



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

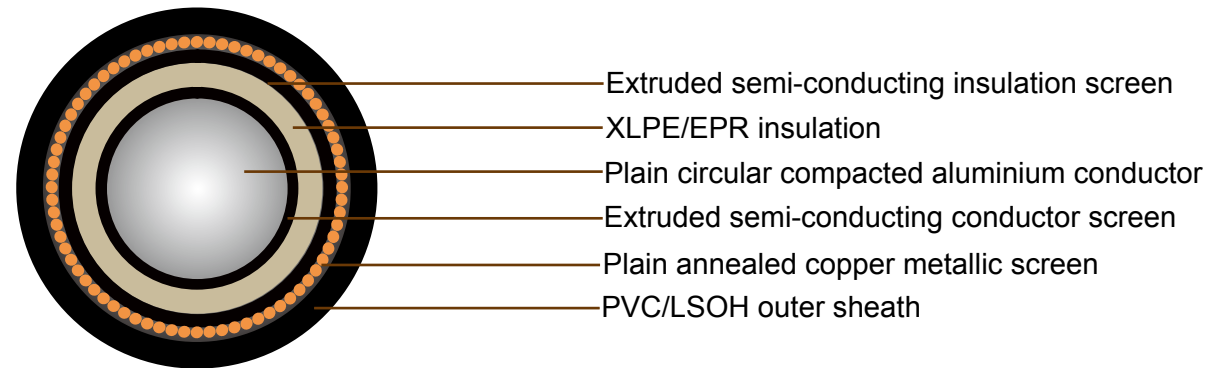
Application

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 Rating		
		Trefoil or Flat touching	flat spaced	Trefoil touching	flat touching	flat spaced				Unenclosed In Air	Buried Direct	Buried In Ducts (c)
mm ²	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	0.156	0.171	0.217	15000	0.157	3.62	157	142	121
50	0.641	0.821	0.821	0.151	0.166	0.212	14000	0.172	3.47	187	167	142
70	0.443	0.568	0.568	0.14	0.155	0.201	13000	0.192	3.3	233	204	176
95	0.32	0.41	0.41	0.133	0.148	0.194	11000	0.214	3.17	283	244	210
120	0.253	0.325	0.325	0.128	0.143	0.189	10000	0.232	3.08	326	277	239
150	0.206	0.264	0.264	0.124	0.139	0.185	9700	0.25	3.01	370	309	267
185	0.164	0.211	0.211	0.121	0.136	0.181	9000	0.269	2.95	426	350	301
240	0.125	0.161	0.161	0.116	0.131	0.177	8100	0.298	2.87	504	405	356
300	0.1	0.129	0.129	0.113	0.128	0.173	7400	0.327	2.81	577	455	401
400	0.0778	0.102	0.101	0.108	0.123	0.169	6700	0.363	2.75	673	520	458
500	0.0605	0.08	0.079	0.104	0.119	0.165	5900	0.407	2.69	783	592	520
630	0.0469	0.0632	0.0619	0.101	0.116	0.162	5300	0.453	2.64	912	672	615
800	0.0367	0.0511	0.0493	0.0976	0.113	0.159	4800	0.507	2.59	1054	756	691
1000	0.0298	0.0391	0.0387	0.0945	0.11	0.155	4000	0.597	2.54	1194	836	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 ²	mm	mm	mm	mm ²	no x mm	mm	mm	kg/100m
35	6.9	5.5	19.2	20	36 x 0.85	20.1	26.3	75
50	8.1	5.5	20.3	20	36 x 0.85	21.3	27.5	82
70	9.6	5.5	21.9	20	36 x 0.85	22.8	29.0	92
95	11.4	5.5	23.6	20	36 x 0.85	24.5	30.7	104
120	12.8	5.5	25	20	36 x 0.85	25.9	32.1	115
150	14.2	5.5	26.4	20	36 x 0.85	27.3	33.5	127
185	15.7	5.5	27.9	20	36 x 0.85	29.0	35.4	143
240	18	5.5	30.3	20	36 x 0.85	31.4	37.8	166
300	20.1	5.5	32.6	20	36 x 0.85	33.4	40.0	190
400	23	5.5	35.4	20	36 x 0.85	36.5	43.3	226
500	26.5	5.5	39	20	36 x 0.85	39.6	46.6	265
630	29.9	5.5	42.7	20	36 x 0.85	43.2	50.5	317
800	34.2	5.5	47.1	20	36 x 0.85	47.8	55.3	383
1000	40.2	5.5	54.3	20	36 x 0.85	51.9	59.4	454



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	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	0.156	0.171	0.217	15000	0.157	3.62	157	142	121
50	0.641	0.821	0.821	0.151	0.166	0.212	14000	0.172	3.47	188	168	142
70	0.443	0.568	0.568	0.14	0.155	0.201	13000	0.192	3.3	235	204	177
95	0.32	0.41	0.41	0.133	0.148	0.194	11000	0.214	3.17	286	243	210
120	0.253	0.325	0.325	0.128	0.143	0.189	10000	0.232	3.08	327	275	237
150	0.206	0.264	0.264	0.124	0.139	0.185	9700	0.25	3.01	370	307	265
185	0.164	0.211	0.211	0.121	0.136	0.181	9000	0.269	2.95	425	346	305
240	0.125	0.161	0.161	0.116	0.131	0.177	8100	0.298	2.87	501	399	351
300	0.1	0.129	0.129	0.113	0.128	0.173	7400	0.327	2.81	571	447	394
400	0.0778	0.102	0.101	0.108	0.123	0.169	6700	0.363	2.75	663	508	447
500	0.0605	0.08	0.079	0.104	0.119	0.165	5900	0.407	2.69	768	574	505
630	0.0469	0.0632	0.0619	0.101	0.116	0.162	5300	0.453	2.64	886	647	592
800	0.0367	0.0511	0.0493	0.0976	0.113	0.159	4800	0.507	2.59	1019	722	660
1000	0.0298	0.0391	0.0387	0.0945	0.11	0.155	4000	0.597	2.54	1146	793	724
1200	0.0247	0.0328	0.0323	0.093	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 ²	mm	mm	mm	mm ²	no x mm	mm	mm	kg/100m
35	6.9	5.5	19.2	22.7	40 x 0.85	22.5	26.6	81
50	8.1	5.5	20.3	32.9	23 x 1.35	24.6	28.7	98
70	9.6	5.5	21.9	45.8	32 x 1.35	26.2	30.5	120
95	11.4	5.5	23.6	61.5	43 x 1.35	27.9	32.2	150
120	12.8	5.5	25	68.7	48 x 1.35	29.3	33.8	170
150	14.2	5.5	26.4	68.7	48 x 1.35	30.7	35.2	180
185	15.7	5.5	27.9	68.7	48 x 1.35	32.2	36.9	195
240	18	5.5	30.3	68.7	48 x 1.35	34.6	39.5	220
300	20.1	5.5	32.6	68.7	48 x 1.35	37.1	42	245
400	23	5.5	35.4	68.7	48 x 1.35	39.9	45.2	280
500	26.5	5.5	39	68.7	48 x 1.35	43.5	49	325
630	29.9	5.5	42.7	68.7	48 x 1.35	47.2	53.1	380
800	34.2	5.5	47.1	68.7	48 x 1.35	51.6	57.7	445
1000	40.2	5.5	54.3	68.7	48 x 1.35	58.8	65.1	540
1200	43.8	5.5	58.3	68.7	48 x 1.35	62.8	69.3	620