



Images not to scale. Follow table for dimensions

#### APPLICATION

POLY CAB MV 12.7/22 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: 12.7/22 (24) 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	
45	25	19	150

**DIMENSIONAL CHARACTERISTICS:**

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			
			No.	mm <sup>2</sup>	Under metallic screen	Over metallic screen
MVNZ12AXUAPH003C035SAXXXX	3	35	21.1		22.6	54.0
MVNZ12AXUAPH003C050SAXXXX	3	50	22.2		23.7	57.0
MVNZ12AXUAPH003C070SAXXXX	3	70	23.8		25.3	61.0
MVNZ12AXUAPH003C095SAXXXX	3	95	25.4		26.9	64.0
MVNZ12AXUAPH003C120SAXXXX	3	120	27		28.5	68.0
MVNZ12AXUAPH003C150SAXXXX	3	150	28.3		29.8	71.0
MVNZ12AXUAPH003C185SAXXXX	3	185	30		31.5	75.0
MVNZ12AXUAPH003C240SAXXXX	3	240	32.3		33.8	80.0
MVNZ12AXUAPH003C300SAXXXX	3	300	34.5		36.0	85.0
MVNZ12AXUAPH003C400SAXXXX	3	400	37.2		38.7	91.0
MVNZ12AXUAPH003C500SAXXXX	3	500	40.6		42.1	99.0

- 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 <sup>2</sup>	Ω/km	Ω/km	μF/km	mH/km	Ω/km	Amps		
3	35	0.868	1.113	0.16	0.627	0.197	119	103	132
3	50	0.641	0.822	0.17	0.605	0.190	140	122	158
3	70	0.443	0.568	0.2	0.572	0.180	171	150	196
3	95	0.32	0.410	0.22	0.552	0.174	203	179	236
3	120	0.253	0.325	0.24	0.534	0.168	232	205	273
3	150	0.206	0.264	0.25	0.523	0.164	260	231	309
3	185	0.164	0.211	0.28	0.511	0.161	294	262	355

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							Buried direct in ground	In a buried duct	In Air
No.	mm <sup>2</sup>	Ω/km	Ω/km	μF/km	mH/km	Ω/km	Amps		
3	240	0.125	0.161	0.31	0.498	0.156	340	305	415
3	300	0.1	0.129	0.33	0.485	0.152	384	346	475
3	400	0.0778	0.101	0.37	0.474	0.149	438	398	552
3	500	0.0605	0.079	0.41	0.463	0.145	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 <sup>2</sup>	kN	Amps/Km	Ohms/Km	kV/mm	kA, 1 sec
3	35	1.75	0.64	2.27	3.7	3.1
3	50	2.5	0.68	1.98	3.5	4.5
3	70	3.5	0.8	1.73	3.4	6.2
3	95	4.75	0.88	1.57	3.2	8.5
3	120	6	0.96	1.49	3.1	10.7
3	150	7.5	1	1.43	3.1	13.4
3	185	9.25	1.12	1.37	3.0	16.5
3	240	12	1.24	1.32	2.9	21.4
3	300	15	1.32	1.29	2.9	26.8
3	400	20	1.48	1.26	2.8	35.5
3	500	25	1.64	1.24	2.7	44.7