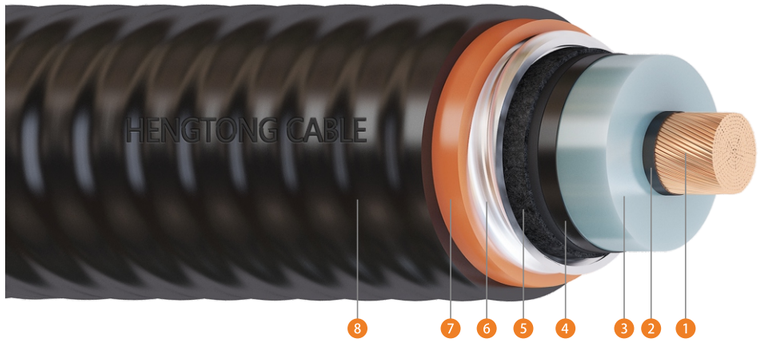
38/66kV Single Core Cu/XLPE/CAS/PVC/HDPE



1. Compacted or Milliken Cu 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	4284	6.5	1324	993
120	13.0	13	2.0	1.7	1.8	67.6	4614	8.2	1352	1014
150	14.6	12	2.0	1.7	1.8	67.2	4810	10.2	1344	1008
185	16.2	12	2.0	1.7	1.8	68.8	5251	12.6	1376	1032
240	18.4	12	2.0	1.7	1.8	72.0	5951	16.3	1440	1080
300	20.6	11	2.0	1.7	1.8	72.2	6455	20.4	1444	1083
400	23.4	11	2.0	1.7	1.8	75.0	7490	27.2	1500	1125
500	26.6	11	2.0	1.7	1.8	78.2	8673	34.0	1564	1173
630	29.9	11	2.0	2.0	2.0	82.5	10281	42.8	1650	1238
800	33.6	10	2.0	2.0	2.0	85.2	11934	54.4	1704	1278
1000	39.2	10	2.3	2.0	2.0	93.7	14669	68	1874	1406
1200	43.4	10	2.3	2.2	2.3	98.9	16939	81.6	1978	1484
1600	49.6	10	2.3	2.2	2.3	105.1	21022	108.8	2102	1577
2000	55.0	10	2.3	2.5	2.5	111.5	25263	136.0	2230	1673
2500	61.5	10	2.3	2.5	2.5	118.0	30227	170.0	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	0.193	0.247	0.247	0.246	13.6	13.6	0.125	1.5	5.1	0.169	0.227	0.183	0.341	0.680
120	0.153	0.196	0.196	0.196	17.2	17.2	0.133	1.6	4.9	0.163	0.221	0.177	0.301	0.671
150	0.124	0.159	0.159	0.159	21.5	21.5	0.149	1.8	5.0	0.155	0.213	0.170	0.272	0.664
185	0.0991	0.127	0.127	0.127	26.5	26.5	0.158	1.9	4.9	0.150	0.208	0.165	0.247	0.655
240	0.0754	0.0972	0.0972	0.0971	34.3	34.3	0.170	2.0	4.7	0.145	0.203	0.159	0.223	0.641
300	0.0601	0.0781	0.0781	0.0778	42.9	42.9	0.195	2.3	4.9	0.138	0.196	0.153	0.208	0.633
400	0.047	0.0618	0.0618	0.0614	57.2	57.2	0.211	2.5	4.7	0.132	0.191	0.147	0.195	0.621
500	0.0366	0.0492	0.0492	0.0486	71.5	64.0	0.231	2.8	4.6	0.127	0.185	0.142	0.185	0.607
630	0.0283	0.0393	0.0393	0.0385	90.1	64.0	0.250	3.0	4.5	0.123	0.181	0.138	0.176	0.593
800	0.0221	0.0323	0.0323	0.0312	114.5	64.0	0.294	3.5	4.8	0.118	0.176	0.132	0.170	0.582
1000	0.0176	0.0250	0.0250	0.0247	143.1	64.0	0.338	4.0	4.6	0.114	0.172	0.129	0.166	0.560
1200	0.0151	0.0222	0.0222	0.0218	171.7	64.0	0.366	4.4	4.5	0.111	0.169	0.126	0.163	0.547
1600	0.0113	0.0181	0.0181	0.0176	229.0	64.0	0.406	4.8	4.5	0.106	0.165	0.121	0.159	0.531
2000	0.009	0.0157	0.0157	0.0151	286.2	64.0	0.440	5.3	4.4	0.104	0.162	0.118	0.157	0.517
2500	0.0072	0.0139	0.0139	0.0132	357.8	64.0	0.482	5.8	4.4	0.100	0.158	0.115	0.155	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	350	380	345	307	316	302	298	296	289	
120	400	436	395	347	359	342	338	336	328	
150	453	497	447	389	403	383	377	377	367	
185	514	567	509	436	455	431	424	425	413	
240	600	665	595	501	526	497	488	493	477	
300	682	764	678	561	594	559	546	555	536	
400	780	885	779	630	676	631	613	632	606	
500	889	1024	892	703	768	711	686	718	683	
630	1006	1177	1016	780	870	795	762	814	765	
800	1123	1346	1142	852	973	877	834	911	844	
1000	1269	1555	1314	929	1099	980	914	1031	948	
1200	1354	1689	1414	974	1175	1036	961	1104	1004	
1600	1491	1932	1581	1040	1309	1128	1030	1230	1097	
2000	1592	2121	1708	1087	1411	1194	1080	1328	1164	
2500	1684	2320	1829	1121	1507	1250	1118	1421	1223	