

# Single Core Al 3.8/6.6kV XLPE Insulated HD Cu Screened PVC Sheathed

STANDARD: AS/NZS 1429.1

RATED VOLTAGE: 3.8/6.6 (7.2) kV

FAULT LEVEL: Up to 10kA for 1 sec or to customer requirements

IMPULSE VOLTAGE: 95kV

TEMPERATURE RANGE:

In continuous operations Max. conductor temp 90°C

Lowest cable temperature during installation: -10°C and below 0°C special precautions 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 semi-conductive cross-linked compound

METALLIC SCREEN:

Circular copper wires with non-hygroscopic binder tape

OUTER SHEATH:

Black PVC as standard. HDPE, halogen free, flame retardant, termite protection in the form of nylon, double brass tape or chemical additive also available.



Product Code	Conductor size mm <sup>2</sup>	Nominal insulation thickness mm	Diameter over insulation mm	Number & nom. diameter of screen wires no./mm	Overall Diameter mm	Mass (approx.) kg/km	Maximum pulling tension kN	Minimum Bending Radius	
								During installation mm	Installed mm
1MV050A06HP	50	2.5	14.3	23/1.35	22.1	750	2.5	400	270
1MV070A06HP	70	2.5	16.1	32/1.35	24.0	1000	3.5	430	290
1MV095A06HP	95	2.5	17.7	43/1.35	26.2	1250	4.8	470	310
1MV120A06HP	120	2.5	19.2	48/1.35	27.8	1400	6.0	500	330
1MV150A06HP	150	2.5	20.7	48/1.35	29.4	1500	7.5	530	350
1MV185A06HP	185	2.5	22.5	48/1.35	31.3	1650	9.3	560	380
1MV240A06HP	240	2.6	24.9	48/1.35	33.4	1850	12	600	400
1MV300A06HP	300	2.8	27.4	48/1.35	36.1	2100	15	650	430
1MV400A06HP	400	3.0	30.7	48/1.35	39.6	2450	20	710	480

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## Electrical Data

Product Code	Conductor size	Max. 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
1MV050A06HP	50	0.641	0.822	0.127	7500	0.385	5.86	1.19	0.0669
1MV070A06HP	70	0.443	0.568	0.117	6500	0.446	6.78	0.837	0.0579
1MV095A06HP	95	0.320	0.411	0.113	5800	0.499	7.59	0.614	0.0542
1MV120A06HP	120	0.253	0.325	0.109	5200	0.550	8.35	0.516	0.0509
1MV150A06HP	150	0.206	0.265	0.105	4800	0.600	9.12	0.469	0.0482
1MV185A06HP	185	0.164	0.211	0.102	4400	0.660	10.0	0.428	0.0454
1MV240A06HP	240	0.125	0.161	0.0981	4100	0.708	10.8	0.390	0.0427
1MV300A06HP	300	0.100	0.130	0.0962	4000	0.725	11.0	0.365	0.0414
1MV400A06HP	400	0.0778	0.102	0.0929	3800	0.762	11.6	0.343	0.0388

## 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 rating on the conductor during 1 sec at initial temp. 90°C	Short circuit current rating of the screen 1 sec.
mm <sup>2</sup>	A	A	A	kA	kA
50	162	167	148	4.7	4.8
70	198	208	178	6.6	6.8
95	234	252	209	9.0	9.1
120	263	290	234	11.3	10.2
150	293	328	258	14.2	10.2
185	329	375	291	17.5	10.2
240	375	437	329	22.7	10.2
300	418	497	364	28.4	10.2
400	470	574	408	37.8	10.2