



## 6.35/11kV Single Core Screened & PVC Sheathed (Al Conductor)

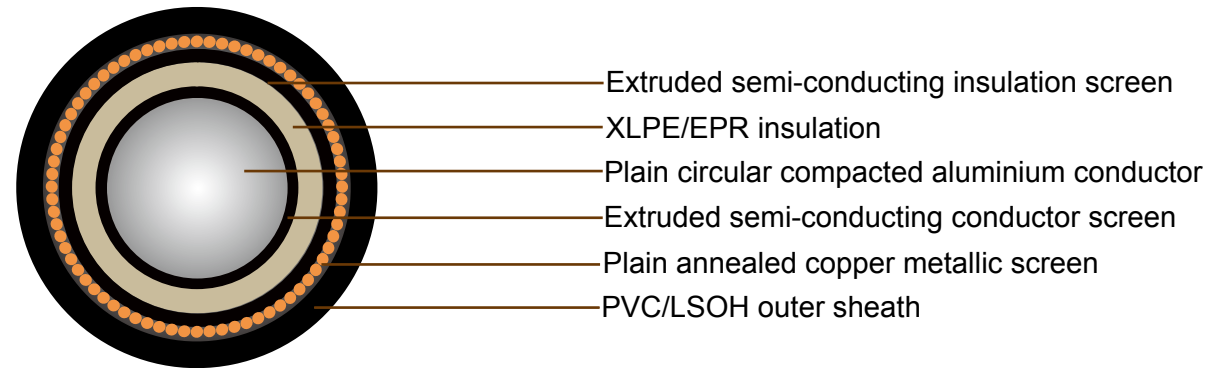
### Application

These cables are designed to be used for the supply of electrical energy in fixed applications up to the rated voltages at a nominal power frequency between 49Hz and 61Hz., they are suitable for use in distribution installation, electrical power station , they are applied for installation, outdoors, underground where subject to mechanical damage.

### Standard

AS/NZS 1429.1

### Cable Construction



**CONDUCTOR:** Plain circular compacted aluminium to AS/NZS1125  
Maximum Continuous Operating Temperature: 90°C

**CONDUCTOR SCREEN:** Extruded semi-conducting compound, bonded to the insulation and applied in the same operation as the insulation

**INSULATION:** Cross Linked Polyethylene (XLPE) – standard  
Ethylene Propylene Rubber (EPR) – alternative

**INSULATION SCREEN:** Extruded semi-conducting compound

**METALLIC SCREEN:** Plain annealed copper wire: 3kA for nominal 1 second(LIGHT DUTY)  
Plain annealed copper wire: 10kA for nominal 1 second(HEAVY DUTY)

**SHEATH:** Black 5V-90 polyvinyl chloride (PVC) – standard  
Orange 5V-90 PVC inner plus black high density polyethylene (HDPE) outer – alternative  
Low smoke zero halogen (LSOH) – alternative



## Technical Characteristics

### LIGHT DUTY

Nominal conductor area	Maximum Conductor DC resistance at 20°C	Cond. AC resistance at 50Hz and 90°C		Inductive reactance at 50Hz and 90°C			Insulation resistance at 20°C	Conductor to screen capacitance	Maximum dielectric stress	Current Ratings		
		Trefoil or Flat touching	flat spaced	Trefoil touching	flat touching	flat spaced				Unenclosed In Air	Buried Direct	Buried In Ducts (c)
mm <sup>2</sup>	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	MegOhm. km	µF x km	kV x mm	A	A	A
35	0.868	1.11	1.11	0.144	0.159	0.205	11000	0.22	2.54	153	142	119
50	0.641	0.821	0.821	0.14	0.155	0.201	9900	0.243	2.46	184	167	140
70	0.443	0.568	0.568	0.129	0.145	0.19	8700	0.276	2.37	229	204	172
95	0.32	0.41	0.41	0.123	0.138	0.184	7800	0.311	2.3	279	243	205
120	0.253	0.325	0.325	0.118	0.134	0.179	7100	0.339	2.25	322	276	237
150	0.206	0.265	0.264	0.115	0.13	0.176	6600	0.368	2.22	365	309	265
185	0.164	0.211	0.211	0.112	0.127	0.172	6100	0.398	2.18	421	349	300
240	0.125	0.161	0.161	0.107	0.123	0.168	5400	0.445	2.14	499	404	347
300	0.1	0.13	0.129	0.105	0.12	0.166	4900	0.491	2.11	572	455	399
400	0.0778	0.102	0.101	0.101	0.116	0.162	4400	0.548	2.08	669	519	456
500	0.0605	0.0803	0.079	0.097	0.112	0.158	3900	0.62	2.05	779	590	518
630	0.0469	0.0636	0.062	0.095	0.11	0.156	3500	0.695	2.02	907	669	587
800	0.0367	0.0516	0.0494	0.092	0.107	0.153	3100	0.782	2	1050	752	687



