

Single Core Cu 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 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 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 & 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
1MV035C22HP	35	5.5	19.1	24/1.35	26.6	1150	2.5	480	320
1MV050C22HP	50	5.5	20.3	34/1.35	28.5	1450	3.5	510	340
1MV070C22HP	70	5.5	22.1	48/1.35	30.9	1900	4.9	560	370
1MV095C22HP	95	5.5	23.7	48/1.35	32.2	2150	6.7	580	390
1MV120C22HP	120	5.5	25.2	48/1.35	33.8	2400	8.4	610	410
1MV150C22HP	150	5.5	26.7	48/1.35	35.4	2700	11	640	420
1MV185C22HP	185	5.5	28.5	48/1.35	37.3	3100	13	670	450
1MV240C22HP	240	5.5	30.7	48/1.35	39.6	3700	17	710	480
1MV300C22HP	300	5.5	32.8	48/1.35	41.9	4300	21	750	500
1MV400C22HP	400	5.5	35.7	48/1.35	45.0	5150	25	810	540
1MV500C22HP	500	5.5	39.5	48/1.35	49.1	6450	25	880	590
1MV630C22HP	630	5.5	42.9	48/1.35	52.7	7850	25	950	630

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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 ²	Ω/km	Ω/km	Ω/km	MΩ.km	A/km	W/km	Ω/km	Ω/km
1MV035C22HP	35	0.524	0.668	0.148	15000	0.0646	32.8	1.05	0.0917
1MV050C22HP	50	0.387	0.494	0.143	14000	0.710	36.1	0.756	0.0859
1MV070C22HP	70	0.268	0.342	0.132	12000	0.805	40.9	0.531	0.0758
1MV095C22HP	95	0.193	0.247	0.125	11000	0.888	45.1	0.458	0.0698
1MV120C22HP	120	0.153	0.196	0.121	10000	0.966	49.1	0.418	0.0655
1MV150C22HP	150	0.124	0.159	0.117	9200	1.04	53.0	0.389	0.0619
1MV185C22HP	185	0.0991	0.128	0.113	8500	1.14	57.7	0.364	0.0583
1MV240C22HP	240	0.0754	0.0978	0.109	7700	1.25	63.5	0.341	0.0546
1MV300C22HP	300	0.0601	0.0788	0.105	7100	1.36	68.9	0.326	0.0517
1MV400C22HP	400	0.0470	0.0628	0.101	6400	1.50	76.4	0.313	0.0475
1MV500C22HP	500	0.0366	0.0504	0.0986	5700	1.70	86.3	0.303	0.0457
1MV630C22HP	630	0.0283	0.0408	0.0955	5100	1.87	95.1	0.295	0.0430

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 ²	A 	A 	A 	kA	kA
35	176	184	161	5.0	5.1
50	207	220	188	7.1	7.3
70	250	273	227	10.0	10.2
95	296	328	265	13.6	10.2
120	333	375	296	17.1	10.2
150	369	422	326	21.4	10.2
185	411	479	361	26.4	10.2
240	467	555	406	34.3	10.2
300	515	624	445	42.9	10.2
400	571	709	490	57.2	10.2
500	629	800	532	71.5	10.2
630	686	894	580	90.0	10.2