



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

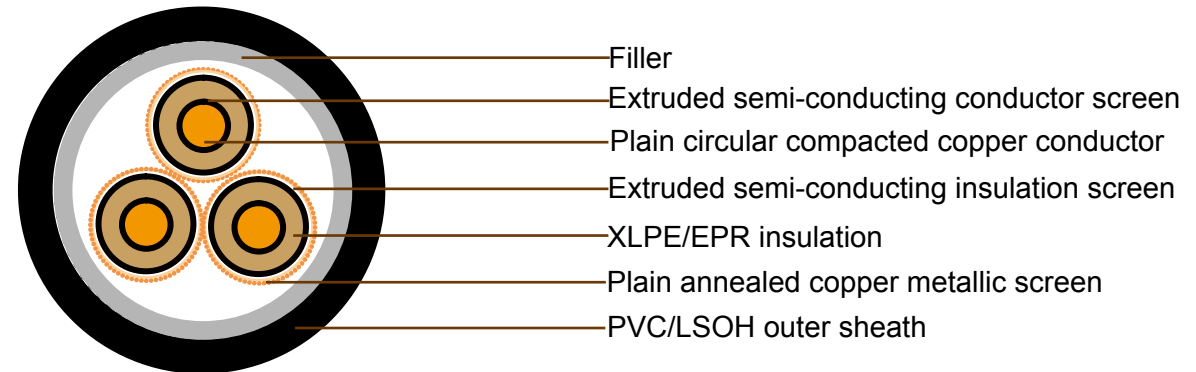
### Application

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	Insulation resistance at 20°C	Conductor to screen capacitance	Maximum dielectric stress	Current Ratings		
							Unenclosed In Air	Unenclosed In Air	Unenclosed In Air
mm <sup>2</sup>	Ohm/km	Ohm/km	Ohm/km	MegOhm.km	µF x km	kV x mm	A	A	A
35	0.524	0.668	0.141	16000	0.156	3.63	177	170	144
50	0.387	0.494	0.134	14000	0.171	3.48	212	201	173
70	0.268	0.342	0.127	13000	0.192	3.31	261	245	210
95	0.193	0.247	0.117	11000	0.216	3.16	317	293	251
120	0.153	0.196	0.112	10000	0.236	3.07	363	333	285
150	0.124	0.16	0.109	9500	0.254	3	411	373	319
185	0.0991	0.128	0.105	8800	0.274	2.93	469	421	366
240	0.0754	0.0981	0.101	7900	0.305	2.85	549	486	423



## 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	7.4	13 x 0.85	20.1	52.9	276
50	8	5.5	20.3	7.9	14 x 0.85	21.4	56.0	328
70	9.6	5.5	21.9	8.5	15 x 0.85	22.8	59.2	404
95	11.5	5.5	23.8	9.1	16 x 0.85	24.5	63.1	499
120	13.1	5.5	25.3	9.6	17 x 0.85	25.9	66.6	590
150	14.5	5.5	26.8	10.2	18 x 0.85	27.3	69.8	685
185	16.1	5.5	28.4	10.8	19 x 0.85	29.1	73.9	810
240	18.5	5.5	30.8	11.3	20 x 0.85	31.4	79.3	1005



## 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	Insulation resistance at 20°C	Conductor to screen capacitance	Maximum dielectric stress	Current Ratings		
							Unenclosed In Air	Unenclosed In Air	Unenclosed In Air
mm <sup>2</sup>	Ohm/km	Ohm/km	Ohm/km	MegOhm.km	µF x km	kV x mm	A	A	A
35	0.524	0.668	0.141	16000	0.156	3.63	177	170	144
50	0.387	0.494	0.134	14000	0.171	3.48	212	201	173
70	0.268	0.342	0.127	13000	0.192	3.31	261	245	210
95	0.193	0.247	0.117	11000	0.216	3.16	317	293	251
120	0.153	0.196	0.112	10000	0.236	3.07	363	333	285
150	0.124	0.16	0.109	9500	0.254	3	411	373	319
185	0.0991	0.128	0.105	8800	0.274	2.93	469	421	366
240	0.0754	0.0981	0.101	7900	0.305	2.85	549	486	423
300	0.0601	0.0792	0.0988	7200	0.334	2.79			
400	0.047	0.0633	0.0944	6500	0.371	2.73			
500	0.0373	0.0518	0.0915	5900	0.407	2.69			



## 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	11.3	20 x 0.85	22.4	54.6	300
50	8	5.5	20.3	16.5	29 x 0.85	23.6	57.3	360
70	9.6	5.5	21.9	22.7	40 x 0.85	25.2	60.9	460
95	11.5	5.5	23.8	22.7	40 x 0.85	27.1	65.2	560
120	13.1	5.5	25.3	22.7	40 x 0.85	28.6	68.9	650
150	14.5	5.5	26.8	22.7	40 x 0.85	30.1	72.2	750
185	16.1	5.5	28.4	22.7	40 x 0.85	31.7	75.9	855
240	18.5	5.5	30.8	22.7	40 x 0.85	34.1	81.5	1060
300	20.7	5.5	33.2	22.7	40 x 0.85	36.7	87.5	1270
400	23.6	5.5	36.1	22.7	40 x 0.85	39.6	94.1	1570
500	26.5	5.5	39	22.7	40 x 0.85	42.5	100.8	1910