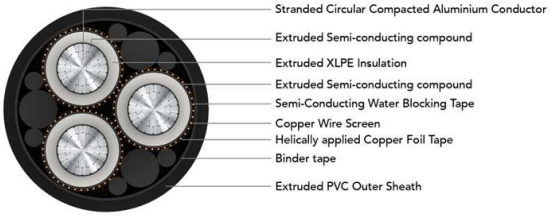
POLYCAB THREE CORE MV AS/NZS 1429.1 1.9/3.3 (3.6) KV

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



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 1.9/3.3 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: 1.9/3.3 (3.6) 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
High Voltage Test
6.5 kV AC

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
- Metallic Sheath: Lead Alloy (optional)
- Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black
- Insect attack Protection: Polyamide Nylon (optional)

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

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

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DIMENSIONSAL CHARACTERISTICS:

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter		
			Under metallic screen	Over metallic screen	Overall
	No.	mm^2	mm	mm	mm
MVNZ10AXUAPH003C016SAXXXX	3	16	11.8	13.3	33.0
MVNZ10AXUAPH003C025SAXXXX	3	25	13.1	14.6	35.0
MVNZ10AXUAPH003C035SAXXXX	3	35	14.1	15.6	38.0
MVNZ10AXUAPH003C050SAXXXX	3	50	15.2	16.7	40.0
MVNZ10AXUAPH003C070SAXXXX	3	70	16.8	18.3	44.0
MVNZ10AXUAPH003C095SAXXXX	3	95	18.4	19.9	48.0
MVNZ10AXUAPH003C120SAXXXX	3	120	20	21.5	51.0
MVNZ10AXUAPH003C150SAXXXX	3	150	21.3	22.8	54.0
MVNZ10AXUAPH003C185SAXXXX	3	185	23	24.5	58.0
MVNZ10AXUAPH003C240SAXXXX	3	240	25.3	26.8	64.0
MVNZ10AXUAPH003C300SAXXXX	3	300	27.5	29.0	69.0
MVNZ10AXUAPH003C400SAXXXX	3	400	30.2	31.7	75.0
MVNZ10AXUAPH003C500SAXXXX	3	500	34	35.5	83.0

• 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	0.26	0.603	0.189	78	67	84
3	25	1.2	1.539	0.3	0.569	0.179	100	87	110
3	35	0.868	1.113	0.34	0.551	0.173	119	103	132
3	50	0.641	0.822	0.38	0.534	0.168	140	122	158
3	70	0.443	0.568	0.43	0.506	0.159	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	0.49	0.492	0.154	203	179	236
3	120	0.253	0.325	0.55	0.477	0.150	232	205	273
3	150	0.206	0.265	0.59	0.469	0.147	260	231	309
3	185	0.164	0.211	0.65	0.460	0.144	294	262	355
3	240	0.125	0.161	0.73	0.450	0.141	340	305	415
3	300	0.1	0.129	0.81	0.441	0.138	384	346	475
3	400	0.0778	0.101	0.9	0.433	0.136	438	398	552
3	500	0.0605	0.079	0.93	0.427	0.134	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

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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	0.16	3.61	1.3	1.4
3	25	1.25	0.18	2.70	1.2	2.3
3	35	1.75	0.2	2.27	1.2	3.1
3	50	2.5	0.23	1.98	1.1	4.5
3	70	3.5	0.26	1.73	1.1	6.2
3	95	4.75	0.29	1.57	1.1	8.5
3	120	6	0.33	1.48	1.1	10.7
3	150	7.5	0.35	1.42	1.1	13.4
3	185	9.25	0.39	1.37	1.1	16.5
3	240	12	0.44	1.32	1.0	21.4
3	300	15	0.48	1.29	1.0	26.8
3	400	20	0.54	1.26	1.0	35.5
3	500	25	0.56	1.24	0.9	44.7