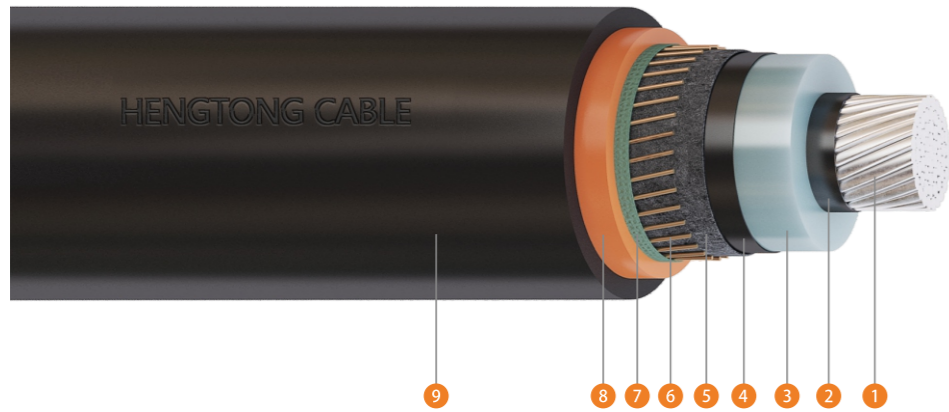


19/33kV Single Core AI/XLPE/CWS/PVC/HDPE



- 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	19/33kV
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
50	8.1	8.0	27.0	31.5	22/1.35	30.6	1.0	1.0	37.0	1356	2.0	920	550
70	9.8	8.0	28.7	44.4	31/1.35	32.3	1.0	1.1	38.7	1605	2.8	960	580
95	11.4	8.0	30.3	61.5	43/1.35	33.9	1.1	1.1	40.3	1904	3.8	1000	600
120	12.9	8.0	31.8	68.7	48/1.35	35.4	1.1	1.1	41.8	2100	4.8	1040	620
150	14.4	8.0	33.3	68.7	48/1.35	36.9	1.1	1.2	43.3	2236	6.0	1080	640
185	16.0	8.0	34.9	68.7	48/1.35	38.5	1.1	1.2	44.9	2402	7.4	1120	670
240	18.4	8.0	37.3	68.7	48/1.35	40.9	1.2	1.2	47.3	2655	9.6	1180	700
300	20.6	8.0	39.5	68.7	48/1.35	43.1	1.2	1.3	49.5	2907	12.0	1230	740
400	23.4	8.0	42.3	68.7	48/1.35	45.9	1.3	1.3	52.3	3253	16.0	1300	780
500	26.2	8.0	45.5	68.7	48/1.35	49.1	1.3	1.4	55.5	3692	20.0	1380	830
630	29.8	8.0	49.1	68.7	48/1.35	52.7	1.4	1.4	59.1	4228	25.2	1470	880
800	33.8	8.0	53.1	68.7	48/1.35	56.7	1.4	1.5	63.1	4872	32.0	1570	940
1000	38.5	8.0	56.3	68.7	48/1.35	61.2	1.6	1.6	68.2	5627	39.0	1700	1020

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			
50	0.641	0.822	0.822	0.822	4.7	4.7	17000	0.142	0.848	64.4	4.04	0.155	0.169	0.213	0.602	1.24	0.1037
70	0.443	0.568	0.568	0.568	6.6	6.6	15300	0.158	0.943	71.7	3.81	0.145	0.160	0.204	0.427	0.873	0.0911
95	0.320	0.411	0.411	0.410	9.0	9.1	14000	0.173	1.03	78.5	3.65	0.139	0.153	0.197	0.309	0.630	0.0848
120	0.253	0.325	0.325	0.325	11.3	10.2	12900	0.186	1.11	84.4	3.53	0.133	0.148	0.191	0.276	0.533	0.0785
150	0.206	0.265	0.265	0.264	14.2	10.2	12000	0.200	1.19	90.7	3.43	0.128	0.143	0.187	0.276	0.486	0.0754
185	0.164	0.211	0.211	0.211	17.5	10.2	11200	0.214	1.28	97.1	3.34	0.124	0.139	0.182	0.276	0.444	0.0723
240	0.125	0.161	0.161	0.161	22.7	10.2	10200	0.236	1.41	107.1	3.24	0.118	0.133	0.177	0.276	0.405	0.0660
300	0.100	0.129	0.129	0.129	28.3	10.2	9400	0.256	1.53	116.1	3.16	0.114	0.129	0.172	0.276	0.380	0.0628
400	0.0778	0.101	0.101	0.101	37.8	10.2	8600	0.280	1.67	127.0	3.08	0.110	0.124	0.168	0.276	0.358	0.0597
500	0.0605	0.0796	0.0792	0.0788	47.2	10.2	7800	0.309	1.84	140.2	3.00	0.106	0.121	0.165	0.276	0.341	0.0565
630	0.0469	0.0629	0.0624	0.0617	59.5	10.2	7000	0.341	2.04	154.7	2.93	0.102	0.117	0.160	0.276	0.327	0.0534
800	0.0367	0.0507	0.0500	0.0490	75.6	10.2	6400	0.376	2.24	170.6	2.87	0.0983	0.113	0.156	0.276	0.317	0.0503
1000	0.0291	0.0392	0.0392	0.0396	94.6	10.2	5400	0.385	2.46	178.4	2.10	0.0892	0.104	0.130	0.276	0.293	0.0422

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
50	175	196	164	171	125	161	164	159	146	149	145	135
70	216	244	201	214	159	199	199	194	179	179	175	169
95	261	291	245	259	189	234	234	231	209	206	209	200
120	299	333	280	295	215	264	261	261	238	234	236	229
150	336	374	316	335	240	294	290	294	264	258	264	254
185	384	423	361	381	271	330	324	330	294	285	295	286
240	449	490	425	450	315	379	365	381	334	320	340	330
300	509	553	484	514	356	420	404	429	370	353	380	370
400	584	629	560	595	425	475	449	488	414	389	430	438
500	673	714	650	690	486	534	498	554	463	429	485	496
630	764	803	749	795	554	594	545	625	508	464	540	560
800	863	897	855	910	624	654	593	699	558	503	603	625
1000	998	1008	1007	1067	732	733	647	797	618	547	682	728