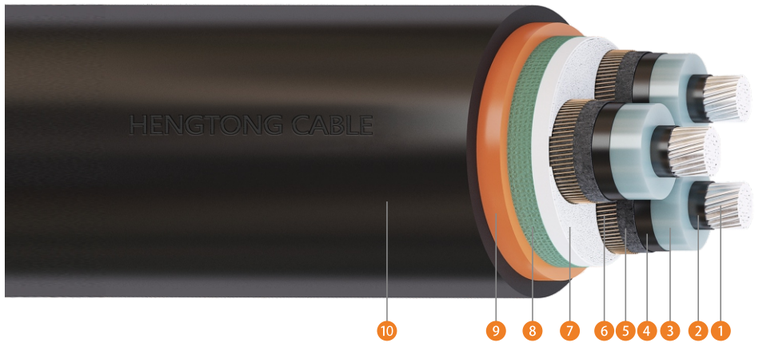
3.8/6.6kV Three Core Al/XLPE/CWS/PVC/HDPE



1. Compacted Al conductor
2. Conductor screen
3. XLPE insulation
4. Insulation screen
5. Semi conductive water-blocking tape
6. Copper wire screen
7. Non-hygroscopic filler
8. Non-hygroscopic tape
9. PVC inner sheath
10. HDPE outer sheath

Properties:

Rated voltage	3.8/6.6kV
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 1429.1
Fault Level	up to 10kA/s or 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 diameter over insulation	Nominal screen area	No. & diameter of screen wire	Nominal diameter over wire screen	Nominal thickness of outer sheath		Approx. overall diameter of cable	Approx. weight of cable	Max. allowable pulling force of conductor	Min. bending radius	
							Inner layer	Outer layer				During installation	Installed
mm^2	mm	mm	mm	mm^2	No./mm	mm	mm	mm	mm	kg/km	kN	mm	mm
25	6.0	2.5	13.9	16.2	19/0.6	16.0	1.0	1.1	40.9	1406	3.0	1020	610
35	7.0	2.5	14.9	22.8	27/0.6	17.0	1.1	1.1	43.0	1635	4.2	1070	640
50	8.1	2.5	16.0	32.1	38/0.6	18.1	1.1	1.2	45.4	1925	6.0	1130	680
70	9.8	2.5	17.7	44.4	26/0.85	20.3	1.2	1.2	50.1	2391	8.4	1250	750
95	11.4	2.5	19.3	61.2	36/0.85	21.9	1.3	1.3	53.6	2919	11.4	1340	800
120	12.9	2.5	20.8	68.1	40/0.85	23.4	1.3	1.4	56.8	3330	14.4	1420	850
150	14.4	2.5	22.3	68.1	40/0.85	24.9	1.4	1.4	60.0	3697	18.0	1500	900
185	16.0	2.5	23.9	68.1	40/0.85	26.5	1.4	1.5	63.5	4164	22.2	1580	950
240	18.4	2.6	26.5	68.1	40/0.85	29.1	1.5	1.6	69.3	4934	28.8	1730	1030
300	20.6	2.8	29.1	68.1	40/0.85	31.7	1.6	1.7	75.3	5797	36.0	1880	1120
400	23.4	3.0	32.3	68.1	40/0.85	34.9	1.7	1.8	82.6	6966	48.0	2060	1230
500	26.2	3.2	35.9	68.1	40/0.85	38.5	1.8	1.9	90.7	8447	60.0	2260	1360

Electrical Characteristics:

Nominal conductor area	Max. DC resistance of conductor at 20℃	Max. AC resistance of conductor at 90℃	Fault current carrying of conductor for 1 second	Fault current carrying of screen for 1 second	Insulation resistance at 20℃	Conductor to screen capacitance	Charging current per phase	Dielectric loss per phase	Maximum dielectric stress	Inductive reactance at 50Hz and 90℃	Screen DC resistance at 20℃	Zero sequence resistance at 20℃	Zero sequence reactance at 50Hz
mm^2	Ω/km	Ω/km	kA	kA	MΩ/km	μF/km	A/km	W/km	kV/mm	Ω/km	Ω/km	Ω/km	Ω/km
25	1.20	1.54	2.4	2.4	8800	0.272	0.325	4.94	1.98	0.121	1.17	2.37	0.0817
35	0.868	1.11	3.3	3.4	8000	0.301	0.359	5.46	1.93	0.115	0.832	1.70	0.0754
50	0.641	0.822	4.7	4.7	7200	0.332	0.396	6.02	1.89	0.110	0.591	1.23	0.0691
70	0.443	0.568	6.6	6.6	6300	0.380	0.454	6.90	1.84	0.105	0.427	0.873	0.0628
95	0.320	0.411	9.0	9.2	5600	0.425	0.507	7.71	1.80	0.100	0.310	0.630	0.0565
120	0.253	0.325	11.3	10.2	5100	0.467	0.558	8.47	1.77	0.0968	0.279	0.533	0.0534
150	0.206	0.265	14.2	10.2	4700	0.509	0.608	9.24	1.75	0.0936	0.279	0.486	0.0503
185	0.164	0.211	17.5	10.2	4300	0.554	0.661	10.1	1.73	0.0911	0.279	0.444	0.0503
240	0.125	0.162	22.7	10.2	4000	0.599	0.715	10.9	1.65	0.0880	0.279	0.405	0.0471
300	0.100	0.130	28.3	10.2	3900	0.616	0.735	11.2	1.52	0.0864	0.279	0.380	0.0440
400	0.0778	0.102	37.8	10.2	3700	0.645	0.770	11.7	1.41	0.0845	0.279	0.358	0.0440
500	0.0605	0.081	47.2	10.2	3500	0.678	0.809	12.3	1.32	0.0836	0.279	0.341	0.0440

Current Ratings:

Nominal conductor area	Continuous current-carrying capacity, A				
	In air			In ground	
					
mm^2					
25	95	100	67	100	77
35	124	133	92	134	104
50	148	159	109	158	123
70	185	199	134	193	151
95	225	242	164	231	183
120	260	280	188	263	209
150	295	318	217	294	238
185	338	365	247	333	270
240	400	434	290	387	315
300	459	499	342	436	365
400	537	584	396	500	420
500	622	679	454	567	477