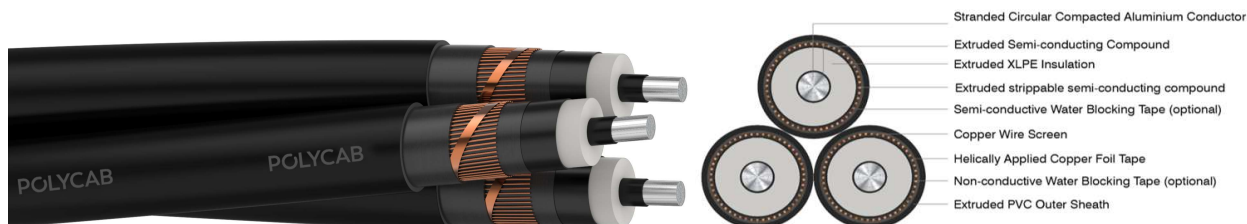


POLYCAB TRIPLEX. MV AS/NZS 1429.1 12.7/22 (24) KV

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

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

D is overall diameter of each 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 (E/F current capacity – Based on requirement)
- Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black
- Termite Protection: Polyamide (Nylon -12) (optional)
- (Alternative Sheath: PVC+HDPE Composite Sheath or LSZH Outer sheath, and parameters will change accordingly)

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

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



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	
42	25	19	150

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DIMENSIONAL 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	27.0	58.0
MVNZ12AXUAPH001T050SAXXXX	3	50	24.1	28.0	60.0
MVNZ12AXUAPH001T070SAXXXX	3	70	25.7	30.0	64.0
MVNZ12AXUAPH001T095SAXXXX	3	95	27.3	31.0	67.0
MVNZ12AXUAPH001T120SAXXXX	3	120	28.9	33.0	71.0
MVNZ12AXUAPH001T150SAXXXX	3	150	30.2	35.0	74.0
MVNZ12AXUAPH001T185SAXXXX	3	185	31.9	36.0	78.0
MVNZ12AXUAPH001T240SAXXXX	3	240	34.2	39.0	83.0
MVNZ12AXUAPH001T300SAXXXX	3	300	36.4	41.0	88.0
MVNZ12AXUAPH001T400SAXXXX	3	400	39.1	44.0	94.0
MVNZ12AXUAPH001T500SAXXXX	3	500	42.5	48.0	102.0

• 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	1.113	0.16	0.472	0.148	119	103	132
3 x 1	50	0.641	0.822	0.17	0.450	0.142	140	122	158
3 x 1	70	0.443	0.568	0.2	0.418	0.131	171	150	196
3 x 1	95	0.32	0.411	0.22	0.397	0.125	203	179	236
3 x 1	120	0.253	0.325	0.24	0.379	0.119	232	205	273
3 x 1	150	0.206	0.265	0.25	0.368	0.116	260	231	309

Document No.: 00436.Rev No.: 00 Date: 06-01-2024 / We reserve the rights to make technical changes.

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	185	0.164	0.211	0.28	0.356	0.112	294	262	355
3 x 1	240	0.125	0.161	0.31	0.341	0.107	340	305	415
3 x 1	300	0.1	0.130	0.33	0.329	0.103	384	346	475
3 x 1	400	0.0778	0.102	0.37	0.318	0.100	438	398	552
3 x 1	500	0.0605	0.080	0.41	0.306	0.096	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

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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 x 1	35	1.8	0.64	2.3	3.7	3.3
3 x 1	50	2.5	0.68	2.0	3.5	4.7
3 x 1	70	3.5	0.8	1.7	3.4	6.6
3 x 1	95	4.8	0.88	1.6	3.2	9.0
3 x 1	120	6.0	0.96	1.5	3.1	11.3
3 x 1	150	7.5	1	1.4	3.1	14.2
3 x 1	185	9.3	1.12	1.4	3.0	17.4
3 x 1	240	12.0	1.24	1.3	2.9	22.6
3 x 1	300	15.0	1.32	1.3	2.9	28.3
3 x 1	400	20.0	1.48	1.3	2.8	37.6
3 x 1	500	25.0	1.64	1.2	2.7	47.2