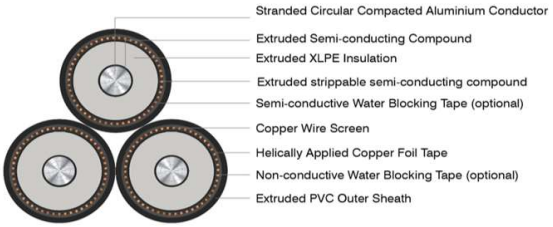
POLYCAB 3 MV AS/NZS 1429.1 3.8/6.6 (7.2) KV
MV Cable AL Conductor, XLPE Insulation, Cu Screen - Triplex



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 3.8/6.6 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: 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)
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 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	
12.5	7.6	5.7	60

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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
MVNZ15AXUAPH001T016SAXXXX	3	16	14.7	19.0	40.0
MVNZ15AXUAPH001T025SAXXXX	3	25	16.0	20.0	43.0
MVNZ15AXUAPH001T035SAXXXX	3	35	17.0	21.0	45.0
MVNZ15AXUAPH001T050SAXXXX	3	50	18.1	22.0	47.0
MVNZ15AXUAPH001T070SAXXXX	3	70	19.7	24.0	51.0
MVNZ15AXUAPH001T095SAXXXX	3	95	21.3	25.0	54.0
MVNZ15AXUAPH001T120SAXXXX	3	120	22.9	27.0	58.0
MVNZ15AXUAPH001T150SAXXXX	3	150	24.2	28.0	60.0
MVNZ15AXUAPH001T185SAXXXX	3	185	25.9	30.0	64.0
MVNZ15AXUAPH001T240SAXXXX	3	240	28.4	33.0	70.0
MVNZ15AXUAPH001T300SAXXXX	3	300	31.0	35.0	76.0
MVNZ15AXUAPH001T400SAXXXX	3	400	34.1	39.0	83.0
MVNZ15AXUAPH001T500SAXXXX	3	500	37.9	43.0	92.0

• 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	16	1.91	2.449	0.22	0.478	0.150	78	67	84
3 x 1	25	1.2	1.539	0.25	0.442	0.139	100	87	110
3 x 1	35	0.868	1.113	0.28	0.421	0.132	119	103	132
3 x 1	50	0.641	0.822	0.31	0.401	0.126	140	122	158
3 x 1	70	0.443	0.568	0.36	0.370	0.116	171	150	196

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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	95	0.32	0.411	0.4	0.353	0.111	203	179	236
3 x 1	120	0.253	0.325	0.45	0.336	0.106	232	205	273
3 x 1	150	0.206	0.265	0.49	0.326	0.103	260	231	309
3 x 1	185	0.164	0.211	0.53	0.317	0.100	294	262	355
3 x 1	240	0.125	0.161	0.58	0.306	0.096	340	305	415
3 x 1	300	0.1	0.130	0.6	0.298	0.094	384	346	475
3 x 1	400	0.0778	0.102	0.62	0.291	0.091	438	398	552
3 x 1	500	0.0605	0.080	0.66	0.284	0.089	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	16	0.8	0.26	3.6	2.1	1.5
3 x 1	25	1.3	0.3	2.7	2.0	2.4
3 x 1	35	1.8	0.33	2.3	2.0	3.3
3 x 1	50	2.5	0.37	2.0	1.9	4.7
3 x 1	70	3.5	0.43	1.7	1.9	6.6
3 x 1	95	4.8	0.48	1.6	1.8	9.0
3 x 1	120	6.0	0.54	1.5	1.8	11.3
3 x 1	150	7.5	0.58	1.4	1.8	14.2
3 x 1	185	9.3	0.63	1.4	1.7	17.4
3 x 1	240	12.0	0.69	1.3	1.7	22.6
3 x 1	300	15.0	0.72	1.3	1.5	28.3
3 x 1	400	20.0	0.74	1.3	1.4	37.6
3 x 1	500	25.0	0.79	1.2	1.3	47.2