

3.8/6.6 (7.2) KV

MV Cable AL Conductor, XLPE Insulation, Cu Screen and UA



Images not to scale. Follow table for dimensions

APPLICATION

POLY CAB MV 3.8/6.6 KV XLPE insulated with Aluminium conductor Three core cable is suitable to use for power supply to wide networks i.e. Commercial, Industrial and Urban / Residential.

CHARACTERISTICS

Voltage Rating

Nominal Voltage: 3.8/6.6 (7.2) kV

Operation Temperature

Min. installation temperature: 0°C

Operating temperature: -25°C to +90°C

Emergency operating temperature: 105°C

(max. operation of 36hrs, at 3 periods for 12 consecutive months use)

Max. Short Circuit Temperature: 250°C

Bending Radius:

Fixed Installation: 20D

During Installation: 30D

D is diameter over nylon

CONSTRUCTION

- Conductor: Stranded Compacted Circular aluminium conductor as per AS/NZS 1125
- Conductor Screen: Extruded Semi-conductive compound
- Insulation: XLPE
- Insulation Screen: Extruded Semi-conductive compound
- Longitudinal Water blocking : Water blocking tape above and below copper screen (Optional)
- Metallic Insulation Screen: Copper Wire Screen + helically applied copper tape
- binder tape / sheath over assembled cores

Composite sheath

- Inner layer : Extruded Polyvinyl Chloride, Colour: Orange
- Termite Protection: Polyamide (Nylon -12)
- Outer layer: HDPE (Black)

OUTSTANDING FEATURES

- Long life
- UV resistant
- Resistant to chemical exposure
- Resistant to weather exposure
- Resistant to water (AD7/AD8)
- Termite resistant

STANDARD FOLLOWS

AS/NZS 1429.1

AS/NZS 1125

AS/NZS 3808

COMPLIANCE

- | | |
|-------------------------|---------------|
| • Conductor resistance | AS/NZS 1125 |
| • Insulation resistance | AS/NZS 1429.1 |
| • Voltage test | AS/NZS 1429.1 |

OUR ACCREDITATIONS



APPROVAL



NOTES

High Voltage Test (kV AC)	Partial discharge test (kV AC)		Impulse test Voltage (kV peak)
	200% to rated voltage	150% to rated voltage	
12.5	7.6	5.7	60

DIMENSIONAL CHARACTERISTICS:

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter		
			No.	mm ²	Under metallic screen
MVNZ15AXUAPH003C016SAXXXX	3	16	12.8	14.3	35.0
MVNZ15AXUAPH003C025SAXXXX	3	25	14.1	15.6	38.0
MVNZ15AXUAPH003C035SAXXXX	3	35	15.1	16.6	40.0
MVNZ15AXUAPH003C050SAXXXX	3	50	16.2	17.7	43.0
MVNZ15AXUAPH003C070SAXXXX	3	70	17.8	19.3	47.0
MVNZ15AXUAPH003C095SAXXXX	3	95	19.4	20.9	50.0
MVNZ15AXUAPH003C120SAXXXX	3	120	21	22.5	54.0
MVNZ15AXUAPH003C150SAXXXX	3	150	22.3	23.8	57.0
MVNZ15AXUAPH003C185SAXXXX	3	185	24	25.5	61.0
MVNZ15AXUAPH003C240SAXXXX	3	240	26.5	28.0	67.0
MVNZ15AXUAPH003C300SAXXXX	3	300	29.1	30.6	72.0
MVNZ15AXUAPH003C400SAXXXX	3	400	32.2	33.7	80.0
MVNZ15AXUAPH003C500SAXXXX	3	500	36	37.5	89.0

• Above mentioned parameters are based on 3kA/sec earth fault current capacity of copper screen.

ELECTRICAL CHARACTERISTICS:

No. of Cores	Core Cross sectional Area	Max. DC Resistance at 20°C	Max. AC Resistance at 90°C	Approx. Capacitance	Approx. Inductance	Approx. Reactance	Continuous Current Rating		
							Buried direct in ground	In a buried duct	In Air
No.	mm ²	Ω/km	Ω/km	μF/km	mH/km	Ω/km	Amps		
3	16	1.91	2.449	0.22	0.618	0.194	78	67	84
3	25	1.2	1.539	0.25	0.586	0.184	100	87	110
3	35	0.868	1.113	0.28	0.565	0.177	119	103	132
3	50	0.641	0.822	0.31	0.548	0.172	140	122	158
3	70	0.443	0.568	0.36	0.518	0.163	171	150	196

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							Buried direct in ground	In a buried duct	In Air
No.	mm ²	Ω/km	Ω/km	μF/km	mH/km	Ω/km	Amps		
3	95	0.32	0.411	0.4	0.503	0.158	203	179	236
3	120	0.253	0.325	0.45	0.487	0.153	232	205	273
3	150	0.206	0.265	0.49	0.479	0.150	260	231	309
3	185	0.164	0.211	0.53	0.470	0.148	294	262	355
3	240	0.125	0.161	0.58	0.459	0.144	340	305	415
3	300	0.1	0.129	0.6	0.452	0.142	384	346	475
3	400	0.0778	0.101	0.62	0.447	0.140	438	398	552
3	500	0.0605	0.079	0.66	0.439	0.138	505	460	646

Current ratings are in accordance with IEC 60502-2*: Current Ratings are based on IEC 60502-2 & IEC 60287, Max. Conductor Temperature at 90°C, Ambient temperature at 30°C in Air / at 20°C in Ground, Thermal resistivity of Soil 1.5 k.m/W & for earthenware ducts 1.2k.m/W and Depth of Laying 0.8m.

Current rating de-rating factors for other than 30°C ambient air temperature.

20	25	35	40	45	50	55	60
1.08	1.04	0.96	0.91	0.87	0.82	0.76	0.71

Current rating de-rating factors for other than 20°C ground temperature.

10	15	25	30	35	40	45	50
1.07	1.04	0.96	0.93	0.89	0.85	0.80	0.76

No. of Cores	Core Cross sectional Area	Max. pulling tension on conductor	Charging Current per phase	Zero sequence impedance	Electric Stress at Conductor Screen	Short circuit rating of Phase conductor
No.	mm ²	kN	Amps/Km	Ohms/Km	kV/mm	kA, 1 sec
3	16	0.8	0.26	3.61	2.1	1.4
3	25	1.25	0.3	2.70	2.0	2.3
3	35	1.75	0.33	2.27	2.0	3.1
3	50	2.5	0.37	1.98	1.9	4.5
3	70	3.5	0.43	1.73	1.9	6.2
3	95	4.75	0.48	1.57	1.8	8.5
3	120	6	0.54	1.48	1.8	10.7
3	150	7.5	0.58	1.42	1.8	13.4
3	185	9.25	0.63	1.37	1.7	16.5
3	240	12	0.69	1.32	1.7	21.4
3	300	15	0.72	1.29	1.5	26.8
3	400	20	0.74	1.26	1.4	35.5
3	500	25	0.79	1.24	1.3	44.7