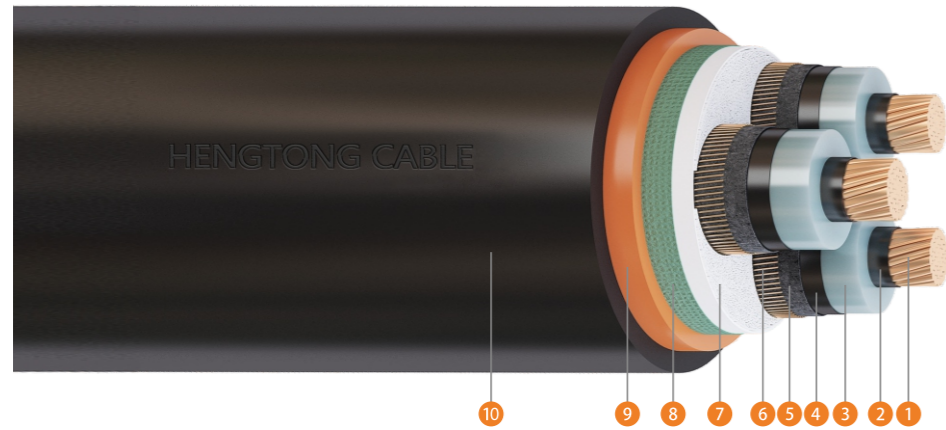


# 12.7/22kV Three Core Cu/XLPE/CWS/PVC/HDPE



- 1 Compacted Cu 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	12.7/22kV
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.


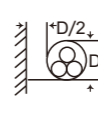



### Structural Parameters:

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
35	7.0	5.5	20.9	34.0	20/0.85	23.5	1.3	1.4	57.0	3218	7.4	1420	850
50	8.1	5.5	22.0	49.4	29/0.85	24.6	1.3	1.5	59.3	3830	10.5	1480	890
70	9.8	5.5	23.7	68.1	40/0.85	26.3	1.4	1.5	63.0	4782	14.7	1570	940
95	11.4	5.5	25.3	68.1	40/0.85	27.9	1.5	1.5	66.5	5698	20.0	1660	990
120	12.9	5.5	26.8	68.1	40/0.85	29.4	1.5	1.6	69.9	6577	25.2	1740	1040
150	14.4	5.5	28.3	68.1	40/0.85	30.9	1.6	1.6	73.4	7556	31.5	1830	1100
185	16.0	5.5	29.9	68.1	40/0.85	32.5	1.6	1.7	77.1	8787	38.9	1920	1150
240	18.4	5.5	32.3	68.1	40/0.85	34.9	1.7	1.8	82.6	10720	50.4	2060	1230
300	20.6	5.5	34.5	68.1	40/0.85	37.1	1.8	1.9	87.6	12733	63.0	2190	1310
400	23.4	5.5	37.3	68.1	40/0.85	39.9	1.9	2.0	94.1	15486	84.0	2350	1410
500	26.2	5.5	40.5	68.1	40/0.85	43.1	2.0	2.1	101.3	19023	105.0	2530	1510

### 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
35	0.524	0.668	5.0	5.1	14400	0.168	0.669	34.0	3.60	0.135	0.557	1.08	0.0970
50	0.387	0.494	7.2	7.3	13200	0.182	0.727	36.9	3.47	0.129	0.384	0.771	0.0886
70	0.268	0.342	10.0	10.1	11800	0.205	0.817	41.5	3.31	0.121	0.279	0.547	0.0795
95	0.193	0.247	13.6	10.1	10700	0.226	0.900	45.7	3.19	0.115	0.279	0.472	0.0739
120	0.153	0.196	17.2	10.1	9800	0.245	0.978	49.7	3.11	0.111	0.279	0.432	0.0697
150	0.124	0.159	21.5	10.1	9100	0.265	1.06	53.6	3.04	0.107	0.279	0.403	0.0661
185	0.0991	0.128	26.5	10.1	8400	0.285	1.14	57.8	2.98	0.104	0.279	0.378	0.0628
240	0.0754	0.0980	34.3	10.1	7600	0.316	1.26	64.1	2.90	0.0995	0.279	0.354	0.0587
300	0.0601	0.0791	42.9	10.1	7000	0.345	1.38	69.8	2.85	0.0962	0.279	0.339	0.0557
400	0.0470	0.0632	57.2	10.1	6300	0.380	1.52	77.1	2.79	0.0928	0.279	0.326	0.0524
500	0.0366	0.0509	71.5	10.1	5700	0.421	1.68	85.3	2.74	0.0905	0.279	0.315	0.0503

### Current Ratings:

Nominal conductor area mm <sup>2</sup>	Continuous current-carrying capacity, A				
	In air		In ground		
					
35	167	178	126	173	140
50	199	213	152	204	168
70	247	265	187	250	205
95	301	323	225	299	246
120	346	373	258	340	280
150	392	422	299	381	321
185	448	483	339	430	363
240	527	570	396	498	421
300	602	652	449	562	474
400	694	754	513	638	539
500	789	859	601	714	624