290/500kV XLPE Insulated, PE Sheathed High Voltage Power Cables

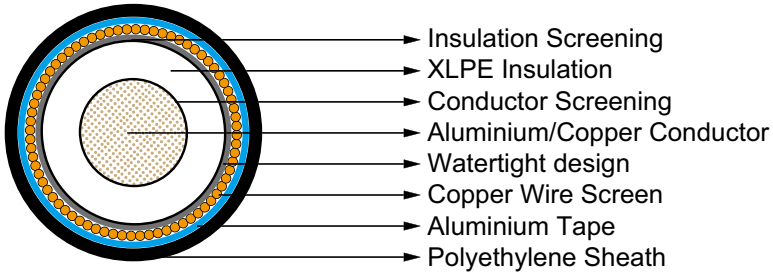
APPLICATIONS

These single core cables are designed for distribution of electrical power with nominal voltage 290/500kV. They are suitable for installation mostly in power supply stations, indoors and in cable ducts, outdoors, underground and in water as well as for installation on cable trays for industries, switchboards and power stations.

Standard

IEC 62067

CONSTRUCTION



Conductor: The cable conductors can be made of copper or aluminium, depending on customer's preference or current carrying capacity. Large size solid conductors are made of aluminium. Available constructions including: round solid conductors up to 2000mm² (RE); circular stranded compacted conductors up to 1200mm² (RM); circular conductors with shaped wires up to 2000mm² (RM, Keystone conductors); segmental conductors up to 2500 mm² (RMS, Milliken conductors); oval shaped stranded compacted conductors up to 800mm² for external gas pressure cables (OM).
Conductor Screen: Extruded layer of semi-conducting cross-linkable compound is applied over the conductor and shall cover the surface completely.
Insulation: Insulation is of cross-linked polyethylene compound XLPE.
Insulaton Screen: Extruded layer of semi-conducting cross-linkable compound is applied over the insulation.
Metallic Layer: The metallic layer may be applied over the core assembly collectively.
The metallic screen shall consist of either copper tapes or a concentric layer of copper wires or a combination of tapes and wires.

Separation Sheath: Aluminum Tape sheath

Outer Sheath: PE

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Wire Screen Area	Approx. Overall Diameter	Approx. Weight	
				CU	AL
mm²	mm	mm²	mm	kg/m	
800	35.0	170	126.0	20.0	15.0
1000(RM)	33.0	170	126.0	21.0	15.0
1000(RMS)	32.0	170	128.0	22.0	16.0
1200	31.0	170	130.0	24.0	16.0
1400	31.0	170	133.0	26.0	17.0
1600	31.0	170	136.0	28.0	18.0
1800	31.0	170	139.0	30.0	19.0
2000	31.0	170	143.0	33.0	20.0
2500	31.0	170	150.0	38.0	23.0

Electrical Data

Nom. Cross-Section Area	D C Resistance @20°C		A C Resistance @90°C		Capacitance per core	Inductance	Current Ratings/Power Ratings(continuous load)			
							Cu conductor		Al conductor	
	Cu	Al	Cu	Al			1 circuit	2 circuits	1 circuit	2 circuits
mm²	Ω/km	Ω/km	Ω/km	Ω/km	μF/km	mH/km	A/MVA		A/MVA	
							trefoil installation			
800	0.0221	0.0367	0.0317	0.0500	0.124	0.45	628/544	498/431	537/465	427/370
1000(RM)	0.0176	0.0291	0.0276	0.0409	0.137	0.43	661/572	520/450	577/500	455/394
							flat installation			
1000(RMS)	0.0176	0.0291	0.0232	0.0375	0.149	0.56	907/785	770/667	725/628	615/533
1200	0.0151	0.0247	0.0201	0.0319	0.159	0.55	968/838	818/708	782/677	661/572
1400	0.0129	0.0212	0.0175	0.0275	0.167	0.53	1031/896	868/752	838/726	707/612
1600	0.0113	0.0186	0.0156	0.0240	0.174	0.52	1085/896	912/790	893/773	751/650
1800	0.0101	0.0165	0.0142	0.0213	0.180	0.51	1124/973	942/816	939/813	787/682
2000	0.0090	0.0149	0.0129	0.0193	0.187	0.50	1159/1004	969/839	976/845	816/707
2500	0.0072	0.0119	0.0109	0.0156	0.202	0.47	1226/1062	1019/882	1063/921	884/766