

6.35/11kV Triplex 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	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

Application:

Cables are designed for fixed installation, for laying in the ground, for indoor application and in cable ducts.

Structural Parameters:

Nominal conductor area	Approx. diameter of conductor	Nominal thickness of insulation	Nominal diameter over insulation	Nominal screen area	No. & diameter of screen wire	Nominal diameter over wire screen	Nominal thickness of outer sheath		Approx. overall diameter of cable	Max. overall diameter of cable	Approx. weight of cable	Max. allowable pulling force of conductor	Min. bending radius	
							Inner layer	Outer layer					During installation	Installed
25	6.0	3.4	15.7	15.9	28/0.85	18.3	1.0	1.0	25.3	54.1	1718	3.0	970	640
35	7.0	3.4	16.7	22.1	39/0.85	19.3	1.0	1.0	26.3	56.3	2046	4.2	1010	670
50	8.1	3.4	17.8	31.5	22/1.35	21.4	1.0	1.0	28.4	60.8	2513	6.0	1090	720
70	9.8	3.4	19.5	44.4	31/1.35	23.1	1.0	1.0	30.1	64.4	3172	8.4	1150	770
95	11.4	3.4	21.1	61.5	43/1.35	24.7	1.0	1.0	31.7	67.8	3986	11.4	1220	810
120	12.9	3.4	22.6	68.7	48/1.35	26.2	1.0	1.0	33.2	71.0	4498	14.4	1270	850
150	14.4	3.4	24.1	68.7	48/1.35	27.7	1.0	1.0	34.7	74.3	4826	18.0	1330	890
185	16.0	3.4	25.7	68.7	48/1.35	29.3	1.0	1.0	36.3	77.7	5242	22.2	1390	930
240	18.4	3.4	28.1	68.7	48/1.35	31.7	1.0	1.1	38.7	82.8	5875	28.8	1490	990
300	20.6	3.4	30.3	68.7	48/1.35	33.9	1.0	1.1	40.9	87.5	6518	36.0	1570	1050
400	23.4	3.4	33.1	68.7	48/1.35	36.7	1.1	1.1	43.7	93.5	7410	48.0	1680	1120
500	26.2	3.4	36.3	68.7	48/1.35	39.9	1.1	1.2	46.9	100.4	8560	60.0	1800	1200

Electrical Characteristics:

Nominal conductor area	Max. DC resistance of conductor at 20°C	Max. AC resistance of conductor at 90°C			Fault current carrying of conductor for 1 second	Fault current carrying of screen for 1 second	Insulation resistance at 20°C	Conductor to screen capacitance	Charging current per phase	Dielectric loss per phase	Maximum dielectric stress	Inductive reactance at 50Hz and 90°C			Screen DC resistance at 20°C	Zero sequence resistance at 20°C	Zero sequence reactance at 50Hz
		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

Current Ratings:

Nominal conductor area	Continuous current-carrying capacity, A				
	In air		In ground		
	Solid bond	Solid bond	Solid bond	Solid bond	Solid bond
25	105	115	80	115	91
35	129	135	96	134	109
50	155	165	116	159	130
70	194	205	144	194	159
95	235	250	170	230	189
120	270	289	200	261	219
150	305	325	225	293	244
185	350	374	255	330	275
240	414	440	295	380	319
300	471	504	346	426	365
400	549	585	399	485	416
500	639	683	455	550	474