WATERLINK - TSRE 24kV

TSRE 24 kV 3x 95 mm² + GS48

Nexans Ref.: 10545089

Armoured sumbarine cable

STANDARDS

Product IEC 60228; IEC 60502-2; Nexans specification

Armored PEX insulated submarine cables for utilities.

Construction:

Conductor:
Round multiple wire, compressed copper conductor

Conductor screen:
Extruded layer of semi-conductive cross-linked polyethylene.

Insulation:
Extruded insulation of cross-linked polyethylene.

Insulation screen:

Extruded insulation of cross-linked polyethylene.

Metal screen:
A layer of Cu tape bonded to an overlying semiconductor sheath.

Sheath:
A layer of extruded semiconductor polyethylene.

Twisting and bonding:
Three insulated conductors are twisted together and bonded with semiconducting bands.
Fillers are installed in the winding rooms.
If desired, fiber cables can also be inserted into the winding rooms.

Armouring:
A layer of galvanized steel wires, 4.2mm.
Zinc wires can be inserted into the reinforcement if desired.

Outer sheath:
A layer of extruded polyethylene, which provides an outer corrosion protection.

The dimensions and weights given are based on IEC 60502 and 4.2 mm reinforcement wire. In other cases, the values given will vary.

CHARACTERISTICS

Construction characteristics

Conductor material	Annealed copper

Conductor flexibility

Rated Voltage Uo/U (Um)
12 / 20 (24) kV

Max.conductor temp.in service
90 °C

Bending factor when laying
15 (xD)

Minimum installation temperature
-10 °C

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Construction characteristics	
Conductor shape	Circular compacted
Material of the inner semi-conductor	Extruded
Insulation	XLPE (Cross-linked Polyethylene)
Material of the external semi-conductor	Extruded
Armour type	Galvanised round steel wires
Conductor flexibility	
Dimensional characteristics	
Conductor diameter	11.5 mm
Diameter over insulation	30.2 mm
Nominal insulation thickness	5.5 mm
Diameter of steel wires	4.2 mm
Nominal outer diameter	80.3 mm
Outer Diameter (mm)	
Approximate weight	12900 kg/km
Conductor cross-section	95 mm²
Number of cores	3
Number of optical fibres	48
Electrical characteristics	
Max. DC resistance of the conductor at 20°C	0.193 Ohm/km
Maximum operating voltage	24 kV
Permissible current rating when buried	315 A
Permissible current rating in open air	330 A
Permissible current rating submerged in water, 15°C ambient temperature	335 A
Permissible short circuit current	13300 A
Nominal phase capacitance	0.233 µF / km
Phase reactance 50 Hz - trefoil formation	0.117 Ohm/km
Rated Voltage Uo/U (Um)	12 / 20 (24) kV
Usage characteristics	
Max. conductor temperature in service	90 °C
Short-circuit max. conductor temperature	250 °C
Bending factor when laying	15 (xD)
Minimum installation temperature	-10 °C

Conductor flexibility

Rated Voltage Uo/U (Um)
12 / 20 (24) kV

Max.conductor temp.in service
90 °C

Bending factor when laying
15 (xD)

Minimum installation temperature
-10 °C