

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	TELDOR Cables & Systems
Address	Kibbutz Ein-Dor, 1933500, Israel
Place of Production	TELDOR Cables & Systems Kibbutz Ein-Dor, 1933500, Israel
Type	Control and Instrumentation Cables
Description	Instrumentation / Control & Signal 250/300V low smoke, zero halogens, flame retardant, fire resistance (optional), made from solid or stranded conductors, made from multi-core, multi-pair and multi-triad constructions and their combinations with SHF1 / SHF2 / SHF2-Mud-resistant per NEK606 jackets. The cables are flame retardant per IEC60332-3 have fire resistant option per IEC60331-21/22, halogen free, low smoke emission (FR-LSZH/HFFR), Armored/ Non-armored.
Trade Name	Teldor
Application	Control and Instrumentation Cables for Marine and Offshore applications
Specified Standard	IEC 60092-376:2017, IEC60092 -350:2020, IEC 60092-360:2021, IEC60754-1/2:2019, IEC 61034-1/2:2019, IEC 60332-1-1/2/3:2015, IEC60332-3-22:2018, IEC 60332-3-24:2018, BS6387:2013; IEC 60331-1:2018, IEC 60331-2:2018, IEC 60331-21:1999, NEK 606:2016; ISO/IEC 11801:2017, CSA 22.2 No.03:2009 (Cold bend, Cold Impact), SOLAS Amendments chapter II-1,

19th Floor, 550 Yan An dong Road, Shanghai,
Huangpu District, China

Ke Lin Zhang

Lead Specialist to Lloyd's Register
Classification Society (China) Co Ltd
A member of the Lloyd's Register group

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Part D, Reg. 45, 5.2.

Ratings

Details see certificate appendix

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 Classification Society (China) Co Ltd of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document LR21328451TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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Appendix

SPECIAL PROPERTIES:

Halogen free per IEC 60754-1/2, Flame retardant per IEC 60332-3-22 (cat.A), 60332-3-24 (cat.C), IEC 60332-1-1/2/3, IEC 60332-2, Low Smoke per IEC 61034-1/2, Armor/Non-Armor Shielded / UnShielded Multi Pair / Multi Core / Multi Cables options, Fire resistant per IEC 60331-23 (Optional) Various Jacket types (SHF1, SHF2, SHF2-MUD resistant per NEK606), Designed for marine and offshore application, Oil resistant, Designed for harsh conditions, Combinations of cross sections and single/pair/core structures are permitted

DETAILED DESCRIPTION:

Cable Type	Multicore	Multipair	Multitriad
Number of units	1-40	1-50	1-36
Conductor size	0.5 mm ² 0.75 mm ² 1.0 mm ² 1.5 mm ² 2.5 mm ²		
Conductor material	Bare annealed copper or Tin-coated annealed copper		
Conductor construction	Stranded - IEC 60228 Class 2 or Class 5		
Flame barrier	Inorganic tapes / Fire resistance tape		
Insulation material	IEC 60092-351 HF XLPE (Cross-Linked, Halogen-Free, Low-Smoke, Flame retardant)		
Individual Shield	Optional metal foil + drain or metal braid or metal foil + metal braid		
Individual jacket	Optional jacket (taped or extruded)		
Overall Shield	Optional metal foil + drain or metal braid or metal foil + metal braid		
Braid construction	0.15mm or 0.20mm tin-coated or bare copper wires, 84% coverage min.		
Inner jacket material	SHF1 or SHF2 or SHF2-MUD per NEK606 single or double layer		
Aarmor	Braid wire materials: Braided tinned copper wire. Braided bare copper wire. Braided galvanized steel wire. Braided aluminum alloy wire. Braided copper alloy wire. Braided bronze wire.		
Outer jacket material	SHF1 or SHF2 or SHF2-MUD per NEK606 single or double layer		

Overall diameter	2.0 mm min. - 60 mm max.
Special Construction	Combinations of various cross sections and combinations of single/pair & triads are allowed
Max. pulling force	Specified in the detailed specification.
Special properties	Flame retardant, Halogen Free, Circuit Integrity with water spray and mechanical shock per EN50200, Fire Resistant, Low Smoke, Mud Resistant

Unit Count	Basic Unit type	Conductor Cross-section	Conductors Material	Individual Shield	Overall Shield	Armor	Fire resistant	Jacket Type (Inner/Outer)
nn	S: Singles P: Pairs T: Triads	05: 0.5 mm ² 07: 0.75 mm ² 10: 1.0 mm ² 15: 1.5 mm ² 25: 2.5 mm ²	T: Tin-coated copper B: Bare copper	1: Unshielded 2: Al. foil 3: Copper foil 4: BC braid 5: TC braid 6: Al. foil + TC braid 7: CU foil + BC braid	1: Unshielded 2: Al. foil 3: Copper foil 4: BC braid 5: TC braid 6: Al. foil + TC braid 7: CU foil + BC braid	T: Braided tinned copper wire B: Braided bare copper wire G: Braided galvanized steel wire A: Braided aluminum alloy wire C: Braided copper alloy wire Z: Braided bronze wire	F=fire resistant (opt.)	SHF1 SHF2 MUD Resistance(NEK606)

APPLICATION LIMITATION:

Operation temperature: -40°C to +95°C

Storage temperature: -40°C to +95°C

Installation temperature: -30°C to +50°C