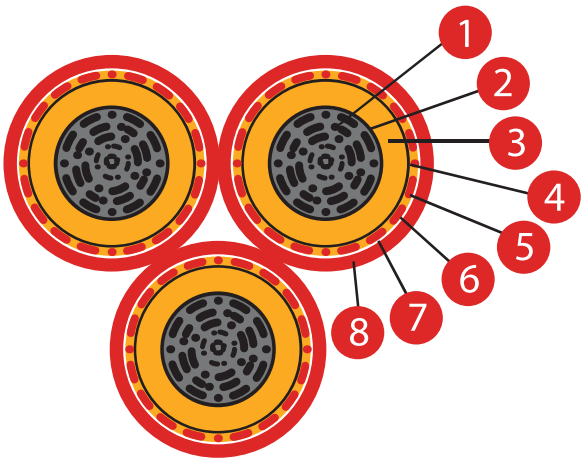
Triplex Cable Structure

MEDIUM VOLTAGE
3x1x400/35 6,35/11kV

Standard Specification: BS EN 60228 BS 7870-4.10
Rated Voltage: Uo/U (Um) – 6,35 / 11 (12) kV

Single core, solid aluminium conductor, triplex formation. XLPE insulation, dry curing, metallic screen of copper wires and tape. Water blocked metallic screen.



1. Circular solid aluminium conductor, class 1, according to BS EN 60228
2. Semi-conducting compound conductor screen
3. Cross-linked polyethylene (XLPE) insulation
4. Semi-conducting compound insulation screen, fully bonded
5. Copper wires helically applied
6. Copper tape applied in an open counter helix
7. Water blocking barrier – Yarns and/or Tapes
8. MDPE red oversheath

CONDUCTOR	
Nominal area of core (mm2)	400
No. of cores ; shape (No.)	1 ; round
Diameter of conductor (mm)	21,7
CONDUCTOR SCREEN	
Material	Semi-conducting compound
Minimum/Nominal thickness (mm)	0,3/0,7
INSULATION	
Material	XLPE
Average thickness (mm)	3,4
INSULATION SCREEN	
Material	Semi-conducting compound
Minimum/Nominal thickness (mm)	0,3/0,5
METALLIC SHIELD	
Material	Copper Wires + Tape
Cross-sectional area (mm2)	35
OUTER SHEATH	
Material	Red MDPE
Average thickness (mm)	2,2
LONGITUDINAL WATERTIGHTNESS	
Material	Waterblocking Yarns and/or Tapes
CABLE	
Approximated outer diameter of cable (mm)	40
Approximated outer diameter of the triplex (D) (mm)	86
Approximated weight of triplex cable (kg/km)	6160

ELECTRICAL CHARACTERISTICS	
Maximum DC conductor resistance, 20°C (Ω/km)	0,0778
AC conductor resistance, 90°C (Ω/km)	0,102
Reactance (Ω/km)	0,082
Capacitance (µF/km)	0,44
Charging current (mA/m)	0,88
Impedance (Ω/km)	0,095
Current carrying capacity (A): - Directly buried; 15°C; 1,2K.m/W; 0,6m deep - In a 150mm twin-wall duct; 15°C; 1,2K.m/W; 0,6m deep - In a 100mm single-wall duct; 15°C; 1,2K.m/W; 0,6m deep - In air; 25°C	 555 492 494 720
Max. adm. short-circuit current, conductor, 1sec. (kA)	37,8
Max. adm. short-circuit current, metallic shield, 1sec. (kA)	5,0
MECHANICAL CHARACTERISTICS	
Maximum pulling effort (per conductor) (daN)	1200
Minimum bending radius of cable, installation (mm)	895
Minimum bending radius of cable, permanent (mm)	810