

Three Core Power Cable 19/33kV

STANDARD: AS/NZS 1429.1

RATED VOLTAGE: 19/33 (36) kV

FAULT LEVEL: Up to 10kA for 1sec or to customer requirements

IMPULSE VOLTAGE: 95kV

TEMPERATURE RANGE:

In continuous operation Max. conductor temp 90°C.
 Lowest cable temperature during installation: -10°C and below 0°C special precaution must be taken.

BENDING RADIUS:

During installation: 18x D. When installed: 12 x D (PVC sheathed cables)
 D = Overall diameter of cable

DESIGN

CONDUCTOR:

Stranded, round and compacted aluminium complying with AS/NZS 1125

SEMI-CONDUCTIVE CONDUCTOR SCREEN:

Extruded cross-linked compound

INSULATION:

XLPE complying with AS/NZS 3808

SEMI-CONDUCTIVE INSULATION SCREEN:

Extruded hand strippable cross-linked compound

METALLIC SCREEN:

Circular copper wires

OUTER SHEATH:

Black PVC. PE, halogen free, flame retardant, termite protection in the form of nylon, double brass tape and chemical additive also available.

Other colours available on request



Electrical Data

Conductor size	Maximum conductor DC resistance at 20°C	Conductor AC resistance at 50Hz and 90°C	Inductive reactance at 50Hz and 90°C	Insulation resistance at 20°C	Charging current per phase	Dielectric loss per phase	Zero sequence resistance at 20°C	Zero sequence reactance at 50Hz
mm ²	Ω/km	Ω/km	Ω/km	MΩ.km	A/km	W/km	Ω/km	Ω/km
50	0.641	0.822	0.143	17000	0.828	15.7	2.32	0.0976
70	0.443	0.568	0.131	16000	0.929	17.6	1.62	0.0862
95	0.320	0.411	0.125	14000	1.02	19.3	1.20	0.0801
120	0.253	0.325	0.120	13000	1.10	20.9	1.05	0.0753
150	0.206	0.265	0.116	12000	1.18	22.4	1.00	0.0713
185	0.164	0.211	0.112	11000	1.28	24.3	0.961	0.0671
240	0.125	0.161	0.108	10000	1.39	26.5	0.922	0.0629
300	0.100	0.130	0.104	9600	1.51	28.6	0.897	0.0595
400	0.0778	0.102	0.0995	8700	1.66	31.5	0.875	0.0548
500	0.0617	0.0815	0.0969	7700	1.86	35.4	0.859	0.0523

Current Ratings

Conductor size	Current rating at core temp. 90°C in ground	Current rating at core temp. 90°C in air	Max. short-circuit current on the conductor during 1sec at initial temp. 90°C	Short circuit current rating of the screen 1sec
mm ²	A	A	kA	kA
50	158	158	4.7	4.8
70	194	197	6.6	6.8
95	231	238	9.0	9.1
120	263	273	11.3	10.1
150	295	309	14.2	10.1
185	334	354	17.5	10.1
240	387	416	22.7	10.1
300	437	475	28.4	10.1
400	501	552	37.8	10.1
500	557	616	47.3	10.1

19/33kV Three Core Aluminium Conductor

Product code	Conductor size	Nominal thickness of insulation	Diameter over insulation	Number & Nominal Diameter of Screen Wires	Overall diameter (approx.)	Mass (approx.)	Maximum pulling tension	Minimum bending radius	
								During installation	Installed
	mm ²	mm	mm	no./mm	mm	kg/km	kN	mm	mm
3MV050A33HP	50	8.0	25.3	19/0.85	68.6	3545	7.5	1230	820
3MV070A33HP	70	8.0	27.1	27/0.85	72.7	4147	11	1310	870
3MV095A33HP	95	8.0	28.7	36/0.85	76.4	4779	14	1380	920
3MV120A33HP	120	8.0	30.2	40/0.85	79.9	5309	18	1440	960
3MV150A33HP	150	8.0	31.7	40/0.85	83.3	5796	23	1500	1000
3MV185A33HP	185	8.0	33.5	40/0.85	87.5	6428	25	1570	1050
3MV240A33HP	240	8.0	35.7	40/0.85	92.5	7301	25	1670	1110
3MV300A33HP	300	8.0	37.8	40/0.85	97.4	8189	25	1750	1170
3MV400A33HP	400	8.0	40.7	40/0.85	104.1	9456	25	1870	1250
3MV500A33HP	500	8.0	46.8	40/0.85	118.1	11904	25	2130	1420