

Three Core Armoured 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: 18 x 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

INNER SHEATH:

Black PVC or PE

ARMOUR:

Galvanized steel wires complying with AS/NZS 3863

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	1.21	0.0976
70	0.443	0.568	0.131	16000	0.929	17.6	0.927	0.0862
95	0.320	0.411	0.125	14000	1.02	19.3	0.733	0.0801
120	0.253	0.325	0.120	13000	1.10	20.9	0.638	0.0753
150	0.206	0.265	0.116	12000	1.18	22.4	0.583	0.0713
185	0.164	0.211	0.112	11000	1.28	24.3	0.531	0.0671
240	0.125	0.161	0.108	10000	1.39	26.5	0.483	0.0629
300	0.100	0.130	0.104	9600	1.51	28.6	0.447	0.0595
400	0.0778	0.102	0.0995	8700	1.66	31.5	0.412	0.0548

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	156	158	4.7	4.8
70	191	195	6.6	6.8
95	227	234	9.0	9.1
120	257	268	11.3	10.1
150	286	301	14.2	10.1
185	322	343	17.5	10.1
240	370	399	22.7	10.1
300	413	450	28.4	10.1
400	466	516	37.8	10.1

19/33kV Three Core Armoured Aluminium Conductor

Product code	Conductor size	Nominal thickness of insulation	Diameter over insulation	Number & Nominal Diameter of Screen Wires	Diameter over inner sheath (approx.)	Diameter of steel wires	Overall diameter (approx.)	Mass (approx.)	Maximum pulling tension	Minimum bending radius	
										During installation	Installed
	mm ²	mm	mm	no./mm	mm	mm	mm	kg/km	kN	mm	mm
3MV050A33HS	50	8.0	25.3	19/0.85	65.9	3.15	79.2	8449	7.5	1430	950
3MV070A33HS	70	8.0	27.1	27/0.85	69.9	3.15	83.6	9381	11	1500	1000
3MV095A33HS	95	8.0	28.7	36/0.85	73.5	3.15	87.4	10338	14	1570	1050
3MV120A33HS	120	8.0	30.2	40/0.85	76.9	3.15	91.0	11125	18	1640	1090
3MV150A33HS	150	8.0	31.7	40/0.85	80.2	3.15	94.6	11873	23	1700	1140
3MV185A33HS	185	8.0	33.5	40/0.85	84.3	3.15	98.9	12845	25	1780	1190
3MV240A33HS	240	8.0	35.7	40/0.85	89.2	3.15	104.2	14082	25	1880	1250
3MV300A33HS	300	8.0	37.8	40/0.85	93.9	3.15	109.2	15398	25	1970	1310
3MV400A33HS	400	8.0	40.7	40/0.85	100.4	3.15	116.2	17203	25	2090	1390