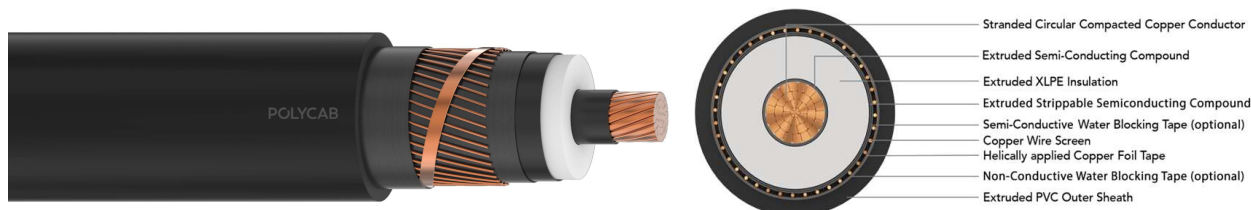


# POLYCAB SINGLE CORE MV AS/NZS 1429.1 3.8/6.6 (7.2) KV MV Cable Cu Conductor, XLPE Insulation, Cu Screen and UA



Images not to scale. Follow table for dimensions

## APPLICATION

POLYCAB MV 3.8/6.6 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: 3.8/6.6 (7.2) 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)

## 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

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

High Voltage Test (kV AC)	Partial discharge test (kV AC)		Impulse test Voltage (kV peak)
	200% to rated voltage	150% to rated voltage	
12.5	7.6	5.7	60

**POLYCAB SINGLE CORE MV AS/NZS 1429.1 3.8/6.6  
(7.2) KV  
MV Cable Cu Conductor, XLPE Insulation, Cu Screen and UA**

**DIMENSIONAL CHARACTERISTICS :**

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter		
	No.	mm <sup>2</sup>	Under metallic screen mm	Over metallic screen mm	Overall mm
MVNZ15CXUAPH001C016SAXXXX	1	16	12.9	14.8	19.0
MVNZ15CXUAPH001C025SAXXXX	1	25	14.1	16.0	20.0
MVNZ15CXUAPH001C035SAXXXX	1	35	15.1	17.0	21.0
MVNZ15CXUAPH001C050SAXXXX	1	50	16.2	18.1	22.0
MVNZ15CXUAPH001C070SAXXXX	1	70	17.9	19.8	24.0
MVNZ15CXUAPH001C095SAXXXX	1	95	19.4	21.3	25.0
MVNZ15CXUAPH001C120SAXXXX	1	120	21	22.9	27.0
MVNZ15CXUAPH001C150SAXXXX	1	150	22.4	24.3	28.0
MVNZ15CXUAPH001C185SAXXXX	1	185	24.1	26.0	30.0
MVNZ15CXUAPH001C240SAXXXX	1	240	26.6	28.5	33.0
MVNZ15CXUAPH001C300SAXXXX	1	300	29	30.9	35.0
MVNZ15CXUAPH001C400SAXXXX	1	400	32.2	34.1	39.0
MVNZ15CXUAPH001C500SAXXXX	1	500	36	37.9	43.0
MVNZ15CXUAPH001C630SAXXXX	1	630	39.6	41.5	47.0
MVNZ15CXUAPH001C800SAXXXX	1	800	43.3	45.2	50.0
MVNZ15CXUAPH001C01KSAXXXX	1	1000	47.6	49.5	55.0

- 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	
No.	mm <sup>2</sup>	Ω/km	Ω/km	μF/km	mH/km	Ω/km	Flat	Trefoil	Flat	Trefoil	Flat	Trefoil
1	16	1.15	1.466	0.22	0.475	0.149	113	109	104	103	128	125
1	25	0.727	0.927	0.25	0.442	0.139	144	140	133	132	167	163
1	35	0.524	0.668	0.28	0.421	0.132	172	166	159	157	203	198
1	50	0.387	0.494	0.31	0.401	0.126	203	196	188	186	243	238

# POLYCAB SINGLE CORE MV AS/NZS 1429.1 3.8/6.6

(7.2) KV

MV Cable Cu Conductor, XLPE Insulation, Cu Screen and UA

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 <sup>2</sup>	Ω/km	Ω/km	μF/km	mH/km	Ω/km	Amps					
1	70	0.268	0.342	0.36	0.369	0.116	246	239	229	227	303	296
1	95	0.193	0.247	0.4	0.353	0.111	293	285	274	271	369	361
1	120	0.153	0.196	0.45	0.336	0.106	332	323	311	308	426	417
1	150	0.124	0.159	0.49	0.326	0.102	366	361	347	343	481	473
1	185	0.0991	0.128	0.54	0.316	0.099	410	406	391	387	550	543
1	240	0.0754	0.098	0.58	0.305	0.096	470	469	453	447	647	641
1	300	0.0601	0.079	0.59	0.299	0.094	524	526	510	504	739	735
1	400	0.047	0.063	0.62	0.291	0.091	572	590	571	564	837	845
1	500	0.0366	0.051	0.66	0.284	0.089	660	655	640	635	970	960
1	630	0.0283	0.042	0.74	0.276	0.087	735	730	715	710	1110	1100
1	800	0.0221	0.035	0.82	0.269	0.084	770	820	800	790	1260	1250
1	1000	0.0176	0.030	0.91	0.262	0.082	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