

Single Core Power Cable 19/33kV

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

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	0.152	17000	0.828	15.7	1.19	0.0976
70	0.443	0.568	0.142	16000	0.929	17.6	0.837	0.0868
95	0.320	0.411	0.135	14000	1.02	19.3	0.615	0.0806
120	0.253	0.325	0.130	13000	1.10	20.9	0.518	0.0759
150	0.206	0.265	0.126	12000	1.18	22.4	0.471	0.0718
185	0.164	0.211	0.121	11000	1.28	24.3	0.429	0.0676
240	0.125	0.161	0.117	10000	1.39	26.5	0.390	0.0634
300	0.100	0.129	0.113	9600	1.51	28.6	0.365	0.0600
400	0.0778	0.101	0.108	8700	1.66	31.5	0.343	0.0552
500	0.0605	0.0797	0.105	7700	1.86	35.4	0.326	0.0527
630	0.0469	0.0630	0.102	7100	2.04	38.8	0.313	0.0495
800	0.0367	0.0508	0.0973	6200	2.31	44.0	0.303	0.0456
1000	0.0291	0.0378	0.0943	5700	2.54	48.2	0.296	0.0428
1200	0.0247	0.0322	0.0924	5300	2.70	51.4	0.292	0.0412

Current Ratings

Conductor size	Current rating at core temp. 90°C in ground	Current rating at core temp. 90°C in air	Current rating at core temp. 90°C in underground ducts	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	A	kA	kA
50	162	174	150	4.70	4.9
70	197	217	182	6.60	6.8
95	233	261	213	8.99	9.1
120	264	300	242	11.4	10.2
150	293	338	267	14.2	10.2
185	330	386	299	17.5	10.2
240	377	450	339	22.7	10.2
300	421	510	376	28.4	10.2
400	474	587	419	37.8	10.2
500	531	673	467	47.3	10.2
630	590	766	510	59.6	10.2
800	652	871	561	75.7	10.2
1000	733	1000	620	96.1	10.2
1200	779	1090	632	116.7	10.2

19/33kV Single 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
1MV050A33HP	50	8.0	25.3	23/1.35	33.2	1209.4	2.5	600	400
1MV070A33HP	70	8.0	27.1	32/1.35	35.8	1471.7	3.5	640	430
1MV095A33HP	95	8.0	28.7	43/1.35	37.5	1752.7	4.8	680	450
1MV120A33HP	120	8.0	30.2	48/1.35	39.1	1949.9	6.0	700	470
1MV150A33HP	150	8.0	31.7	48/1.35	40.7	2086.0	7.5	730	490
1MV185A33HP	185	8.0	33.5	48/1.35	42.6	2263.1	9.3	770	510
1MV240A33HP	240	8.0	35.7	48/1.35	45.0	2510.7	12	810	540
1MV300A33HP	300	8.0	37.8	48/1.35	47.2	2762.6	15	850	570
1MV400A33HP	400	8.0	40.7	48/1.35	50.3	3119.9	20	910	600
1MV500A33HP	500	8.0	44.5	48/1.35	54.4	3784.9	25	980	650
1MV630A33HP	630	8.0	47.9	48/1.35	58.1	4337.0	25	1050	700
1MV800A33HP	800	8.0	53.1	48/1.35	63.6	5079.7	25	1150	760
1MV10MA33HP	1000	8.0	57.4	48/1.35	68.3	5815.0	25	1230	820
1MV12MA33HP	1200	8.0	60.6	48/1.35	71.7	6521.0	25	1290	860