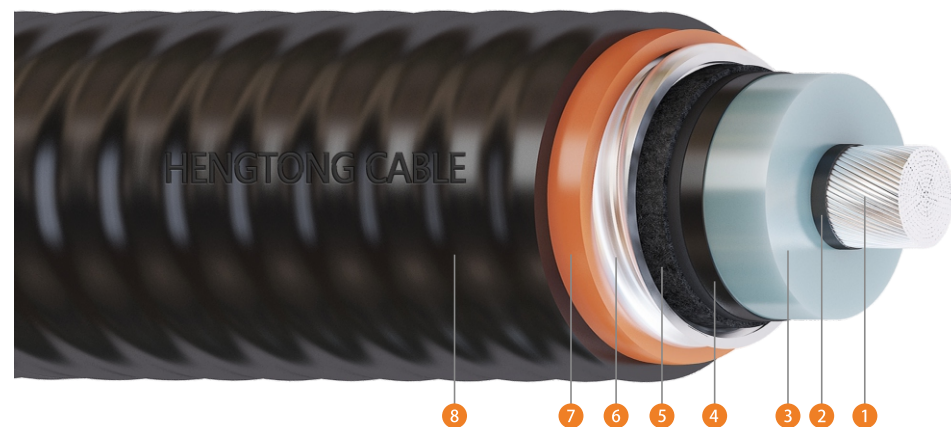


160/275kV Single Core Al/XLPE/CAS/PVC/HDPE



- 1 Compacted or Milliken Al conductor
- 2 Semi conductive screen tape and conductor screen
- 3 XLPE insulation
- 4 Insulation screen
- 5 Semi conductive water-blocking tape
- 6 Corrugated aluminium
- 7 PVC inner sheath
- 8 HDPE outer sheath with graphite coating

Properties:

Rated voltage	160/275kV
Max. operating temperature of conductor	90°C
Max. short-circuit operation temperature of conductor (5s Max. duration)	250°C
Ambient temperature range for operating	from -40°C to +50°C
Relative air humidity at temperature lower than +35°C	up to 95%
Min. temperature for installing without preheating	+0°C
Standard	AS/NZS 1429.2
Fault Level	as per customer requirements

Application:

Cables are designed for fixed installation, for laying in the ground, for indoor application and in cable ducts.

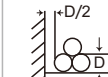
Structural Parameters:

Nominal conductor area	Approx. diameter of conductor	Nominal thickness of insulation	Nominal thickness of aluminium sheath	Nominal thickness of outer sheath		Approx. overall diameter of cable	Approx. weight of cable	Max. allowable pulling force of conductor	Min. bending radius during installation	Min. bending radius after installed
				Inner layer	Outer layer					
mm²	mm	mm	mm	mm	mm	mm	kg/km	kN	mm	mm
400	23.4	29	2.4	2.5	2.5	118.5	11455	15.6	2290	1718
500	26.6	29	2.4	2.5	2.5	122.0	12185	19.5	2360	1770
630	29.9	28	2.4	2.5	2.5	122.9	12601	24.6	2378	1784
800	33.6	27	2.4	2.5	2.5	125.4	13255	31.2	2428	1821
1000	39.2	26	2.6	2.5	2.5	130.5	14796	39.0	2530	1898
1200	43.4	26	2.6	2.5	2.5	137.0	16025	46.8	2660	1995
1600	49.6	26	2.6	2.5	2.5	143.5	17981	62.4	2790	2093
2000	55.0	26	2.8	2.5	2.5	150.5	20171	78.0	2930	2198
2500	61.5	26	2.8	3.0	3.0	163.5	23301	97.5	3150	2363

Electrical Characteristics:

Nominal conductor area	Max. DC resistance of conductor at 20°C	Max. AC resistance of conductor at 90°C			Fault current carrying of conductor for 1 second	Fault current carrying of screen for 1 second	Conductor to screen capacitance	Charging current per phase	Maximum dielectric stress	Inductive reactance at 50Hz and 90°C			Zero sequence resistance at 20°C	Zero sequence reactance at 50Hz
		Trefoil touching	Flat touching	Flat spaced						Trefoil touching	Flat touching	Flat spaced		
mm²	Ω/km	Ω/km	Ω/km	Ω/km	kA	kA	μF/km	A/km	kV/mm	Ω/km	Ω/km	Ω/km	Ω/km	Ω/km
400	0.0778	0.101	0.101	0.101	37.8	37.8	0.113	5.7	10.3	0.159	0.174	0.217	0.226	0.451
500	0.0605	0.0788	0.0788	0.0787	47.2	47.2	0.120	6.1	9.8	0.153	0.167	0.211	0.208	0.440
630	0.0469	0.0617	0.0617	0.0616	59.5	59.5	0.131	6.6	9.7	0.146	0.161	0.204	0.195	0.431
800	0.0367	0.0491	0.0491	0.0486	75.6	75.6	0.144	7.2	9.5	0.140	0.154	0.198	0.185	0.421
1000	0.0291	0.0375	0.0375	0.0375	94.5	94.5	0.163	8.2	9.3	0.133	0.147	0.191	0.177	0.406
1200	0.0247	0.0319	0.0319	0.0318	113.4	106	0.174	8.7	9.1	0.130	0.144	0.188	0.173	0.394
1600	0.0186	0.0241	0.0241	0.0241	151.2	106	0.189	9.5	8.8	0.124	0.139	0.182	0.167	0.379
2000	0.0149	0.0194	0.0194	0.0194	189.0	106	0.203	10.2	8.6	0.121	0.135	0.179	0.163	0.367
2500	0.0127	0.0167	0.0167	0.0166	236.3	106	0.220	11.0	8.3	0.118	0.133	0.176	0.161	0.351

Current Ratings:

Nominal conductor area	Continuous current-carrying capacity, A								
	In air			In ground			In underground ducts		
									
mm²	Single point bonding or cross-bonding	Single point bonding or cross-bonding	Single point bonding or cross-bonding	Single point bonding or cross-bonding	Single point bonding or cross-bonding	Single point bonding or cross-bonding	Single point bonding or cross-bonding	Single point bonding or cross-bonding	Single point bonding or cross-bonding
400	591	641	590	491	523	491	490	500	483
500	680	744	680	554	598	558	554	571	549
630	778	864	784	621	682	631	622	651	621
800	895	998	896	689	774	707	690	737	696
1000	1025	1175	1046	772	889	803	774	847	794
1200	1114	1300	1149	821	970	867	926	925	858
1600	1277	1536	1334	907	1117	980	915	1065	972
2000	1407	1745	1492	968	1243	1068	979	1185	1062
2500	1515	1907	1624	1026	1352	1143	1044	1293	1139