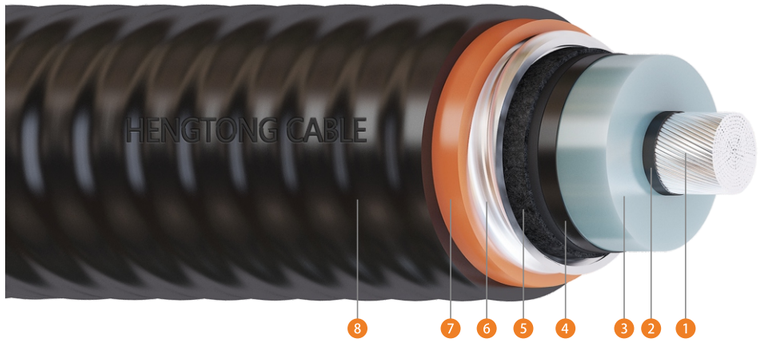
38/66kV Single Core Al/XLPE/CAS/PVC/HDPE



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	38/66kV
Max. operating temperature of conductor	90℃
Max. short-circuit operation temperature of conductor (5s Max. duration)	250℃
Ambient temperature range for operating	from - 40℃ to +50℃
Relative air humidity at temperature lower than +35℃	up to 95%
Min. temperature for installing without preheating	+0℃
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					
mm^2	mm	mm	mm	mm	mm	mm	kg/km	kN	mm	mm
95	11.6	13	2.0	1.7	1.8	66.2	3714	3.7	1324	993
120	13.0	13	2.0	1.7	1.8	67.6	3898	4.7	1352	1014
150	14.6	12	2.0	1.7	1.8	67.2	3909	5.9	1344	1008
185	16.2	12	2.0	1.7	1.8	68.8	4133	7.2	1376	1032
240	18.4	12	2.0	1.7	1.8	72.0	4493	9.4	1440	1080
300	20.6	11	2.0	1.7	1.8	72.2	4616	11.7	1444	1083
400	23.4	11	2.0	1.7	1.8	75.0	5105	15.6	1500	1125
500	26.6	11	2.0	1.7	1.8	78.2	5624	19.5	1564	1173
630	29.9	11	2.0	2.0	2.0	82.5	6401	24.6	1650	1238
800	33.6	10	2.0	2.0	2.0	85.2	6939	31.2	1704	1278
1000	39.2	10	2.3	2.0	2.0	93.7	8438	39.0	1874	1406
1200	43.4	10	2.3	2.2	2.3	98.9	9515	46.8	1978	1484
1600	49.6	10	2.3	2.2	2.3	105.1	11123	62.4	2102	1577
2000	55.0	10	2.3	2.5	2.5	111.5	12889	78.0	2230	1673
2500	61.5	10	2.3	2.5	2.5	118.0	14809	97.5	2360	1770

Electrical Characteristics:

Nominal conductor area	Max. D.C resistance of conductor at 20℃	Max. A.C resistance of conductor at 90℃			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℃			Zero sequence resistance at 20℃	Zero sequence reactance at 50Hz
		Trefoil touching	Flat touching	Flat spaced						Trefoil touching	Flat touching	Flat spaced		
mm^2	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
95	0.320	0.411	0.411	0.411	9.0	9.0	0.125	1.5	5.1	0.169	0.227	0.183	0.468	0.680
120	0.253	0.325	0.325	0.325	11.3	11.3	0.133	1.6	4.9	0.163	0.221	0.177	0.401	0.671
150	0.206	0.265	0.265	0.265	14.2	14.2	0.149	1.8	5.0	0.155	0.213	0.170	0.354	0.664
185	0.164	0.211	0.211	0.211	17.5	17.5	0.158	1.9	4.9	0.150	0.208	0.165	0.312	0.655
240	0.125	0.161	0.161	0.161	22.7	22.7	0.170	2.0	4.7	0.145	0.203	0.159	0.273	0.641
300	0.100	0.129	0.129	0.129	28.3	28.3	0.195	2.3	4.9	0.138	0.196	0.153	0.248	0.633
400	0.0778	0.1009	0.1009	0.1009	37.8	37.8	0.211	2.5	4.7	0.132	0.191	0.147	0.226	0.621
500	0.0605	0.0791	0.0791	0.0791	47.2	47.2	0.231	2.8	4.6	0.127	0.185	0.142	0.208	0.607
630	0.0469	0.0622	0.0622	0.0622	59.5	59.5	0.250	3.0	4.5	0.123	0.181	0.138	0.195	0.593
800	0.0367	0.0498	0.0498	0.0498	75.6	64.0	0.294	3.5	4.8	0.118	0.176	0.132	0.185	0.582
1000	0.0291	0.0375	0.0375	0.0375	94.5	64.0	0.338	4.0	4.6	0.114	0.172	0.129	0.177	0.560
1200	0.0247	0.0319	0.0319	0.0318	113.4	64.0	0.366	4.4	4.5	0.111	0.169	0.126	0.173	0.547
1600	0.0186	0.0241	0.0241	0.0241	151.2	64.0	0.406	4.8	4.5	0.106	0.165	0.121	0.167	0.531
2000	0.0149	0.0195	0.0195	0.0194	189.0	64.0	0.440	5.3	4.4	0.104	0.162	0.118	0.163	0.517
2500	0.0127	0.0167	0.0167	0.0166	236.3	64.0	0.482	5.8	4.4	0.100	0.158	0.115	0.161	0.503

Current Ratings:

Nominal conductor area	Continuous current-carrying capacity, A									
	In air			In ground			In underground ducts			
mm^2	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
95	272	294	268	239	245	235	232	230	225
120	311	338	307	271	279	266	264	261	256
150	353	385	347	304	313	298	295	293	286
185	402	441	397	342	354	337	333	331	323
240	471	518	465	395	410	390	385	384	374
300	537	595	531	444	464	439	432	434	421
400	620	693	615	504	531	501	491	497	481
500	715	808	711	570	608	570	557	569	548
630	820	936	819	642	695	645	628	650	621
800	932	1083	936	715	787	723	700	737	697
1000	1080	1277	1100	802	908	827	789	852	801
1200	1179	1415	1210	859	992	895	848	932	868
1600	1348	1674	1406	951	1142	1012	942	1074	984
2000	1485	1899	1572	1023	1272	1107	1017	1198	1079
2500	1594	2100	1710	1070	1374	1176	1067	1296	1151