



## 3.8/6.6kV Single Core Screened & PVC Sheathed (Al Conductor)

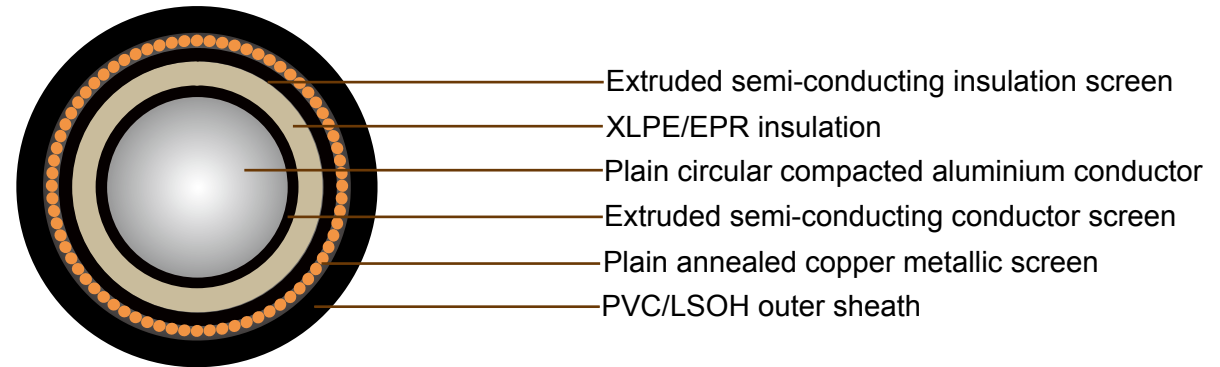
### Application

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	0.138	0.154	0.199	8700	0.278	1.92	131	139	132
50	0.641	0.821	0.821	0.135	0.15	0.196	7800	0.309	1.87	160	167	159
70	0.443	0.568	0.568	0.125	0.14	0.185	6800	0.353	1.82	196	201	192
95	0.32	0.41	0.41	0.118	0.134	0.179	6000	0.4	1.77	237	245	227
120	0.253	0.325	0.325	0.114	0.129	0.175	5500	0.439	1.74	273	270	256
150	0.206	0.265	0.264	0.111	0.126	0.171	5100	0.477	1.72	313	305	289
185	0.164	0.211	0.211	0.108	0.123	0.169	4700	0.518	1.7	356	340	320
240	0.125	0.161	0.161	0.104	0.119	0.165	4300	0.561	1.62	421	394	372
300	0.1	0.13	0.129	0.102	0.118	0.163	4100	0.582	1.5	486	444	419
400	0.0778	0.102	0.101	0.0989	0.114	0.16	3900	0.613	1.39	578	516	491



## 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	2.5	13	17.6		14.5	20.0	54
50	8.1	2.5	14.2	17.6		15.6	21.1	60
70	9.6	2.5	15.8	17.6		17.3	22.8	69
95	11.4	2.5	17.5	17.6		19.1	24.6	80
120	12.8	2.5	18.9	17.6		20.5	26.0	89
150	14.2	2.5	20.3	17.6		21.9	27.4	99
185	15.7	2.5	21.8	17.6		23.5	29.2	114
240	18	2.6	24.3	17.6		26.1	31.8	135
300	20.1	2.8	27	17.6		29.0	34.9	160
400	23	3	30.3	17.6		32.1	38.2	200



## 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	0.138	0.154	0.199	8700	0.278	1.92	131	138	132
50	0.641	0.821	0.821	0.135	0.15	0.196	7800	0.309	1.87	160	167	158
70	0.443	0.568	0.568	0.125	0.14	0.185	6800	0.353	1.82	197	201	192
95	0.32	0.41	0.41	0.118	0.134	0.179	6000	0.4	1.77	240	245	218
120	0.253	0.325	0.325	0.114	0.129	0.175	5500	0.439	1.74	275	268	246
150	0.206	0.265	0.264	0.111	0.126	0.171	5100	0.477	1.72	314	302	273
185	0.164	0.211	0.211	0.108	0.123	0.169	4700	0.518	1.7	356	336	299
240	0.125	0.161	0.161	0.104	0.119	0.165	4300	0.561	1.62	419	386	342
300	0.1	0.13	0.129	0.102	0.118	0.163	4100	0.582	1.5	480	434	380
400	0.0778	0.102	0.101	0.0989	0.114	0.16	3900	0.613	1.39	566	501	432



## 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	2.5	13	22.7	40 x 0.85	16.3	20.4	60
50	8.1	2.5	14.2	32.9	23 x 1.35	18.5	22.6	76
70	9.6	2.5	15.8	45.8	32 x 1.35	20.1	24.2	97
95	11.4	2.5	17.5	61.5	43 x 1.35	21.8	25.9	120
120	12.8	2.5	18.9	68.7	48 x 1.35	23.2	27.3	140
150	14.2	2.5	20.3	68.7	48 x 1.35	24.6	28.7	150
185	15.7	2.5	21.8	68.7	48 x 1.35	26.1	30.4	160
240	18	2.6	24.3	68.7	48 x 1.35	28.6	33.1	185
300	20.1	2.8	27	68.7	48 x 1.35	31.3	36	210
400	23	3	30.3	68.7	48 x 1.35	34.6	39.5	245