Caledonian High Voltage Cables

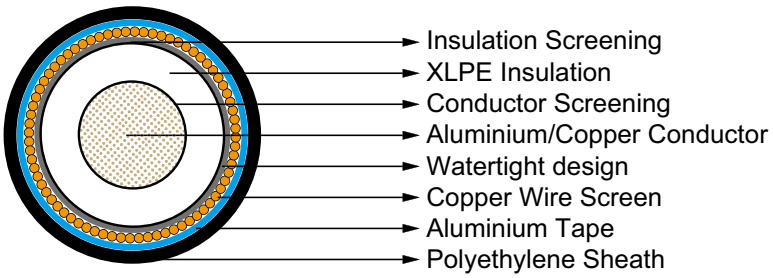
127/220kV XLPE Insulated, PE Sheathed High Voltage Power Cables

APPLICATIONS

These single core cables are designed for distribution of electrical power with nominal voltage 127/220kV. 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	
240	25.0	50	83.0	7.4	5.9
300	24.0	50	83.0	8.0	6.1
400	22.0	50	82.0	8.6	6.2
500	22.0	50	86.0	9.9	6.8
630	22.0	50	90.0	11.4	7.5
800	19.0	50	88.0	12.5	7.5
1000	19.0	110	98.0	16.0	10.0
1200	18.0	110	100.0	18.0	10.6
1400	18.0	110	103.0	20.0	11.4
1600	18.0	110	108.0	22.0	12.4
1800	19.0	110	113.0	25.0	13.6
2000	19.0	110	116.0	27.0	14.5
2500	19.0	110	123.0	32.0	16.6

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			
240	0.0754	0.125	0.0973	0.161	0.106	0.49	423/161	357/136	333/127	282/107
300	0.0601	0.100	0.0781	0.129	0.116	0.47	470/179	396/151	372/142	314/120
400	0.0470	0.0778	0.0618	0.101	0.133	0.44	524/200	440/168	420/160	352/134
500	0.0366	0.0605	0.0492	0.0791	0.143	0.42	584/223	489/186	473/180	396/151
630	0.0283	0.0469	0.0393	0.0622	0.155	0.41	648/247	540/206	531/202	443/169
800	0.0221	0.0367	0.0326	0.0500	0.187	0.38	702/267	582/222	587/224	487/186
							flatinstallation			
1000	0.0176	0.0291	0.0232	0.0375	0.215	0.56	989/377	857/327	782/298	678/258
1200	0.0151	0.0247	0.0201	0.0319	0.236	0.55	1060/404	917/349	849/324	734/280
1400	0.0129	0.0212	0.0175	0.0275	0.248	0.53	1136/433	981/374	915/349	790/301
1600	0.0113	0.0186	0.0156	0.0240	0.260	0.52	1201/458	1035/394	979/373	844/322
1800	0.0101	0.0165	0.0142	0.0213	0.260	0.51	1253/477	1080/412	1035/394	892/340
2000	0.0090	0.0149	0.0129	0.0193	0.270	0.50	1308/498	1126/429	1086/414	935/356
2500	0.0072	0.0119	0.0109	0.0156	0.294	0.47	1406/536	1207/460	1201/458	1031/393