

# POLYCAB SINGLE CORE MV AS/NZS 1429.1 6.35/11 (12) KV MV Cable AL Conductor, XLPE Insulation, Cu Screen and UA



Images not to scale. Follow table for dimensions

## APPLICATION

POLYCAB MV 6.35/11 KV XLPE insulated with Aluminium 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: 6.35/11 (12) 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 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)
- Metallic Sheath: Lead Alloy (optional)
- Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black

(Alternative Sheath: PVC+HDPE Composite Sheath 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

## 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

High Voltage Test (kV AC)	Partial discharge test (kV AC)		Impulse test Voltage (kV peak)
	200% to rated voltage	150% to rated voltage	
21	13	10	95

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## DIMENSIONAL CHARACTERISTICS:

Product Code	No. of Cores	Core Cross sectional Area mm <sup>2</sup>	Nominal Diameter		
	No.		Under metallic screen mm	Over metallic screen mm	Overall mm
MVNZ17AXUAPH001C016SAXXXX	1	16	14.6	16.5	20.0
MVNZ17AXUAPH001C025SAXXXX	1	25	15.9	17.8	22.0
MVNZ17AXUAPH001C035SAXXXX	1	35	16.9	18.8	23.0
MVNZ17AXUAPH001C050SAXXXX	1	50	18	19.9	24.0
MVNZ17AXUAPH001C070SAXXXX	1	70	19.6	21.5	25.0
MVNZ17AXUAPH001C095SAXXXX	1	95	21.2	23.1	27.0
MVNZ17AXUAPH001C120SAXXXX	1	120	22.8	24.7	29.0
MVNZ17AXUAPH001C150SAXXXX	1	150	24.1	26.0	30.0
MVNZ17AXUAPH001C185SAXXXX	1	185	25.8	27.7	32.0
MVNZ17AXUAPH001C240SAXXXX	1	240	28.1	30.0	34.0
MVNZ17AXUAPH001C300SAXXXX	1	300	30.3	32.2	37.0
MVNZ17AXUAPH001C400SAXXXX	1	400	33	34.9	40.0
MVNZ17AXUAPH001C500SAXXXX	1	500	36.4	38.3	43.0
MVNZ17AXUAPH001C630SAXXXX	1	630	39.6	41.5	47.0
MVNZ17AXUAPH001C800SAXXXX	1	800	43.5	45.4	51.0
MVNZ17AXUAPH001C01KSAXXXX	1	1000	48	49.9	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 Ducts		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
Amps												
1	16	1.91	2.449	0.17	0.497	0.156	88	84	81	80	99	97
1	25	1.2	1.539	0.2	0.460	0.144	112	108	103	102	130	127
1	35	0.868	1.113	0.22	0.437	0.137	134	129	123	122	157	154
1	50	0.641	0.822	0.25	0.417	0.131	157	152	146	142	189	184
1	70	0.443	0.568	0.28	0.385	0.121	192	186	178	176	236	230
1	95	0.32	0.411	0.31	0.367	0.115	229	221	213	210	287	280
1	120	0.253	0.325	0.35	0.349	0.110	260	252	242	240	332	324
1	150	0.206	0.265	0.37	0.340	0.107	288	281	271	267	376	368
1	185	0.164	0.211	0.41	0.329	0.103	324	317	307	303	432	424
1	240	0.125	0.161	0.46	0.317	0.099	373	367	356	351	511	502

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## MV Cable AL 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 Ducts		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	300	0.1	0.130	0.5	0.306	0.096	419	414	402	397	586	577
1	400	0.0778	0.102	0.56	0.296	0.093	466	470	457	451	676	673
1	500	0.0605	0.080	0.63	0.286	0.090	525	530	510	505	760	750
1	630	0.0469	0.064	0.69	0.279	0.088	580	585	560	555	860	850
1	800	0.0367	0.052	0.77	0.271	0.085	650	655	620	615	960	950
1	1000	0.0291	0.043	0.86	0.263	0.083	715	705	670	665	1060	1050

\*: 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