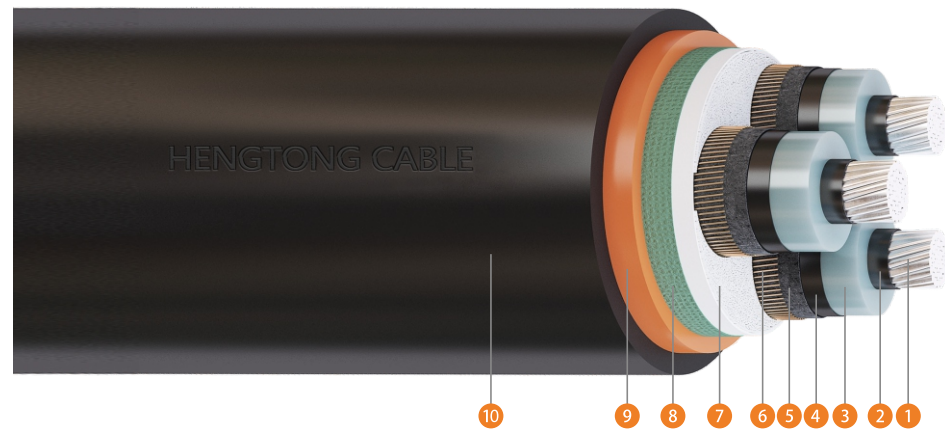


# 19/33kV Three Core Al/XLPE/CWS/PVC/HDPE



- 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	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.

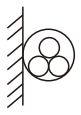
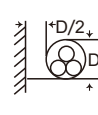



## Structural Parameters:

Nominal conductor area mm <sup>2</sup>	Approx. diameter of conductor mm	Nominal thickness of insulation mm	Nominal diameter over insulation mm	Nominal screen area mm <sup>2</sup>	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	32.1	38/0.6	29.1	1.6	1.6	69.5	3707	6.0	1730	1040
70	9.8	8.0	28.7	44.4	26/0.85	31.3	1.6	1.7	74.4	4314	8.4	1860	1110
95	11.4	8.0	30.3	61.2	36/0.85	32.9	1.7	1.7	78.1	4983	11.4	1950	1170
120	12.9	8.0	31.8	68.1	40/0.85	34.4	1.7	1.8	81.5	5518	14.4	2030	1220
150	14.4	8.0	33.3	68.1	40/0.85	35.9	1.8	1.8	84.9	6023	18.0	2120	1270
185	16.0	8.0	34.9	68.1	40/0.85	37.5	1.8	1.9	88.6	6628	22.2	2210	1320
240	18.4	8.0	37.3	68.1	40/0.85	39.9	1.9	2.0	94.1	7570	28.8	2350	1410
300	20.6	8.0	39.5	68.1	40/0.85	42.1	2.0	2.0	99.1	8497	36.0	2470	1480
400	23.4	8.0	42.3	68.1	40/0.85	44.9	2.1	2.2	105.7	9807	48.0	2640	1580
500	26.2	8.0	45.5	68.1	40/0.85	48.1	2.2	2.3	113.0	11418	60.0	2820	1690

## Electrical Characteristics:

Nominal conductor area mm <sup>2</sup>	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
50	0.641	0.822	4.7	4.7	17000	0.142	0.848	64.4	4.04	0.139	0.591	1.23	0.1005
70	0.443	0.568	6.6	6.6	15300	0.158	0.943	71.7	3.81	0.132	0.427	0.873	0.0942
95	0.320	0.411	9.0	9.2	14000	0.173	1.03	78.5	3.65	0.126	0.310	0.630	0.0848
120	0.253	0.325	11.3	10.2	12900	0.186	1.11	84.4	3.53	0.121	0.279	0.533	0.0785
150	0.206	0.265	14.2	10.2	12000	0.200	1.19	90.7	3.43	0.117	0.279	0.486	0.0754
185	0.164	0.211	17.5	10.2	11200	0.214	1.28	97.1	3.34	0.113	0.279	0.444	0.0723
240	0.125	0.161	22.7	10.2	10200	0.236	1.41	107.1	3.24	0.108	0.279	0.405	0.0691
300	0.100	0.130	28.3	10.2	9400	0.256	1.53	116.1	3.16	0.104	0.279	0.380	0.0628
400	0.0778	0.102	37.8	10.2	8600	0.280	1.67	127.0	3.08	0.100	0.279	0.358	0.0597
500	0.0605	0.080	47.2	10.2	7800	0.309	1.84	140.2	3.00	0.097	0.279	0.341	0.0565

## Current Ratings:

Nominal conductor area mm <sup>2</sup>	Continuous current-carrying capacity, A				
	In air		In ground		
					
50	158	168	121	159	132
70	196	209	153	194	165
95	237	254	184	232	197
120	272	292	210	264	224
150	307	330	236	295	251
185	351	378	268	334	284
240	413	445	312	388	330
300	472	509	354	438	372
400	548	593	424	502	440
500	632	686	484	570	499