



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

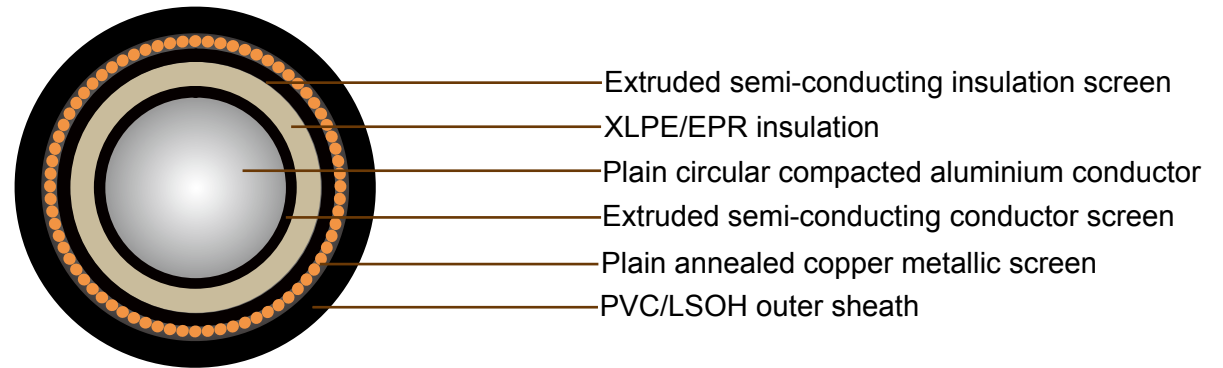
Application

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: Plain annealed copper wire: 3kA for nominal 1 second(LIGHT DUTY)
Plain annealed copper wire: 10kA for nominal 1 second(HEAVY DUTY)

METALLIC SCREEN: Plain annealed copper wire: 10kA for nominal 1 second

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 ²	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	MegOhm. km	µF x km	kV x mm	A	A	A
50	0.641	0.821	0.821	0.163	0.178	0.223	18000	0.134	4.04	190	167	146
70	0.443	0.568	0.568	0.151	0.166	0.212	16000	0.148	3.81	236	204	177
95	0.32	0.41	0.41	0.143	0.159	0.204	15000	0.164	3.62	287	244	211
120	0.253	0.325	0.325	0.138	0.154	0.199	14000	0.176	3.5	330	277	245
150	0.206	0.264	0.264	0.134	0.149	0.195	13000	0.189	3.4	374	309	274
185	0.164	0.211	0.211	0.13	0.145	0.191	12000	0.202	3.31	430	350	309
240	0.125	0.161	0.161	0.125	0.14	0.186	11000	0.222	3.2	508	405	358
300	0.1	0.129	0.129	0.121	0.136	0.182	10000	0.242	3.11	581	456	402
400	0.0778	0.101	0.101	0.116	0.131	0.177	9100	0.267	3.02	677	521	459
500	0.0605	0.0797	0.0789	0.111	0.126	0.172	8100	0.297	2.93	787	593	544
630	0.0469	0.0629	0.0618	0.108	0.123	0.168	7300	0.329	2.86	914	674	617
800	0.0367	0.0507	0.0492	0.104	0.119	0.165	6600	0.366	2.8	1057	759	694
1000	0.0298	0.039	0.0387	0.1	0.115	0.161	5600	0.427	2.72	1197	841	768



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
50	8.1	8	25.6	20	36 x 0.85	26.1	32.3	103
70	9.6	8	27.2	20	36 x 0.85	27.6	33.8	114
95	11.4	8	28.9	20	36 x 0.85	29.3	35.7	128
120	12.8	8	30.3	20	36 x 0.85	30.7	37.1	140
150	14.2	8	31.7	20	36 x 0.85	32.1	38.7	154
185	15.7	8	33.2	20	36 x 0.85	33.8	40.4	171
240	18	8	35.5	20	36 x 0.85	36.2	43	197
300	20.1	8	37.8	20	36 x 0.85	38.2	45.2	223
400	23	8	40.7	20	36 x 0.85	41.3	48.6	261
500	26.5	8	44.2	20	36 x 0.85	44.4	51.9	304
630	29.9	8	48	20	36 x 0.85	48	55.7	358
800	34.2	8	52.3	20	36 x 0.85	52.6	60.5	428
1000	40.2	8	59.5	21	37 x 0.85	56.7	64.6	505



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 ²	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	Ohm/km	MegOhm. km	µF x km	kV x mm	A	A	A
50	0.641	0.821	0.821	0.163	0.178	0.223	18000	0.134	4.04	191	168	146
70	0.443	0.568	0.568	0.151	0.166	0.212	16000	0.148	3.81	238	204	178
95	0.32	0.41	0.41	0.143	0.159	0.204	15000	0.164	3.62	288	243	215
120	0.253	0.325	0.325	0.138	0.154	0.199	14000	0.176	3.5	331	275	244
150	0.206	0.264	0.264	0.134	0.149	0.195	13000	0.189	3.4	374	307	272
185	0.164	0.211	0.211	0.13	0.145	0.191	12000	0.202	3.31	429	346	306
240	0.125	0.161	0.161	0.125	0.14	0.186	11000	0.222	3.2	505	400	353
300	0.1	0.129	0.129	0.121	0.136	0.182	10000	0.242	3.11	575	448	395
400	0.0778	0.101	0.101	0.116	0.131	0.177	9100	0.267	3.02	668	509	449
500	0.0605	0.0797	0.0789	0.111	0.126	0.172	8100	0.297	2.93	772	576	528
630	0.0469	0.0629	0.0618	0.108	0.123	0.168	7300	0.329	2.86	891	650	595
800	0.0367	0.0507	0.0492	0.104	0.119	0.165	6600	0.366	2.8	1023	726	663
1000	0.0298	0.039	0.0387	0.1	0.115	0.161	5600	0.427	2.72	1152	799	728
1200	0.0247	0.0327	0.0323	0.0981	0.113	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 ²	mm	mm	mm	mm ²	no x mm	mm	mm	kg/100m
50	8.1	8	25.6	32.9	23 x 1.35	29.9	34.4	125
70	9.6	8	27.2	45.8	32 x 1.35	31.5	36.2	150
95	11.4	8	28.9	61.5	43 x 1.35	33.2	37.9	180
120	12.8	8	30.3	68.7	48 x 1.35	34.6	39.5	200
150	14.2	8	31.7	68.7	48 x 1.35	36.2	41.1	215
185	15.7	8	33.2	68.7	48 x 1.35	37.7	42.8	230
240	18	8	35.5	68.7	48 x 1.35	40	45.1	255
300	20.1	8	37.8	68.7	48 x 1.35	42.3	47.8	285
400	23	8	40.7	68.7	48 x 1.35	45.2	50.9	320
500	26.5	8	44.2	68.7	48 x 1.35	48.7	54.6	370
630	29.9	8	48	68.7	48 x 1.35	52.5	58.6	430
800	34.2	8	52.3	68.7	48 x 1.35	56.8	63.4	500
1000	40.2	8	59.5	68.7	48 x 1.35	64	70.8	600
1200	43.8	8	63.5	68.7	48 x 1.35	68	75	680