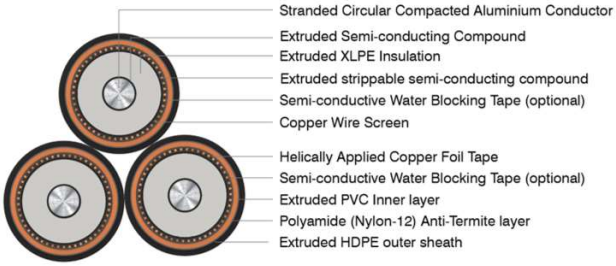
POLYCAB TRIPLEX ANTI-TERMITE MV AS/NZS 1429.1 12.7/22 (24) KV

MV Cable AL Conductor, XLPE Insulation, Cu Screen - Triplex



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 12.7/22 KV XLPE insulated with Aluminium conductor Triplex 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 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 (E/F current capacity – Based on requirement)

Composite sheath

- Inner layer : Extruded Polyvinyl Chloride, Colour: Orange
- Termite Protection: Polyamide (Nylon -12)
- Outer layer: HDPE (Black)Three Single Core Cables twisted and assembled to form triplex formation

OUTSTANDING FEATURES

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

STANDARD FOLLOWS

AS/NZS 1429.1
AS/NZS 1125
AS/NZS 3008

COMPLIANCE

• Conductor resistance	AS/NZS 1125
• Insulation resistance	AS/NZS 1429.1
• Voltage test	AS/NZS 1429.1

OUR ACCREDITATIONS

NABL

APPROVAL

FQC CE

NOTES

High Voltage Test (kV AC)	Partial discharge test (kV AC)		Impulse test Voltage (kV peak)
	200% to rated voltage	150% to rated voltage	
42	25	19	150

POLYCAB TRIPLEX ANTI-TERMITE MV AS/NZS 1429.1 12.7/22 (24) KV

MV Cable AL Conductor, XLPE Insulation, Cu Screen - Triplex

DIMENSIONSAL CHARACTERISTICS:

Product Code	No. of Single Cores	Core Cross sectional Area	Nominal Diameter		
			Over Screen	Each Phase	Overall
	No.	mm^2	mm	mm	mm
MVNZ12AXUAPH001T035SAXXXX	3	35	23.0	29.0	62.0
MVNZ12AXUAPH001T050SAXXXX	3	50	24.1	30.0	65.0
MVNZ12AXUAPH001T070SAXXXX	3	70	25.7	32.0	68.0
MVNZ12AXUAPH001T095SAXXXX	3	95	27.3	33.0	72.0
MVNZ12AXUAPH001T120SAXXXX	3	120	28.9	35.0	75.0
MVNZ12AXUAPH001T150SAXXXX	3	150	30.2	36.0	78.0
MVNZ12AXUAPH001T185SAXXXX	3	185	31.9	38.0	82.0
MVNZ12AXUAPH001T240SAXXXX	3	240	34.2	40.0	87.0
MVNZ12AXUAPH001T300SAXXXX	3	300	36.4	43.0	91.0
MVNZ12AXUAPH001T400SAXXXX	3	400	39.1	45.0	97.0
MVNZ12AXUAPH001T500SAXXXX	3	500	42.5	49.0	105.0

• 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 @ ambient 45°C		
							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 x 1	35	0.868	1.11	0.16	0.488	0.153	119	103	132
3 x 1	50	0.641	0.82	0.17	0.466	0.146	140	122	158
3 x 1	70	0.443	0.57	0.2	0.432	0.136	171	150	196
3 x 1	95	0.32	0.41	0.22	0.411	0.129	203	179	236
3 x 1	120	0.253	0.32	0.24	0.392	0.123	232	205	273
3 x 1	150	0.206	0.26	0.25	0.380	0.119	260	231	309
3 x 1	185	0.164	0.21	0.28	0.367	0.115	294	262	355

POLYCAB TRIPLEX ANTI-TERMITE MV AS/NZS 1429.1 12.7/22 (24) KV

MV Cable AL Conductor, XLPE Insulation, Cu Screen - Triplex

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 @ ambient 45°C		
							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 x 1	240	0.125	0.16	0.31	0.350	0.110	340	305	415
3 x 1	300	0.1	0.13	0.33	0.337	0.106	384	346	475
3 x 1	400	0.0778	0.10	0.37	0.324	0.102	438	398	552
3 x 1	500	0.0605	0.08	0.41	0.311	0.098	505	460	646

*: 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

POLYCAB TRIPLEX ANTI-TERMITE MV AS/NZS 1429.1 12.7/22 (24) KV

MV Cable AL Conductor, XLPE Insulation, Cu Screen - Triplex

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 x 1	35	1.75	0.64	2.27	3.7	3.3
3 x 1	50	2.5	0.68	1.98	3.5	4.7
3 x 1	70	3.5	0.8	1.73	3.4	6.6
3 x 1	95	4.75	0.88	1.57	3.2	9.0
3 x 1	120	6	0.96	1.49	3.1	11.3
3 x 1	150	7.5	1	1.43	3.1	14.2
3 x 1	185	9.25	1.12	1.37	3.0	17.4
3 x 1	240	12	1.24	1.32	2.9	22.6
3 x 1	300	15	1.32	1.29	2.9	28.3
3 x 1	400	20	1.48	1.26	2.8	37.6
3 x 1	500	25	1.64	1.24	2.7	47.2