

# Three Core Armoured 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

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



## 3.8/6.6kV Three Core Armoured Copper 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 <sup>2</sup>	mm	mm	no./mm	mm	mm	mm	kg/km	kN	mm	mm
3MV035C06HS	35	2.5	13.1	20/0.85	38.6	2.5	48.6	4488	7.4	880	580
3MV050C06HS	50	2.5	14.3	29/0.85	41.3	2.5	51.5	5225	11	930	620
3MV070C06HS	70	2.5	16.1	40/0.85	45.3	2.5	55.8	6380	15	1000	670
3MV095C06HS	95	2.5	17.7	40/0.85	48.9	2.5	59.6	7450	20	1070	720
3MV120C06HS	120	2.5	19.2	40/0.85	52.2	2.5	63.2	8467	25	1140	760
3MV150C06HS	150	2.5	20.7	40/0.85	55.6	2.5	66.8	9574	25	1200	800
3MV185C06HS	185	2.5	22.5	40/0.85	59.6	2.5	71.1	11016	25	1280	850
3MV240C06HS	240	2.6	24.9	40/0.85	65.0	3.15	78.3	14121	25	1410	940
3MV300C06HS	300	2.8	27.4	40/0.85	70.6	3.15	84.3	16513	25	1520	1010
3MV400C06HS	400	3.0	30.7	40/0.85	78.0	3.15	92.2	19814	25	1660	1110

## 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 <sup>2</sup>	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	1.38	0.0712
50	0.387	0.494	0.112	7500	0.385	5.86	1.06	0.0658
70	0.268	0.342	0.103	6500	0.446	6.78	0.798	0.0569
95	0.193	0.247	0.0987	5800	0.499	7.59	0.710	0.0527
120	0.153	0.196	0.0954	5200	0.550	8.35	0.659	0.0495
150	0.124	0.159	0.0926	4800	0.600	9.12	0.618	0.0468
185	0.0991	0.128	0.0898	4400	0.660	10.0	0.580	0.0442
240	0.0754	0.0986	0.0874	4100	0.708	10.8	0.492	0.0420
300	0.0601	0.0797	0.0860	4000	0.725	11.0	0.462	0.0407
400	0.047	0.064	0.0833	3800	0.762	11.6	0.430	0.0382

## Current Ratings

Conductor size	Current rating at core temp. 90 in ground	Current rating at core temp. 90 in air	Max. short-circuit current on the conductor during 1sec at initial temp. 90	Short circuit current rating of the screen 1sec
mm <sup>2</sup>	A	A	kA	kA
35	171	162	5.0	5.1
50	201	194	7.1	7.3
70	245	240	10.0	10.1
95	291	290	13.6	10.1
120	328	331	17.1	10.1
150	366	374	21.4	10.1
185	410	425	26.4	10.1
240	466	493	34.3	10.1
300	517	554	42.9	10.1
400	574	627	57.2	10.1