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

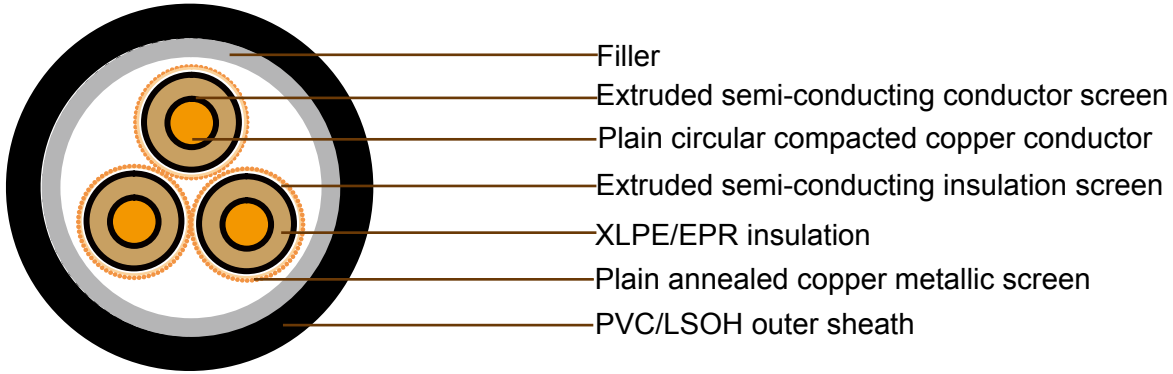
Application

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 diaelectric 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	0.387	0.494	0.147	18000	0.133	4.05	212	200	173
70	0.268	0.342	0.139	16000	0.148	3.82	262	244	211
95	0.193	0.247	0.128	15000	0.165	3.61	317	292	256
120	0.153	0.196	0.123	14000	0.179	3.48	364	331	290
150	0.124	0.159	0.12	13000	0.191	3.38	411	372	325

Cable Parameter

LIGHT DUTY

Sectional Area of Conductor	Nom. Conductor Diameter	Nom. Insulation Thickness	Nom. Diamete Over insulation	Screen Area on Each core	No. and Diamter of Screened Wires	Nom. Diamete Over Screened Wires	Nom. Overall Diameter	Approx. mass
mm^2	mm	mm	mm	mm^2	no x mm	mm	mm	kg/100m
50	8	8	25.5	9.6	17 x 0.85	26.2	66.9	415
70	9.6	8	27.1	10.2	18 x 0.85	27.6	70.4	499
95	11.5	8	29	10.8	19 x 0.85	29.3	74.5	600
120	13.1	8	30.6	11.3	20 x 0.85	30.7	77.8	690
150	14.5	8	32	11.9	21 x 0.85	32.1	81.0	795

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 diaelectric 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	0.387	0.494	0.147	18000	0.133	4.05	212	200	173
70	0.268	0.342	0.139	16000	0.148	3.82	262	244	211
95	0.193	0.247	0.128	15000	0.165	3.61	317	292	256
120	0.153	0.196	0.123	14000	0.179	3.48	364	331	290
150	0.124	0.159	0.12	13000	0.191	3.38	411	372	325
185	0.0991	0.128	0.116	12000	0.205	3.29			
240	0.0754	0.0978	0.111	11000	0.227	3.17			
300	0.0601	0.0788	0.107	9800	0.247	3.09			
400	0.047	0.0628	0.102	8900	0.272	3			
500	0.0373	0.0513	0.099	8100	0.297	2.93			

Cable Parameter

HEAVY DUTY

Sectional Area of Conductor	Nom. Conductor Diameter	Nom. Insulation Thickness	Nom. Diamete Over insulation	Screen Area on Each core	No. and Diamter of Screened Wires	Nom. Diamete Over Screened Wires	Nom. Overall Diameter	Approx. mass
mm^2	mm	mm	mm	mm^2	no x mm	mm	mm	kg/100m
50	8	8	25.5	16.5	29 x 0.85	28.8	69.4	460
70	9.6	8	27.1	22.7	40 x 0.85	30.4	73	560
95	11.5	8	29	22.7	40 x 0.85	32.3	77.3	665
120	13.1	8	30.6	22.7	40 x 0.85	33.9	81.1	765
150	14.5	8	32	22.7	40 x 0.85	35.5	84.8	875
185	16.1	8	33.6	22.7	40 x 0.85	37.1	88.4	990
240	18.5	8	36	22.7	40 x 0.85	39.5	94.1	1190
300	20.7	8	38.4	22.7	40 x 0.85	41.9	99.4	1410
400	23.6	8	41.3	22.7	40 x 0.85	44.8	106.2	1730
500	26.5	8	44.2	22.7	40 x 0.85	47.7	112.9	2070