

Single Core Al 12.7/22kV XLPE Insulated HD Cu Screened PVC Sheathed

STANDARD: AS/NZS 1429.1

RATED VOLTAGE: 12.7/22 (24) 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 ²	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
1MV050A22HP	50	5.5	20.3	23/1.35	27.9	1000	2.5	500	330
1MV070A22HP	70	5.5	22.1	32/1.35	30.4	1250	3.5	550	370
1MV095A22HP	95	5.5	23.7	43/1.35	32.2	1500	4.8	580	390
1MV120A22HP	120	5.5	25.2	48/1.35	33.8	1700	6.0	610	410
1MV150A22HP	150	5.5	26.7	48/1.35	35.4	1800	7.5	640	420
1MV185A22HP	185	5.5	28.5	48/1.35	37.3	1950	9.3	670	450
1MV240A22HP	240	5.5	30.7	48/1.35	39.6	2200	12	710	480
1MV300A22HP	300	5.5	32.8	48/1.35	41.9	2450	15	750	500
1MV400A22HP	400	5.5	35.7	48/1.35	45.0	2800	20	810	540
1MV500A22HP	500	5.5	39.5	48/1.35	49.1	3400	25	880	590
1MV630A22HP	630	5.5	42.9	48/1.35	52.7	3900	25	950	630

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Electrical Data

Product Code	Conductor size mm ²	Max. conductor DC resistance at 20°C Ω/km	Conductor AC resistance at 50Hz and 90°C Ω/km	Inductive reactance at 50Hz and 90°C Ω/km	Insulation resistance at 20°C MΩ.km	Charging current per phase A/km	Dielectric loss per phase W/km	Zero sequence resistance at 20°C Ω/km	Zero sequence reactance at 50Hz Ω/km
1MV050A22HP	50	0.641	0.822	0.141	14000	0.710	36.1	1.19	0.0851
1MV070A22HP	70	0.443	0.568	0.131	12000	0.805	40.9	0.837	0.0752
1MV095A22HP	95	0.320	0.411	0.125	11000	0.888	45.1	0.615	0.0698
1MV120A22HP	120	0.253	0.325	0.121	10000	0.966	49.1	0.518	0.0655
1MV150A22HP	150	0.206	0.265	0.117	9200	1.04	53.0	0.471	0.0619
1MV185A22HP	185	0.164	0.211	0.113	8500	1.14	57.7	0.429	0.0583
1MV240A22HP	240	0.125	0.161	0.109	7700	1.25	63.5	0.390	0.0546
1MV300A22HP	300	0.100	0.130	0.105	7100	1.36	68.9	0.365	0.0517
1MV400A22HP	400	0.0779	0.102	0.101	6400	1.50	76.4	0.343	0.0475
1MV500A22HP	500	0.0606	0.0799	0.0986	5700	1.70	86.3	0.326	0.0457
1MV630A22HP	630	0.0469	0.0633	0.0955	5100	1.87	95.1	0.313	0.0430

Current Ratings

Conductor Size mm ²	Current rating at core temp. 90°C in ground A 	Current rating at core temp. 90°C in air A 	Current rating at core temp. 90°C in underground ducts A 	Max. short circuit current rating on the conductor during 1 sec at initial temp. 90°C kA	Short circuit current rating of the screen 1 sec. kA
50	162	171	147	4.7	4.9
70	197	214	181	6.6	6.8
95	233	258	212	9.0	9.1
120	263	296	238	11.3	10.2
150	293	334	263	14.2	10.2
185	329	382	294	17.5	10.2
240	376	445	336	22.7	10.2
300	419	505	371	28.4	10.2
400	472	582	415	37.8	10.2
500	528	667	459	47.3	10.2
630	586	759	508	59.5	10.2