## Cable Parameter

### LIGHT DUTY

Sectional Area of Conductor	Nom. Conductor Diameter	Nom. Insulation Thickness	Nom. Diameter Over insulation	Screen Area on Each core	No. and Diameter of Screened Wires	Nom. Diameter Over Screened Wires	Nom. Overall Diameter	Approx. mass
mm <sup>2</sup>	mm	mm	mm	mm <sup>2</sup>	no x mm	mm	mm	kg/100m
35	6.9	3.4	14.9	20	36 x 0.85	16.3	22.5	62
50	8.1	3.4	16	20	36 x 0.85	17.5	23.7	68
70	9.6	3.4	17.6	20	36 x 0.85	19.0	25.2	78
95	11.4	3.4	19.3	20	36 x 0.85	20.7	26.9	89
120	12.8	3.4	20.7	20	36 x 0.85	22.1	28.3	99
150	14.2	3.4	22.1	20	36 x 0.85	23.5	29.7	109
185	15.7	3.4	23.6	20	36 x 0.85	25.2	31.4	123
240	18	3.4	25.9	20	36 x 0.85	27.6	33.8	145
300	20.1	3.4	28.3	20	36 x 0.85	29.6	36.0	168
400	23	3.4	31.1	20	36 x 0.85	32.7	39.3	202
500	26.5	3.4	34.7	20	36 x 0.85	35.8	42.6	239
630	29.9	3.4	38.4	20	36 x 0.85	39.4	46.4	289
800	34.2	3.4	42.8	20	36 x 0.85	44.0	51.3	351



## Technical Characteristics

### HEAVY DUTY

Nominal conductor area	Maximum Conductor DC resistance at 20°C	Cond. AC resistance at 50Hz and 90°C		Inductive reactance at 50Hz and 90°C			Insulation resistance at 20°C	Conductor to screen capacitance	Maximum dielectric stress	Current Ratings		
		Trefoil or Flat touching	flat spaced	Trefoil touching	flat touching	flat spaced				Unenclosed In Air	Buried Direct	Buried In Ducts (c)
mm <sup>2</sup>	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	MegOhm. km	µF x km	kV x mm	A	A	A
35	0.868	1.11	1.11	0.144	0.159	0.205	11000	0.22	2.54	153	142	119
50	0.641	0.821	0.821	0.14	0.155	0.201	9900	0.243	2.46	185	168	141
70	0.443	0.568	0.568	0.129	0.145	0.19	8700	0.276	2.37	229	204	172
95	0.32	0.41	0.41	0.123	0.138	0.184	7800	0.311	2.3	281	243	205
120	0.253	0.325	0.325	0.118	0.134	0.179	7100	0.339	2.25	323	275	236
150	0.206	0.265	0.264	0.115	0.13	0.176	6600	0.368	2.22	366	307	263
185	0.164	0.211	0.211	0.112	0.127	0.172	6100	0.398	2.18	420	346	297
240	0.125	0.161	0.161	0.107	0.123	0.168	5400	0.445	2.14	496	399	342
300	0.1	0.13	0.129	0.105	0.12	0.166	4900	0.491	2.11	567	447	392
400	0.0778	0.102	0.101	0.101	0.116	0.162	4400	0.548	2.08	659	507	445
500	0.0605	0.0803	0.079	0.097	0.112	0.158	3900	0.62	2.05	763	572	502
630	0.0469	0.0636	0.062	0.095	0.11	0.156	3500	0.695	2.02	881	644	565
800	0.0367	0.0516	0.0494	0.092	0.107	0.153	3100	0.782	2	1013	718	656



## Cable Parameter

### HEAVY DUTY

Sectional Area of Conductor	Nom. Conductor Diameter	Nom. Insulation Thickness	Nom. Diameter Over insulation	Screen Area on Each core	No. and Diameter of Screened Wires	Nom. Diameter Over Screened Wires	Nom. Overall Diameter	Approx. mass
mm <sup>2</sup>	mm	mm	mm	mm <sup>2</sup>	no x mm	mm	mm	kg/100m
35	6.9	3.4	14.9	23	40 x 0.85	18.2	22.3	66
50	8.1	3.4	16	33	23 x 1.35	20.3	24.4	82
70	9.6	3.4	17.6	46	32 x 1.35	21.9	26	105
95	11.4	3.4	19.3	62	43 x 1.35	23.6	27.7	130
120	12.8	3.4	20.7	69	48 x 1.35	25	29.1	145
150	14.2	3.4	22.1	69	48 x 1.35	26.4	30.7	155
185	15.7	3.4	23.6	69	48 x 1.35	27.9	32.2	170
240	18	3.4	25.9	69	48 x 1.35	30.2	34.7	190
300	20.1	3.4	28.3	69	48 x 1.35	32.6	37.3	215
400	23	3.4	31.1	69	48 x 1.35	35.6	40.5	250
500	26.5	3.4	34.7	69	48 x 1.35	39.2	44.3	295
630	29.9	3.4	38.4	69	48 x 1.35	42.9	48.4	345
800	34.2	3.4	42.8	69	48 x 1.35	47.3	53	405