

Three Core Power Cable 3.8/6.6kV

STANDARD: AS/NZS 1429.1

RATED VOLTAGE: 3.8/6.6 (7.2) 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	0.112	7500	0.385	5.86	2.32	0.0658
70	0.443	0.568	0.103	6500	0.446	6.78	1.62	0.0569
95	0.320	0.411	0.0987	5800	0.499	7.59	1.20	0.0527
120	0.253	0.325	0.0954	5200	0.550	8.35	1.05	0.0495
150	0.206	0.265	0.0926	4800	0.600	9.12	1.00	0.0468
185	0.164	0.211	0.0898	4400	0.660	10.0	0.961	0.0442
240	0.125	0.162	0.0874	4100	0.708	10.8	0.922	0.0420
300	0.100	0.130	0.0860	4000	0.725	11.0	0.897	0.0407
400	0.0778	0.102	0.0833	3800	0.762	11.6	0.875	0.0382

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	149	4.7	4.8
70	194	186	6.6	6.8
95	231	226	9.0	9.1
120	263	261	11.3	10.1
150	294	297	14.2	10.1
185	334	342	17.5	10.1
240	386	403	22.7	10.1
300	436	463	28.4	10.1
400	499	540	37.8	10.1

3.8/6.6kV 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
3MV050A06HP	50	2.5	14.3	19/0.85	43.2	1735	7.5	780	520
3MV070A06HP	70	2.5	16.1	27/0.85	47.4	2203	11	850	570
3MV095A06HP	95	2.5	17.7	36/0.85	51.0	2714	14	920	610
3MV120A06HP	120	2.5	19.2	40/0.85	54.5	3131	18	980	650
3MV150A06HP	150	2.5	20.7	40/0.85	58.0	3506	23	1040	700
3MV185A06HP	185	2.5	22.5	40/0.85	62.1	4003	25	1120	750
3MV240A06HP	240	2.6	24.9	40/0.85	67.6	4751	25	1220	810
3MV300A06HP	300	2.8	27.4	40/0.85	73.4	5570	25	1320	880
3MV400A06HP	400	3.0	30.7	40/0.85	81.0	6726	25	1460	970