

6.35/11kV Triplex 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	6.35/11kV
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

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			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	Inductive reactance at 50Hz and 90°C			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	11200	0.216	0.431	10.9	2.62	0.150	0.164	0.208	1.20	2.39	0.0880
35	0.868	1.11	1.11	1.11	3.3	3.3	10200	0.237	0.473	12.0	2.54	0.142	0.157	0.200	0.859	1.73	0.0785
50	0.641	0.822	0.822	0.822	4.7	4.7	9300	0.260	0.519	13.2	2.47	0.138	0.153	0.196	0.602	1.24	0.0785
70	0.443	0.568	0.568	0.568	6.6	6.6	8100	0.295	0.588	14.9	2.39	0.130	0.144	0.188	0.427	0.870	0.0691
95	0.320	0.411	0.411	0.410	9.0	9.1	7300	0.329	0.656	16.7	2.33	0.123	0.138	0.182	0.309	0.629	0.0628
120	0.253	0.325	0.325	0.325	11.3	10.2	6700	0.360	0.718	18.2	2.28	0.119	0.133	0.177	0.276	0.529	0.0597
150	0.206	0.265	0.265	0.264	14.2	10.2	6100	0.391	0.780	19.8	2.24	0.115	0.129	0.172	0.276	0.482	0.0565
185	0.164	0.211	0.211	0.211	17.5	10.2	5700	0.424	0.846	21.5	2.21	0.111	0.125	0.169	0.276	0.440	0.0534
240	0.125	0.161	0.161	0.161	22.7	10.2	5100	0.473	0.944	24.0	2.17	0.106	0.121	0.164	0.276	0.401	0.0503
300	0.100	0.130	0.129	0.129	28.3	10.2	4600	0.519	1.04	26.3	2.14	0.102	0.117	0.161	0.276	0.376	0.0471
400	0.0778	0.102	0.101	0.101	37.8	10.2	4100	0.576	1.15	29.2	2.11	0.0986	0.113	0.156	0.276	0.354	0.0440
500	0.0605	0.0800	0.0795	0.0788	47.2	10.2	3700	0.642	1.28	32.5	2.09	0.0958	0.110	0.154	0.276	0.337	0.0440

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./mm	Nominal diameter of screen wire mm	Nominal diameter over wire screen mm	Nominal thickness of outer sheath		Approx. overall diameter of cable mm	Max. overall diameter of cable kg/m	Approx. weight of cable kN	Max. allowable pulling force of conductor mm	Min. bending radius (bundled cable) During installation mm	Min. bending radius (bundled cable) Installed mm
								Inner layer	Outer layer						
								mm	mm						
25	6.0	3.4	15.7	15.9	28/0.85	18.3	1.0	1.0	25.3	54.1	1.7	3.0	810	540	
35	7.0	3.4	16.7	22.1	39/0.85	19.3	1.0	1.0	26.3	56.3	2.0	4.2	840	560	
50	8.1	3.4	17.8	31.5	22/1.35	21.4	1.0	1.0	28.4	60.8	2.5	6.0	910	610	
70	9.8	3.4	19.5	44.4	31/1.35	23.1	1.0	1.0	30.1	64.4	3.2	8.4	970	640	
95	11.4	3.4	21.1	61.5	43/1.35	24.7	1.0	1.0	31.7	67.8	4.0	11.4	1020	680	
120	12.9	3.4	22.6	68.7	48/1.35	26.2	1.0	1.0	33.2	71.0	4.5	14.4	1070	710	
150	14.4	3.4	24.1	68.7	48/1.35	27.7	1.0	1.0	34.7	74.3	4.8	18.0	1110	740	
185	16.0	3.4	25.7	68.7	48/1.35	29.3	1.0	1.0	36.3	77.7	5.2	22.2	1170	780	
240	18.4	3.4	28.1	68.7	48/1.35	31.7	1.0	1.1	38.7	82.8	5.9	28.8	1240	830	
300	20.6	3.4	30.3	68.7	48/1.35	33.9	1.0	1.1	40.9	87.5	6.5	36.0	1310	880	
400	23.4	3.4	33.1	68.7	48/1.35	36.7	1.1	1.1	43.7	93.5	7.4	48.0	1400	940	
500	26.2	3.4	36.3	68.7	48/1.35	39.9	1.1	1.2	46.9	100.4	8.6	60.0	1500	1000	

Current Ratings:

Nominal conductor area mm ²	Continuous current-carrying capacity, A					
	In air			In ground		
	Solid bond	D/2	Solid bond	Solid bond	Solid bond	
25	105		115	80	115	91
3						