

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 copper 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

3.8/6.6kV Three Core Copper 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
3MV035C06HP	35	2.5	13.1	20/0.85	40.4	2188	7.4	730	480
3MV050C06HP	50	2.5	14.3	29/0.85	43.2	2770	11	780	520
3MV070C06HP	70	2.5	16.1	40/0.85	47.4	3671	15	850	570
3MV095C06HP	95	2.5	17.7	40/0.85	51.0	4529	20	920	610
3MV120C06HP	120	2.5	19.2	40/0.85	54.5	5335	25	980	650
3MV150C06HP	150	2.5	20.7	40/0.85	58.0	6230	25	1040	700
3MV185C06HP	185	2.5	22.5	40/0.85	62.1	7405	25	1120	750
3MV240C06HP	240	2.6	24.9	40/0.85	67.6	9225	25	1220	810
3MV300C06HP	300	2.8	27.4	40/0.85	73.4	11194	25	1320	880
3MV400C06HP	400	3.0	30.7	40/0.85	81.0	13901	25	1460	970

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
35	0.524	0.668	0.118	8400	0.345	5.24	2.12	0.0712
50	0.387	0.494	0.112	7500	0.385	5.86	1.49	0.0658
70	0.268	0.342	0.103	6500	0.446	6.78	1.06	0.0569
95	0.193	0.247	0.0987	5800	0.499	7.59	0.990	0.0527
120	0.153	0.196	0.0954	5200	0.550	8.35	0.950	0.0495
150	0.124	0.159	0.0926	4800	0.600	9.12	0.921	0.0468
185	0.0991	0.128	0.0898	4400	0.660	10.0	0.896	0.0442
240	0.0754	0.0986	0.0874	4100	0.708	10.8	0.873	0.0420
300	0.0601	0.0797	0.0860	4000	0.725	11.0	0.858	0.0407
400	0.0470	0.0640	0.0833	3800	0.762	11.6	0.845	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
35	173	160	5.0	5.1
50	204	192	7.1	7.3
70	249	240	10.0	10.1
95	298	292	13.6	10.1
120	338	336	17.1	10.1
150	379	382	21.4	10.1
185	428	439	26.4	10.1
240	495	517	34.3	10.1
300	557	591	42.9	10.1
400	631	683	57.2	10.1