Cable Co., Ltd No.88 Kangyuan Road, Xiangcheng Economic Development District, Suzhou City, 215131, China
Type	Control and Instrumentation Cables
Description	HFX-OSU FRSW, FHFX-OSU FRSW: XLPE Insulated, Low Smoke Halogen Free Flame retardant and Enhanced Fire resistance for fixed installation Marine and Offshore Control and Instrumentation Cables HFX-ISOSU FRSW, FHFX-ISOSU FRSW: XLPE Insulated, Low Smoke Halogen Free Flame retardant and Enhanced Fire resistance for fixed installation Marine and Offshore Control and Instrumentation Cables HFX-OSA FRSW, FHFX-OSA FRSW: XLPE Insulated, Low Smoke Halogen Free Flame retardant and Enhanced Fire resistance for fixed installation Marine and Offshore Control and Instrumentation Cables HFX-ISOSA FRSW, FHFX-ISOSA FRSW: XLPE Insulated, Low Smoke Halogen Free Flame retardant and Enhanced Fire resistance for fixed installation Marine and Offshore Control and

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CHETAN WAGH

Senior Specialist Electrical & Control to Lloyd's Register Marine and Offshore India LLP

Units 1702-1704, 17th Floor (Level-13), Building Q2, Aurum Q Parc; Gen 4/1 TTC, Thane-Belapur Road, Ghansoli, Navi Mumbai, 400710, India

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Instrumentation Cables

Note:
HFX -- Halogen free cable Cross-linked insulated stranded conductor class 2
FHFX -- Halogen free cable Cross-linked insulated flexible conductor class 5
U – Unarmoured
A -- Copper(plain or tinned) wire braid armored
IS -- Individual screen
OS -- Overall screen
FRSW -- Fire resistant + Shock + Water (test to IEC 60331-1 or -2, with Water spray and/or Water jet)

Trade Name

HFX-OSU FRSW, FHFX-OSU FRSW, HFX-ISOSU FRSW, FHFX-ISOSU FRSW, HFX-OSA FRSW, FHFX-OSA FRSW, HFX-ISOSA FRSW, FHFX-ISOSA FRSW

Application

Fixed wiring for marine and offshore installations

Specified Standard

IEC 60092-376:2025;
IEC 60092-350:2020;
IEC 60092-360:2021;
IEC 60332-3-22 Cat.A:2018
IEC 60332-1-2:2025;
IEC 60754-1:2011+AMD1:2019 CSV
IEC 60754-2:2011+AMD1:2019 CSV
IEC 61034-1:2005/AMD2:2019;
IEC 61034-2:2005/AMD2:2019;
IEC 60331-1/-2:2018;
EN 50200:2015 Annex E;
BS 8491:2008(R2015)

Ratings

Rated voltage: 150/250V
HFX-OSU FRSW, FHFX-OSU FRSW,

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HFX-OSA FRSW, FHFX-OSA FRSW,
No. of Pairs: 1x2, 2x2, 3x2, 4x2,5x2, 6x2, 7x2, 8x2, 10x2, 12x2, 14x2, 15x2, 16x2, 19x2, 20x2, 24x2, 27x2, 30x2, 37x2
No. of Triple: 1x3, 2x3, 3x3, 4x3, 5x3, 6x3,7x3, 8x3, 10x3, 12x3, 14x3, 16x3, 19x3
No. of Quad: 1x4, 3x4, 7x4
Cross-Section of Conductor(mm2): 0.75, 1, 1.5

HFX-ISOSU FRSW, FHFX-ISOSU FRSW,
HFX-ISOSA FRSW, FHFX-ISOSA FRSW,
No. of Pairs: 2x2, 3x2, 4x2, 5x2, 6x2, 7x2, 8x2, 10x2, 12x2, 14x2, 15x2, 16x2, 19x2, 20x2, 24x2, 27x2, 30x2, 37x2
No. of Triple: 2x3, 3x3, 4x3, 5x3, 6x3, 7x3, 8x3, 10x3, 12x3, 14x3, 16x3, 19x3
No. of Quad: 3x4, 7x4
Cross-Section of Conductor(mm2): 0.75, 1, 1.5

Max. conductor temperature: 90°C

Additional Tests

1. Flame temperature at least 830℃
2. Flame application time: 180min or 360min
3. Water jet(Cable OD＞20mm, IEC 60331-1 and additional water jet as per BS 8491:2008(R2015) par. 5.5 and 5.6 as far as applicable during the last 5 minutes of the test (5 water bursts each of 5 seconds and a time distance of 60 seconds).)
4. Water spray(Cable OD＜=20mm, IEC 60331-2 integrated by water spray protocol as per EN 50200:2015 Annex E during the last 15 minutes of the test)
5. Shock application intervals: 5min

Other Conditions

Type Approval does not eliminate the need (as required by LR Rules) the requirements for further review or for the product to be further inspected and/ or surveyed to be installed in ships classed or intended to be classed with LR.

If the specified standards are amended during the validity of this certificate, the product is to be reapproved prior to it being supplied to vessels to which the amended standards apply.

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Type Approval Certificate

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Marine and Offshore India LLP of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR21176950TA

The Design Appraisal Document TSO/25-052340-E-02 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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