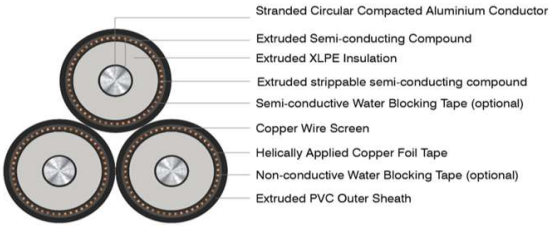
POLYCAB TRIPLEX MV AS/NZS 1429.1 19/33 (36) KV
MV Cable AL Conductor, XLPE Insulation, Cu Screen - Triplex



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 19/33 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: 19/33 (36) 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

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	
63	38	29	200

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POLYCAB
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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
MVNZ13AXUAPH001T050SAXXXX	3	50	29.1	33.0	72.0
MVNZ13AXUAPH001T070SAXXXX	3	70	30.7	35.0	75.0
MVNZ13AXUAPH001T095SAXXXX	3	95	32.3	37.0	79.0
MVNZ13AXUAPH001T120SAXXXX	3	120	33.9	38.0	82.0
MVNZ13AXUAPH001T150SAXXXX	3	150	35.2	40.0	86.0
MVNZ13AXUAPH001T185SAXXXX	3	185	36.9	42.0	89.0
MVNZ13AXUAPH001T240SAXXXX	3	240	39.2	44.0	95.0
MVNZ13AXUAPH001T300SAXXXX	3	300	41.4	46.0	100.0
MVNZ13AXUAPH001T400SAXXXX	3	400	44.1	49.0	106.0
MVNZ13AXUAPH001T500SAXXXX	3	500	47.5	53.0	114.0

• 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	50	0.641	0.822	0.14	0.486	0.153	140	122	158
3 x 1	70	0.443	0.568	0.15	0.450	0.141	171	150	196
3 x 1	95	0.32	0.411	0.17	0.429	0.135	203	179	236
3 x 1	120	0.253	0.325	0.18	0.409	0.128	232	205	273
3 x 1	150	0.206	0.265	0.19	0.397	0.125	260	231	309
3 x 1	185	0.164	0.211	0.21	0.383	0.120	294	262	355
3 x 1	240	0.125	0.161	0.23	0.367	0.115	340	305	415

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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 x 1	300	0.1	0.129	0.25	0.354	0.111	384	346	475
3 x 1	400	0.0778	0.101	0.27	0.341	0.107	438	398	552
3 x 1	500	0.0605	0.080	0.3	0.327	0.103	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	50	2.5	0.84	2.0	4.1	4.7
3 x 1	70	3.5	0.9	1.7	3.9	6.6
3 x 1	95	4.8	1.01	1.6	3.7	9.0
3 x 1	120	6.0	1.07	1.5	3.6	11.3
3 x 1	150	7.5	1.13	1.4	3.5	14.2
3 x 1	185	9.3	1.25	1.4	3.4	17.4
3 x 1	240	12.0	1.37	1.3	3.3	22.6
3 x 1	300	15.0	1.49	1.3	3.2	28.3
3 x 1	400	20.0	1.61	1.3	3.1	37.6
3 x 1	500	25.0	1.79	1.2	3.0	47.2