



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: 12D (PVC) / 15D (HDPE)

During Installation: 18D (PVC) / 25D (HDPE)

D is overall diameter of cable

## CONSTRUCTION

- Conductor: Stranded Compacted Circular aluminium conductor as per AS/NZS 1125
- Conductor Screen: Extruded Semi-conductive compound
- Insulation: XLPE
- Insulation Screen: Extruded Strippable 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
- Metallic Sheath: Lead Alloy (optional)
- Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black
- Insect attack Protection: Polyamide Nylon (optional)

(Alternative Sheath: PVC + HDPE Outer Sheath or LSZH Outer sheath and parameters will change accordingly)

## OUTSTANDING FEATURES

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

## 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		
			Under metallic screen	Over metallic screen	Overall
No.	mm <sup>2</sup>	mm	mm	mm	mm
MVNZ15AXSWPH003C016SAXXXX	3	16	12.8	14.3	35.0
MVNZ15AXSWPH003C025SAXXXX	3	25	14.1	15.6	38.0
MVNZ15AXSWPH003C035SAXXXX	3	35	15.1	16.6	40.0
MVNZ15AXSWPH003C050SAXXXX	3	50	16.2	17.7	43.0
MVNZ15AXSWPH003C070SAXXXX	3	70	17.8	19.3	46.0
MVNZ15AXSWPH003C095SAXXXX	3	95	19.4	20.9	50.0
MVNZ15AXSWPH003C120SAXXXX	3	120	21	22.5	54.0
MVNZ15AXSWPH003C150SAXXXX	3	150	22.3	23.8	57.0
MVNZ15AXSWPH003C185SAXXXX	3	185	24	25.5	61.0
MVNZ15AXSWPH003C240SAXXXX	3	240	26.5	28.0	66.0
MVNZ15AXSWPH003C300SAXXXX	3	300	29.1	30.6	72.0
MVNZ15AXSWPH003C400SAXXXX	3	400	32.2	33.7	79.0
MVNZ15AXSWPH003C500SAXXXX	3	500	36	37.5	88.0

• 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	16	1.91	2.449	0.22	0.616	0.194	78	67	84
3	25	1.2	1.539	0.25	0.583	0.183	100	87	110
3	35	0.868	1.113	0.28	0.563	0.177	119	103	132
3	50	0.641	0.822	0.31	0.546	0.171	140	122	158
3	70	0.443	0.568	0.36	0.517	0.162	171	150	196

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	95	0.32	0.411	0.4	0.501	0.157	203	179	236
3	120	0.253	0.325	0.45	0.485	0.152	232	205	273
3	150	0.206	0.265	0.49	0.477	0.150	260	231	309
3	185	0.164	0.211	0.53	0.468	0.147	294	262	355
3	240	0.125	0.161	0.58	0.458	0.144	340	305	415
3	300	0.1	0.129	0.6	0.451	0.142	384	346	475
3	400	0.0778	0.101	0.62	0.445	0.140	438	398	552
3	500	0.0605	0.079	0.66	0.438	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 deg.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 deg.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	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