

Three Core Power Cable 6.35/11kV

STANDARD: AS/NZS 1429.1

RATED VOLTAGE: 6.35/11 (12) 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



6.35/11kV 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	
								Minimum bending radius	
								During installation	Installed
	mm ²	mm	mm	no./mm	mm	kg/km	kN	mm	mm
3MV035C11HP	35	3.4	14.9	20/0.85	44.6	2412	7.4	800	540
3MV050C11HP	50	3.4	16.1	29/0.85	47.4	3010	11	850	570
3MV070C11HP	70	3.4	17.9	40/0.85	51.5	3933	15	930	620
3MV095C11HP	95	3.4	19.5	40/0.85	55.2	4811	20	990	660
3MV120C11HP	120	3.4	21.0	40/0.85	58.6	5635	25	1060	700
3MV150C11HP	150	3.4	22.5	40/0.85	62.1	6549	25	1120	750
3MV185C11HP	185	3.4	24.3	40/0.85	66.3	7746	25	1190	800
3MV240C11HP	240	3.4	26.5	40/0.85	71.3	9553	25	1280	860
3MV300C11HP	300	3.4	28.6	40/0.85	76.2	11459	25	1370	910
3MV400C11HP	400	3.4	31.5	40/0.85	82.8	14095	25	1490	990
3MV500C11HP	500	3.4	35.3	40/0.85	97.4	18331	25	1750	1170

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	0.125	11000	0.455	11.5	2.12	0.0781
50	0.387	0.494	0.118	9500	0.505	12.8	1.49	0.0722
70	0.268	0.342	0.109	8300	0.580	14.7	1.06	0.0627
95	0.193	0.247	0.104	7400	0.646	16.4	0.990	0.0581
120	0.153	0.196	0.100	6800	0.708	18.0	0.950	0.0545
150	0.124	0.159	0.0971	6300	0.770	19.6	0.921	0.0515
185	0.0991	0.128	0.0940	5700	0.844	21.4	0.896	0.0486
240	0.0754	0.0984	0.0909	5200	0.934	23.7	0.873	0.0456
300	0.0601	0.0796	0.0884	4700	1.02	25.9	0.858	0.0432
400	0.0470	0.0638	0.0848	4200	1.14	28.9	0.845	0.0397
500	0.0373	0.0524	0.0835	3700	1.29	32.9	0.836	0.0386

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	163	5.0	5.1
50	204	195	7.1	7.3
70	250	243	10.0	10.1
95	298	295	13.6	10.1
120	338	340	17.1	10.1
150	380	386	21.4	10.1
185	429	443	26.4	10.1
240	495	520	34.3	10.1
300	557	594	42.9	10.1
400	631	685	57.2	10.1
500	691	754	71.5	10.1