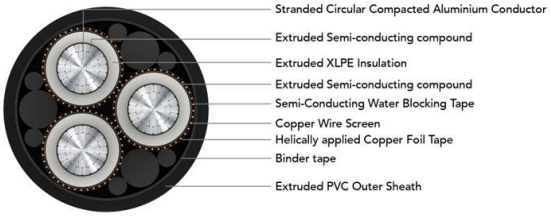
POLYCAB 3 CORE MV AS/NZS. 1429.1 12.7/22 (24) KV
MV Cable AL Conductor, XLPE Insulation, Cu Screen and UA



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB 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: 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

NABL

APPROVAL

FQC CE CPRI APPROVED

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

POLYCAB 3 CORE MV AS/NZS. 1429.1 12.7/22 (24) KV
MV Cable AL Conductor, XLPE Insulation, Cu Screen and UA

POLYCAB
IDEAS. CONNECTED.

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
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	60.0
MVNZ12AXUAPH003C095SAXXXX	3	95	25.4	26.9	64.0
MVNZ12AXUAPH003C120SAXXXX	3	120	27	28.5	67.0
MVNZ12AXUAPH003C150SAXXXX	3	150	28.3	29.8	70.0
MVNZ12AXUAPH003C185SAXXXX	3	185	30	31.5	74.0
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^2	Ω/km	Ω/km	µF/km	mH/km	Ω/km	Amps		
3	35	0.868	1.113	0.16	0.625	0.196	119	103	132
3	50	0.641	0.822	0.17	0.604	0.190	140	122	158
3	70	0.443	0.568	0.2	0.571	0.179	171	150	196
3	95	0.32	0.410	0.22	0.551	0.173	203	179	236
3	120	0.253	0.325	0.24	0.533	0.167	232	205	273
3	150	0.206	0.264	0.25	0.522	0.164	260	231	309
3	185	0.164	0.211	0.28	0.510	0.160	294	262	355
3	240	0.125	0.161	0.31	0.496	0.156	340	305	415
3	300	0.1	0.129	0.33	0.484	0.152	384	346	475

POLYCAB 3 CORE MV AS/NZS. 1429.1 12.7/22 (24) KV
MV Cable AL Conductor, XLPE Insulation, Cu Screen and UA

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	400	0.0778	0.101	0.37	0.473	0.149	438	398	552
3	500	0.0605	0.079	0.41	0.462	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^2	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