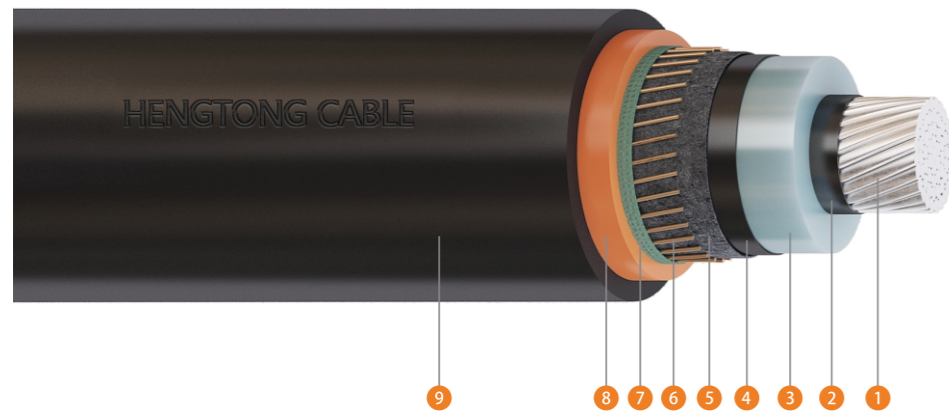


3.8/6.6kV Single Core Al/XLPE/CWS/PVC/HDPE



- 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 tape
- 8 PVC inner sheath
- 9 HDPE outer sheath

Properties:

Rated voltage	3.8/6.6kV
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 1429.1
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 mm ²	Approx. diameter of conductor mm	Nominal thickness of insulation mm	Nominal diameter over insulation mm	Nominal screen area mm ²	No. & diameter of screen wire No./mm	Nominal diameter over wire screen mm	Nominal thickness of outer sheath		Approx. overall diameter of cable mm	Approx. weight of cable kg/km	Max. allowable pulling force of conductor kN	Min. bending radius	
							Inner layer mm	Outer layer mm				During installation mm	Installed mm
25	6.0	2.5	13.9	15.9	28/0.85	16.5	1.0	1.0	22.9	591	1.0	570	340
35	7.0	2.5	14.9	22.1	39/0.85	17.5	1.0	1.0	23.9	701	1.4	590	350
50	8.1	2.5	16.0	31.5	22/1.35	19.6	1.0	1.0	26.0	862	2.0	650	390
70	9.8	2.5	17.7	44.4	31/1.35	21.3	1.0	1.0	27.7	1084	2.8	690	410
95	11.4	2.5	19.3	61.5	43/1.35	22.9	1.0	1.0	29.3	1357	3.8	730	430
120	12.9	2.5	20.8	68.7	48/1.35	24.4	1.0	1.0	30.8	1530	4.8	770	460
150	14.4	2.5	22.3	68.7	48/1.35	25.9	1.0	1.0	32.3	1641	6.0	800	480
185	16.0	2.5	23.9	68.7	48/1.35	27.5	1.0	1.0	33.9	1782	7.4	840	500
240	18.4	2.6	26.5	68.7	48/1.35	30.1	1.0	1.0	36.5	2006	9.6	910	540
300	20.6	2.8	29.1	68.7	48/1.35	32.7	1.0	1.1	39.1	2246	12.0	970	580
400	23.4	3.0	32.3	68.7	48/1.35	35.9	1.1	1.1	42.3	2574	16.0	1050	630
500	26.2	3.2	35.9	68.7	48/1.35	39.5	1.1	1.2	45.9	2992	20.0	1140	680
630	29.8	3.2	39.5	68.7	48/1.35	43.1	1.2	1.2	49.5	3477	25.2	1230	740
800	33.8	3.2	43.5	68.7	48/1.35	47.1	1.3	1.3	53.5	4065	32.0	1330	800
1000	38.5	3.2	46.7	68.7	48/1.35	51.6	1.4	1.4	57.8	4662	39.0	1440	860

Electrical Characteristics:

