

HV XLPE Insulated Metallic Screened ABC 12.7/22kV



XLPE insulated copper wire screened HDPE sheath aerial bundled cables to AS/NZS 3599.1
Aluminium conductors, galvanized steel catenary.



Physical data

Nominal conductor area	Nominal conductor diameter	Average insulation thickness	Nominal diameter over insulation	Average insulation screen thickness	Copper wire screen stranding	Nominal diameter over screen	Average sheath thickness	Nominal diameter over sheath	Galvanised steel catenary stranding		Nominal overall diameter	Approximate mass
									Size	Diameter		
mm ²	mm	mm	mm	mm	no/mm	mm	mm	mm	No/mm	mm	mm	kg/km
Light duty screen												
35	7	5.5	19.40	0.9	24/0.85	23.8	1.8	28.0	7/2.00	6.0	62.0	2308
35	7	5.5	19.40	0.9	24/0.85	23.8	1.8	28.0	19/2.00	10.0	66.0	2608
50	8.3	5.5	20.70	0.9	24/0.85	25.1	1.8	29.3	19/2.00	10.0	68.6	2842
70	10	5.5	22.40	0.9	24/0.85	26.8	1.9	31.0	19/2.00	10.0	72.4	3179
95	11.6	5.5	24.00	0.9	24/0.85	28.4	1.9	32.8	19/2.00	10.0	75.6	3520
120	12.9	5.5	25.30	0.9	24/0.85	29.7	2.0	34.1	19/2.00	10.0	78.8	3867
150	14.5	5.5	26.90	0.9	24/0.85	31.3	2.0	35.9	19/2.00	10.0	81.8	4249
185	16.2	5.5	28.60	0.9	24/0.85	33.0	2.1	37.6	19/2.00	10.0	85.6	4715
Heavy duty screen												
35	7	5.5	19.40	0.9	40/0.85	23.8	1.8	28.0	7/2.00	6.0	62.0	2560
35	7	5.5	19.40	0.9	40/0.85	23.8	1.8	28.0	19/2.00	10.0	66.0	2859
50	8.3	5.5	20.70	0.9	23/1.35	26.1	1.8	30.3	19/2.00	10.0	70.6	3395
70	10	5.5	22.40	0.9	32/1.35	27.8	1.9	32.0	19/2.00	10.0	74.4	4091
95	11.6	5.5	24.00	0.9	38/1.35	29.4	1.9	33.8	19/2.00	10.0	77.6	4670
120	12.9	5.5	25.30	0.9	38/1.35	30.7	2.0	35.1	19/2.00	10.0	80.6	5017
150	14.5	5.5	26.90	0.9	38/1.35	32.3	2.0	36.9	19/2.00	10.0	83.8	5399
185	16.2	5.5	28.60	0.9	38/1.35	34.0	2.1	38.6	19/2.00	10.0	87.6	5866

Electrical Properties

Nominal conductor area	DC resist at 20°C	AC resist at 50Hz 90°C	Inductive reactance at 50Hz	Three-phase Voltage drop at 50Hz 90°C	Conductor To Screen capacitance	Continuous current carrying capacity, A			Earth fault current rating for 1s conductor	Minimum bending radius (installed)		Projected diameter for wind loading
						still air	1m/s wind	2m/s wind		kA	Core	
mm ²	Ω/km	Ω/km	Ω/km	mV/A.m	µf/km							
Light duty screen												
35	0.868	1.11	0.157	1.93	0.143	105	145	170	2.1	430	620	58.9
35	0.868	1.11	0.163	1.93	0.143	110	150	170	2.1	430	660	60.9
50	0.641	0.821	0.156	1.44	0.156	130	175	205	2.1	440	680	63.2
70	0.443	0.566	0.142	1.01	0.175	155	220	255	2.1	470	720	66.8
95	0.320	0.410	0.137	0.750	0.194	185	265	310	2.1	500	760	70.3
120	0.253	0.324	0.132	0.607	0.213	210	305	355	2.1	520	780	73.5
150	0.206	0.263	0.127	0.511	0.231	240	345	400	2.1	540	820	76.4
185	0.164	0.210	0.122	0.423	0.245	270	395	460	2.1	570	850	79.8
Heavy duty screen												
35	0.868	1.11	0.157	1.93	0.143	105	145	170	3.5	430	620	58.9
35	0.868	1.11	0.163	1.93	0.143	110	150	170	3.5	430	660	60.8
50	0.641	0.821	0.156	1.44	0.156	130	175	205	5.0	460	700	65.1
70	0.443	0.566	0.142	1.01	0.175	155	220	255	6.9	490	740	68.8
95	0.32	0.410	0.137	0.751	0.194	185	265	310	8.2	510	780	72.4
120	0.253	0.324	0.132	0.608	0.213	210	310	355	8.2	540	800	75.5
150	0.206	0.263	0.127	0.512	0.231	240	345	400	8.2	560	840	78.6
185	0.164	0.210	0.122	0.424	0.245	270	395	460	8.2	580	870	81.8

Galvanised Steel Support Wire Manufactured to AS 1222.1

Stranding and nom. wire dia. meter	Nominal overall diameter	Cross sectional area	DC resist at 20°C	Minimum breaking load	Recommended tension		Modulus of elasticity of conducto	Coeff. Of linear expansion
					Highest Everyday tension	Max. working tension		
no/mm	mm	mm ²	Ω/km	kN	kN	kN	GPa	×10 ⁻⁶ /°C
7/2.00	6.0	22.0	8.7	26.0	6.5	13.0	170	11.5
19/2.00	10.0	59.7	3.2	70.5	17.6	35.3	166	11.5

Note: Continuous current ratings are based on an ambient temperature of 40°C maximum conductor temperature of 90°C and solar radiation intensity of 1000W/M fault current ratings are based on an initial conductor temperature of 90°C and final conductor temperature of 250°C