



## 19/33kV Single Core Screened & PVC Sheathed (Cu Conductor)

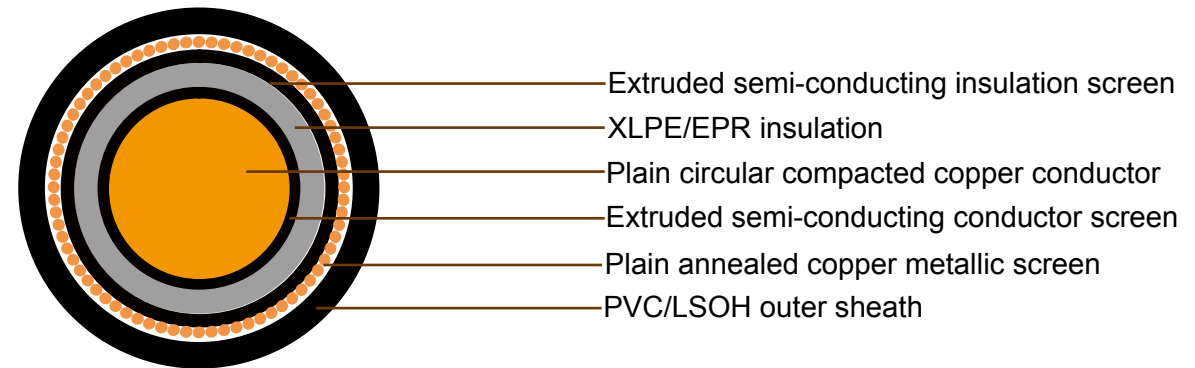
### Application

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 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
50	0.387	0.494	0.494	0.163	0.178	0.224	18000	0.133	4.05	246	216	188
70	0.268	0.342	0.342	0.154	0.169	0.215	16000	0.148	3.82	304	263	228
95	0.193	0.247	0.247	0.143	0.158	0.204	15000	0.165	3.61	370	314	272
120	0.153	0.195	0.195	0.137	0.153	0.198	14000	0.179	3.48	425	356	315
150	0.124	0.159	0.159	0.133	0.148	0.194	13000	0.191	3.38	482	398	352
185	0.0991	0.127	0.127	0.129	0.144	0.19	12000	0.205	3.29	552	448	396
240	0.0754	0.0976	0.0972	0.124	0.139	0.185	11000	0.227	3.17	650	518	458
300	0.0601	0.0786	0.0779	0.12	0.135	0.181	9800	0.247	3.09	743	582	514
400	0.047	0.0625	0.0616	0.115	0.13	0.176	8900	0.272	3	861	660	582
500	0.0366	0.0499	0.0487	0.111	0.126	0.172	8100	0.297	2.93	993	744	682
630	0.0283	0.0403	0.0387	0.108	0.123	0.169	7300	0.329	2.86	1139	835	764



## 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
50	8	8	25.5	20	36 x 0.85	26.2	32.4	133
70	9.6	8	27.1	20	36 x 0.85	27.6	33.8	157
95	11.5	8	29	20	36 x 0.85	29.3	35.7	188
120	13.1	8	30.6	20	36 x 0.85	30.7	37.1	216
150	14.5	8	32	20	36 x 0.85	32.1	38.7	247
185	16.1	8	33.6	20	36 x 0.85	33.9	40.5	288
240	18.5	8	36	20	36 x 0.85	36.2	43.0	350
300	20.7	8	38.4	20	36 x 0.85	38.4	45.4	416
400	23.6	8	41.3	20	36 x 0.85	41.8	49.1	510
500	26.5	8	44.2	20	36 x 0.85	45.1	52.6	615
630	29.9	8	47.9	20	36 x 0.85	48.7	56.4	760



## 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
50	0.387	0.494	0.494	0.163	0.178	0.224	18000	0.133	4.05	248	216	188
70	0.268	0.342	0.342	0.154	0.169	0.215	16000	0.148	3.82	305	262	227
95	0.193	0.247	0.247	0.143	0.158	0.204	15000	0.165	3.61	370	311	276
120	0.153	0.195	0.195	0.137	0.153	0.198	14000	0.179	3.48	424	352	311
150	0.124	0.159	0.159	0.133	0.148	0.194	13000	0.191	3.38	479	392	347
185	0.0991	0.127	0.127	0.129	0.144	0.19	12000	0.205	3.29	547	441	389
240	0.0754	0.0976	0.0972	0.124	0.139	0.185	11000	0.227	3.17	641	506	447
300	0.0601	0.0786	0.0779	0.12	0.135	0.181	9800	0.247	3.09	729	565	499
400	0.047	0.0625	0.0616	0.115	0.13	0.176	8900	0.272	3	840	636	583
500	0.0366	0.0499	0.0487	0.111	0.126	0.172	8100	0.297	2.93	961	711	651
630	0.0283	0.0403	0.0387	0.108	0.123	0.169	7300	0.329	2.86	1094	790	723
800	0.0221	0.0336	0.0315	0.102	0.117	0.163	6300	0.381	2.78			
1000	0.0182	0.0245	0.024	0.1	0.115	0.161	5600	0.427	2.72			
1200	0.015	0.0207	0.0201	0.0984	0.114	0.159	5200	0.461	2.68			



## 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
50	8	8	25.5	48.7	34 x 1.35	29.8	34.3	170
70	9.6	8	27.1	68.7	48 x 1.35	31.4	36.1	215
95	11.5	8	29	68.7	48 x 1.35	33.3	38	245
120	13.1	8	30.6	68.7	48 x 1.35	34.9	39.8	280
150	14.5	8	32	68.7	48 x 1.35	36.5	41.4	310
185	16.1	8	33.6	68.7	48 x 1.35	38.1	43.2	345
240	18.5	8	36	68.7	48 x 1.35	40.5	45.9	410
300	20.7	8	38.4	68.7	48 x 1.35	42.9	48.4	475
400	23.6	8	41.3	68.7	48 x 1.35	45.8	51.5	575
500	26.5	8	44.2	68.7	48 x 1.35	48.7	54.9	685
630	29.9	8	47.9	68.7	48 x 1.35	52.4	58.8	815
800	35.9	8	54	68.7	48 x 1.35	58.5	65.3	1020
1000	40.2	8	59.5	68.7	48 x 1.35	64	71	1220
1200	43.8	8	63.5	68.7	48 x 1.35	68	75.2	1420