



## 12.7/22kV Single Core Screened & PVC Sheathed (Cu Conductor)

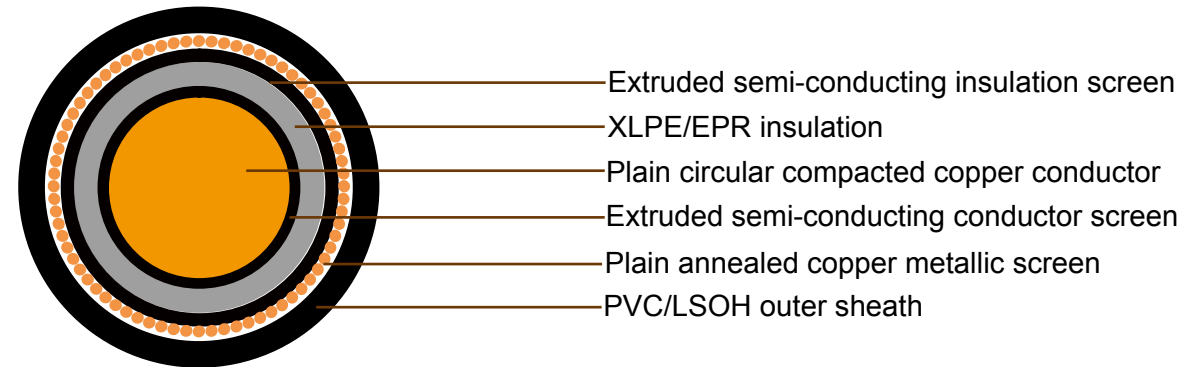
### Application

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 copper 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 Rating		
		Trefoil or Flat touching	flat spaced	Trefoil touching	flat touching	flat spaced				Unenclosed In Air	Buried Direct	Buried In Ducts (c)
mm	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	MegOhm. km	µF x km	kV x mm	A	A	A
35	0.524	0.668	0.668	0.159	0.174	0.219	16000	0.156	3.63	202	183	156
50	0.387	0.494	0.494	0.151	0.166	0.212	14000	0.171	3.48	242	216	183
70	0.268	0.342	0.342	0.143	0.158	0.204	13000	0.192	3.31	299	263	227
95	0.193	0.247	0.247	0.132	0.147	0.193	11000	0.216	3.16	365	314	271
120	0.153	0.196	0.195	0.127	0.143	0.188	10000	0.236	3.07	419	355	307
150	0.124	0.159	0.159	0.123	0.138	0.184	9500	0.254	3	476	398	343
185	0.0991	0.128	0.127	0.119	0.135	0.18	8800	0.274	2.93	546	448	386
240	0.0754	0.0978	0.0972	0.115	0.13	0.176	7900	0.305	2.85	644	517	455
300	0.0601	0.0788	0.078	0.112	0.127	0.172	7200	0.334	2.79	737	581	511
400	0.047	0.0628	0.0617	0.107	0.122	0.168	6500	0.371	2.73	855	658	579
500	0.0366	0.0503	0.0488	0.104	0.119	0.165	5900	0.407	2.69	986	740	651
630	0.0283	0.0407	0.0388	0.101	0.117	0.162	5300	0.453	2.64	1132	829	758



## 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	6.8	5.5	19.1	20	36 x 0.85	20.1	26.3	98
50	8	5.5	20.3	20	36 x 0.85	21.4	27.6	112
70	9.6	5.5	21.9	20	36 x 0.85	22.8	29.0	135
95	11.5	5.5	23.8	20	36 x 0.85	24.5	30.7	164
120	13.1	5.5	25.3	20	36 x 0.85	25.9	32.1	191
150	14.5	5.5	26.8	20	36 x 0.85	27.3	33.5	220
185	16.1	5.5	28.4	20	36 x 0.85	29.1	35.5	260
240	18.5	5.5	30.8	20	36 x 0.85	31.4	37.8	319
300	20.7	5.5	33.2	20	36 x 0.85	33.6	40.2	383
400	23.6	5.5	36.1	20	36 x 0.85	37.0	43.8	473
500	26.5	5.5	39	20	36 x 0.85	40.3	47.3	575
630	29.9	5.5	42.7	20	36 x 0.85	43.9	51.2	720



## 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 Rating		
		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	0.524	0.668	0.668	0.159	0.174	0.219	16000	0.156	3.63	202	183	156
50	0.387	0.494	0.494	0.151	0.166	0.212	14000	0.171	3.48	244	216	187
70	0.268	0.342	0.342	0.143	0.158	0.204	13000	0.192	3.31	301	262	226
95	0.193	0.247	0.247	0.132	0.147	0.193	11000	0.216	3.16	365	311	269
120	0.153	0.196	0.195	0.127	0.143	0.188	10000	0.236	3.07	419	351	303
150	0.124	0.159	0.159	0.123	0.138	0.184	9500	0.254	3	474	392	338
185	0.0991	0.128	0.127	0.119	0.135	0.18	8800	0.274	2.93	541	440	387
240	0.0754	0.0978	0.0972	0.115	0.13	0.176	7900	0.305	2.85	635	504	444
300	0.0601	0.0788	0.078	0.112	0.127	0.172	7200	0.334	2.79	722	563	496
400	0.047	0.0628	0.0617	0.107	0.122	0.168	6500	0.371	2.73	832	633	556
500	0.0366	0.0503	0.0488	0.104	0.119	0.165	5900	0.407	2.69	953	707	621
630	0.0283	0.0407	0.0388	0.101	0.117	0.162	5300	0.453	2.64	1083	783	716
800	0.0221	0.0341	0.0317	0.096	0.111	0.157	4600	0.528	2.58			
1000	0.0182	0.0246	0.024	0.0948	0.11	0.156	4000	0.597	2.54			
1200	0.015	0.0208	0.0201	0.0932	0.108	0.154	3700	0.646	2.51			



## 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	6.8	5.5	19.1	34.4	24 x 1.35	23.4	27.5	115
50	8	5.5	20.3	48.7	34 x 1.35	24.6	28.7	140
70	9.6	5.5	21.9	68.7	48 x 1.35	26.2	30.5	185
95	11.5	5.5	23.8	68.7	48 x 1.35	28.1	32.4	215
120	13.1	5.5	25.3	68.7	48 x 1.35	29.6	34.1	245
150	14.5	5.5	26.8	68.7	48 x 1.35	31.1	35.6	275
185	16.1	5.5	28.4	68.7	48 x 1.35	32.7	37.4	310
240	18.5	5.5	30.8	68.7	48 x 1.35	35.1	40	375
300	20.7	5.5	33.2	68.7	48 x 1.35	37.7	42.6	440
400	23.6	5.5	36.1	68.7	48 x 1.35	40.6	46.1	535
500	26.5	5.5	39	68.7	48 x 1.35	43.5	49	640
630	29.9	5.5	42.7	68.7	48 x 1.35	47.2	53.4	765
800	35.9	5.5	48.8	68.7	48 x 1.35	53.3	59.7	965
1000	40.2	5.5	54.3	68.7	48 x 1.35	58.8	65.4	1160
1200	43.8	5.5	58.3	68.7	48 x 1.35	62.8	69.6	1360