



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

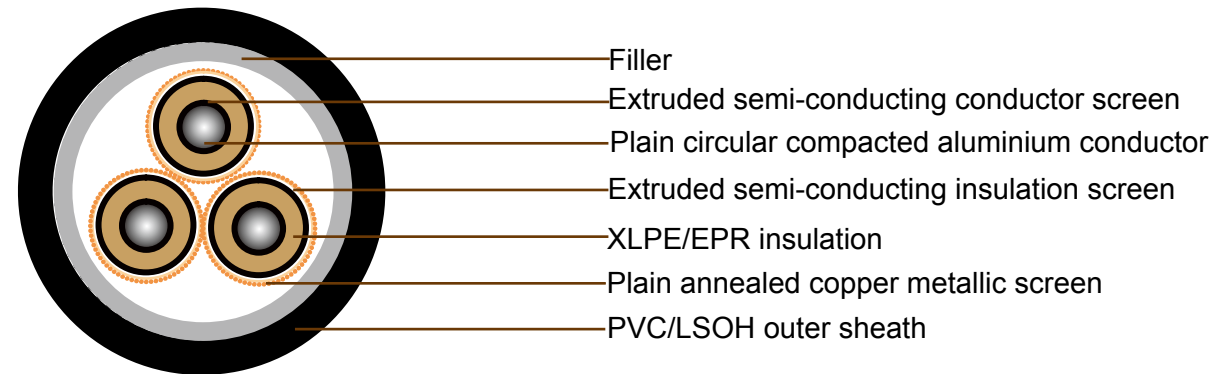
Application

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	Insulation resistance at 20°C	Conductor to screen capacitance	Maximum dielectric stress	Current Ratings		
							Unenclosed In Air	Unenclosed In Air	Unenclosed In Air
mm	Ohm/km	Ohm/km	Ohm/km	MegOhm.km	µF x km	kV x mm	A	A	A
50	0.641	0.821	0.147	18000	0.134	4.04	164	155	134
70	0.443	0.568	0.136	16000	0.148	3.81	203	189	163
95	0.32	0.41	0.129	15000	0.164	3.62	246	226	198
120	0.253	0.325	0.124	14000	0.176	3.5	283	257	226
150	0.206	0.264	0.12	13000	0.189	3.4	319	288	252

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	9.6	17 x 0.85	26.1	66.7	322
70	9.6	8	27.2	10.2	18 x 0.85	27.6	70.4	367
95	11.4	8	28.9	10.8	19 x 0.85	29.3	74.2	418
120	12.8	8	30.3	11.3	20 x 0.85	30.7	77.5	463
150	14.2	8	31.7	11.9	21 x 0.85	32.1	80.7	510



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 ²	Ohm/km	Ohm/km	Ohm/km	MegOhm.km	µF x km	kV x mm	A	A	A
50	0.641	0.821	0.147	18000	0.134	4.04	164	155	134
70	0.443	0.568	0.136	16000	0.148	3.81	203	189	163
95	0.32	0.41	0.129	15000	0.164	3.62	246	226	198
120	0.253	0.325	0.124	14000	0.176	3.5	283	257	226
150	0.206	0.264	0.12	13000	0.189	3.4	319	288	252
185	0.164	0.211	0.117	12000	0.202	3.31			
240	0.125	0.161	0.112	11000	0.222	3.2			
300	0.1	0.13	0.108	10000	0.242	3.11			
400	0.0778	0.102	0.103	9100	0.267	3.02			
500	0.0617	0.0815	0.099	8100	0.297	2.93			



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	10.8	19 x 0.85	28.9	69.5	355
70	9.6	8	27.2	15.3	27 x 0.85	30.5	73.1	415
95	11.4	8	28.9	20.4	36 x 0.85	32.2	77	480
120	12.8	8	30.3	22.7	40 x 0.85	33.6	80.2	525
150	14.2	8	31.7	22.7	40 x 0.85	35.2	83.9	580
185	15.7	8	33.2	22.7	40 x 0.85	36.7	87.3	635
240	18	8	35.5	22.7	40 x 0.85	39	92.9	730
300	20.1	8	37.8	22.7	40 x 0.85	41.3	98.1	820
400	23	8	40.7	22.7	40 x 0.85	44.2	104.8	955
500	26.5	8	44.2	22.7	40 x 0.85	47.7	112.9	1120