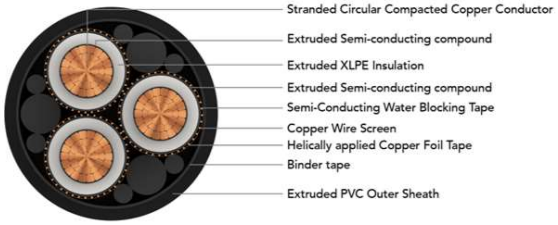
POLYCAB 3 CORE MV AS/NZS 1429.1 12.7/22 (24) KV
MV Cable Cu Conductor, XLPE Insulation, Cu Screen and UA



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 12.7/22 KV XLPE insulated with Copper 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)/20D (Nylon)
During Installation: 18D (PVC) / 25D (HDPE)/30D (Nylon)
D is overall diameter of cable

CONSTRUCTION

- Conductor: Stranded Compacted Circular Copper 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 below copper screen (Optional)
- Metallic Insulation Screen: Copper Wire Screen + helically applied copper tape (E/F current capacity – Based on requirement)
- 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 Composite Sheath or PVC + Nylon + HDPE (composite sheath with anti-termite properties) 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
- Termite resistant (Optional)

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

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POLYCAB
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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
MVNZ12CXUAPH003C035SAXXXX	3	35	21.1	22.6	54.0
MVNZ12CXUAPH003C050SAXXXX	3	50	22.2	23.7	57.0
MVNZ12CXUAPH003C070SAXXXX	3	70	23.9	25.4	60.0
MVNZ12CXUAPH003C095SAXXXX	3	95	25.4	26.9	64.0
MVNZ12CXUAPH003C120SAXXXX	3	120	27	28.5	67.0
MVNZ12CXUAPH003C150SAXXXX	3	150	28.4	29.9	71.0
MVNZ12CXUAPH003C185SAXXXX	3	185	30.1	31.6	75.0
MVNZ12CXUAPH003C240SAXXXX	3	240	32.4	33.9	80.0
MVNZ12CXUAPH003C300SAXXXX	3	300	34.4	35.9	84.0
MVNZ12CXUAPH003C400SAXXXX	3	400	37.2	38.7	91.0
MVNZ12CXUAPH003C500SAXXXX	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	0.524	0.668	0.16	0.625	0.196	153	133	170
3	50	0.387	0.494	0.17	0.604	0.190	181	158	204
3	70	0.268	0.342	0.2	0.569	0.179	221	193	253
3	95	0.193	0.246	0.22	0.551	0.173	262	231	304
3	120	0.153	0.196	0.24	0.533	0.167	298	264	351
3	150	0.124	0.159	0.26	0.521	0.164	334	297	398
3	185	0.0991	0.127	0.28	0.509	0.160	377	336	455

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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	240	0.0754	0.097	0.31	0.496	0.156	434	390	531
3	300	0.0601	0.078	0.33	0.484	0.152	489	441	606
3	400	0.047	0.062	0.37	0.473	0.149	553	501	696
3	500	0.0366	0.049	0.41	0.462	0.145	632	574	800

*: 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	35	2.45	0.64	1.83	3.7	5.0
3	50	3.5	0.68	1.66	3.5	7.2
3	70	4.9	0.8	1.50	3.4	10.0
3	95	6.65	0.88	1.41	3.2	13.6
3	120	8.4	0.96	1.36	3.1	17.1
3	150	10.5	1.04	1.32	3.1	21.4
3	185	12.95	1.12	1.29	3.0	26.4
3	240	16.8	1.24	1.26	2.9	34.3
3	300	21	1.32	1.24	2.9	42.8
3	400	28	1.48	1.22	2.8	56.9
3	500	35	1.64	1.21	2.7	71.5