Nominal conductor area mm ²	Max. DC resistance of conductor at 20°C Ω/km	Max. AC resistance of conductor at 90°C Ω/km			Fault current carrying of conductor for 1 second kA	Fault current carrying of screen for 1 second kA	Insulation resistance at 20°C MΩ/km	Conductor to screen capacitance μF/km	Charging current per phase A/km	Dielectric loss per phase W/km	Maximum dielectric stress kV/mm	Inductive reactance at 50Hz and 90°C Ω/km			Screen DC resistance at 20°C Ω/km	Zero sequence resistance at 20°C Ω/km	Zero sequence reactance at 50Hz Ω/km
		Trefoil touching	Flat touching	Flat spaced								Trefoil touching	Flat touching	Flat spaced			
25	1.20	1.54	1.54	1.54	2.4	2.4	8800	0.272	0.325	4.94	1.98	0.144	0.158	0.201	1.19	2.39	0.0817
35	0.868	1.11	1.11	1.11	3.3	3.3	8000	0.301	0.359	5.46	1.93	0.136	0.151	0.194	0.859	1.73	0.0723
50	0.641	0.822	0.822	0.822	4.7	4.7	7200	0.332	0.396	6.02	1.89	0.133	0.147	0.191	0.602	1.24	0.0723
70	0.443	0.568	0.568	0.568	6.6	6.6	6300	0.380	0.454	6.90	1.84	0.124	0.139	0.183	0.427	0.873	0.0628
95	0.320	0.411	0.411	0.410	9.0	9.1	5600	0.425	0.507	7.71	1.80	0.118	0.133	0.177	0.309	0.630	0.0565
120	0.253	0.325	0.325	0.325	11.3	10.2	5100	0.467	0.558	8.47	1.77	0.114	0.128	0.172	0.276	0.533	0.0534
150	0.206	0.265	0.265	0.264	14.2	10.2	4700	0.509	0.608	9.24	1.75	0.110	0.124	0.168	0.276	0.486	0.0503
185	0.164	0.211	0.211	0.211	17.5	10.2	4300	0.554	0.661	10.1	1.73	0.106	0.121	0.165	0.276	0.444	0.0471
240	0.125	0.161	0.161	0.161	22.7	10.2	4000	0.599	0.715	10.9	1.65	0.102	0.117	0.160	0.276	0.405	0.0471
300	0.100	0.130	0.129	0.129	28.3	10.2	3900	0.616	0.735	11.2	1.52	0.100	0.114	0.158	0.276	0.380	0.0440
400	0.0778	0.102	0.101	0.101	37.8	10.2	3700	0.645	0.770	11.7	1.41	0.0964	0.111	0.155	0.276	0.358	0.0440
500	0.0605	0.0801	0.0795	0.0788	47.2	10.2	3500	0.678	0.809	12.3	1.32	0.0946	0.109	0.153	0.276	0.341	0.0408
630	0.0469	0.0635	0.0627	0.0618	59.5	10.2	3100	0.757	0.904	13.7	1.30	0.0911	0.106	0.149	0.276	0.327	0.0408
800	0.0367	0.0514	0.0504	0.0492	75.6	10.2	2800	0.844	1.01	15.3	1.29	0.0880	0.103	0.146	0.276	0.317	0.0377
1000	0.0291	0.0387	0.0387	0.0399	94.6	10.2	2300	0.982	1.18	18.3	1.18	0.0870	0.103	0.151	0.276	0.293	0.0372

Current Ratings:

Nominal conductor area mm ²	Continuous current-carrying capacity, A											
	In air					In ground			In underground ducts			
	Solid bond	Solid bond	Solid bond	Solid bond	Solid bond	Solid bond	Solid bond	Solid bond	Solid bond	Solid bond	Solid bond	Solid bond
25	115	135	105	110	79	115	115	110	100	105	100	90
35	139	164	126	134	95	139	139	134	120	121	119	106
50	166	196	154	164	114	164	164	159	141	144	140	129
70	209	244	191	204	141	199	199	194	171	170	170	156
95	251	294	234	249	170	234	234	230	201	199	200	189
120	289	334	269	285	194	264	260	261	225	220	226	214
150	325	375	304	324	224	294	289	291	250	244	254	241
185	370	424	346	370	254	329	320	329	280	271	285	274
240	435	493	410	439	294	375	363	380	320	305	329	315
300	495	554	469	501	340	419	399	425	355	338	369	360
400	573	629	545	585	396	470	444	485	400	374	419	415
500	660	717	639	683	455	529	490	550	449	414	474	474
630	750	803	734	785	516	585	538	620	494	450	530	534
800	849	894	840	900	610	645	584	691	544	489	590	619
1000	987	1008	997	1067	707	727	638	797	592	527	658	707