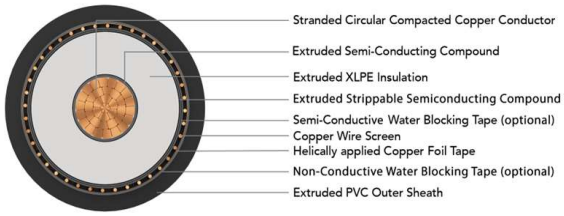
POLYCAB SC MV AS/NZS 1429.1 19/33 (36) KV
MV Cable Cu Conductor, XLPE Insulation, Cu Screen and UA



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 19/33 KV XLPE insulated with Copper conductor single core 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)/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 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)
- Metallic Sheath: Lead Alloy (optional)
- Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black

Termite Protection: Polyamide (Nylon -12) (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

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	
63	38	29	200

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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
MVNZ13CXUAPH001C050SAXXXX	1	50	27.2	29.1	33.0
MVNZ13CXUAPH001C070SAXXXX	1	70	28.9	30.8	35.0
MVNZ13CXUAPH001C095SAXXXX	1	95	30.4	32.3	37.0
MVNZ13CXUAPH001C120SAXXXX	1	120	32	33.9	38.0
MVNZ13CXUAPH001C150SAXXXX	1	150	33.4	35.3	40.0
MVNZ13CXUAPH001C185SAXXXX	1	185	35.1	37.0	42.0
MVNZ13CXUAPH001C240SAXXXX	1	240	37.4	39.3	44.0
MVNZ13CXUAPH001C300SAXXXX	1	300	39.4	41.3	46.0
MVNZ13CXUAPH001C400SAXXXX	1	400	42.2	44.1	49.0
MVNZ13CXUAPH001C500SAXXXX	1	500	45.6	47.5	53.0
MVNZ13CXUAPH001C630SAXXXX	1	630	49.2	51.1	57.0
MVNZ13CXUAPH001C800SAXXXX	1	800	52.9	54.8	61.0
MVNZ13CXUAPH001C01KSAXXXX	1	1000	57.2	59.1	65.0

• 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					
							In ground at 20°C		In Duct at 20°C		In air at 30°C	
							Flat	Trefoil	Flat	Trefoil	Flat	Trefoil
No.	mm^2	Ω/km	Ω/km	µF/km	mH/km	Ω/km	Amps					
1	50	0.387	0.494	0.14	0.486	0.153	203	196	188	186	243	238
1	70	0.268	0.342	0.15	0.449	0.141	246	239	229	227	303	296
1	95	0.193	0.247	0.17	0.429	0.135	293	285	274	271	369	361
1	120	0.153	0.196	0.18	0.409	0.128	332	323	311	308	426	417
1	150	0.124	0.159	0.19	0.396	0.124	366	361	347	343	481	473
1	185	0.0991	0.127	0.21	0.382	0.120	410	406	391	387	550	543
1	240	0.0754	0.098	0.23	0.367	0.115	470	469	453	447	647	641

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							In ground at 20°C		In Duct at 20°C		In air at 30°C	
							Flat	Trefoil	Flat	Trefoil	Flat	Trefoil
No.	mm^2	Ω/km	Ω/km	µF/km	mH/km	Ω/km	Amps					
1	300	0.0601	0.079	0.25	0.354	0.111	524	526	510	504	739	735
1	400	0.047	0.063	0.27	0.341	0.107	572	590	571	564	837	845
1	500	0.0366	0.050	0.3	0.327	0.103	660	655	640	635	970	960
1	630	0.0283	0.041	0.33	0.316	0.099	735	730	715	710	1110	1100
1	800	0.0221	0.034	0.37	0.306	0.096	770	820	800	790	1260	1250
1	1000	0.0176	0.029	0.4	0.297	0.093	825	885	865	855	1420	1410

*: 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