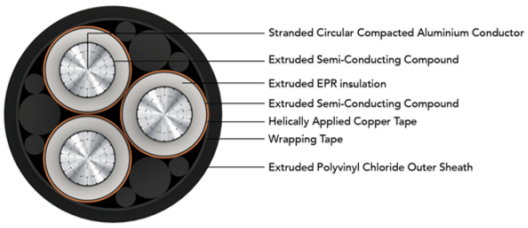
POLYCAB MV MC SCR ICEA S-93-639 5KV (or) 8KV
MV Cable with Aluminium Conductor, EPR Insulation and Copper Screen



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 5 KV EPR insulated with Aluminium conductor Three core cable is suitable to use in conduits, ducts, troughs, trays, direct burial in wet and dry conditions for power supply to wide networks.

CHARACTERISTICS

Nominal Voltage: 5kV AC (100% / 133%) or 8kV AC (100%)

Operation Temperature
Operating temperature: -35°C to +105°C
Emergency operating temperature: 140°C
Max. Short Circuit Temperature: 250°C

CONSTRUCTION

- Conductor: Circular Compacted Aluminium conductor as per ASTM B496
- Conductor Screen: Extruded Semi-conductive compound
- Insulation: Extruded EPR (TR-XLPE will be provided on demand)
- Insulation Screen: Extruded Semi-conductive compound
- Metallic Insulation Screen: Helically applied copper tape

  (Round / Corrugated copper screen will be provided on demand)

- Cores assembled together along with fillers (and ground wire optional)
- Binder: Wrapping tape
- (Armour will be provided on demand)
- Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black

(Alternative Sheath: CPE Outer Sheath or LSZH Outer sheath, and parameters will change accordingly)

Bending Radius: 7D
D is overall diameter of cable

OUTSTANDING FEATURES

- Flame retardant
- High life
- Sunlight resistant
- Oil, Acid and Alkalies resistant
- Corona resistant
- Treeing resistant
- Moisture resistant

STANDARD FOLLOWS

ASTM B496
ICEA S-93-639 (NEMA WC-74)
UL 1072
UL 1685 / FT-1
IEEE 1202
UL 2556

COMPLIANCE

• Conductor resistance	ICEA S-93-639
• Insulation resistance	ICEA S-93-639
• Vertical Tray Flame	UL 1685
• Smoke Release	UL 1685
• Flame Test	IEEE 1202

OUR ACCREDITATIONS

APPROVAL

NOTES

Voltage Rating (kV AC)	High Voltage Test (kV AC)	Min. Partial discharge test (kV AC)	
		100% level	133% level
5	18	4	5

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DIMENSIONS, WEIGHT AND AMPACITY:

133% insulation (5kV) and 100% insulation (8kV):

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight	Current rating *	
			Under metallic screen	Over metallic screen	Overall	(Approx.)	Directly buried in ground	In air
	No.	AWG / MCM	mm	mm	mm	Kg/Km	Amps	
MVIC36ARUAYF003C002AA001P	3	2 AWG	15.1	15.6	37.5	1600	105	120
MVIC36ARUAYF003C001AA001P	3	1 AWG	15.9	16.4	39.5	1750	115	140
MVIC36ARUAYF003C1X0AA001P	3	1/0 AWG	16.9	17.4	41.5	1950	140	165
MVIC36ARUAYF003C2X0AA001P	3	2/0 AWG	17.9	18.4	44.0	2200	155	190
MVIC36ARUAYF003C3X0AA001P	3	3/0 AWG	19.1	19.6	48.0	2650	175	215
MVIC36ARUAYF003C4X0AA001P	3	4/0 AWG	20.4	20.9	51.0	2950	210	250
MVIC36ARUAYF003C250CA001P	3	250 MCM	21.7	22.2	53.5	3250	230	280
MVIC36ARUAYF003C350CA001P	3	350 MCM	24.1	24.6	59.0	4000	265	355
MVIC36ARUAYF003C500CA001P	3	500 MCM	27.2	27.7	65.5	4950	355	430
MVIC36ARUAYF003C600CA001P	3	600 MCM	29.7	30.2	72.0	6000	390	485
MVIC36ARUAYF003C750CA001P	3	750 MCM	32.1	32.7	77.5	6900	440	555
MVIC36ARUAYF003C01KCA001P	3	1000 MCM	35.7	36.2	85.0	8350	505	665

100% insulation (5kV):

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight	Current rating *	
			Under metallic screen	Over metallic screen	Overall	(Approx.)	Directly buried in ground	In air
	No.	AWG / MCM	mm	mm	mm	Kg/Km	Amps	
MVIC36ARUAYF003C002AA002P	3	2 AWG	13.8	14.3	35.0	1450	105	120
MVIC36ARUAYF003C001AA002P	3	1 AWG	14.7	15.2	37.0	1600	115	140
MVIC36ARUAYF003C1X0AA002P	3	1/0 AWG	15.6	16.1	39.0	1750	140	165
MVIC36ARUAYF003C2X0AA002P	3	2/0 AWG	16.6	17.2	41.0	2050	155	190
MVIC36ARUAYF003C3X0AA002P	3	3/0 AWG	17.8	18.3	43.5	2300	175	215
MVIC36ARUAYF003C4X0AA002P	3	4/0 AWG	19.2	19.7	48.0	2750	210	250
MVIC36ARUAYF003C250CA002P	3	250 MCM	20.4	20.9	51.0	3050	230	280
MVIC36ARUAYF003C350CA002P	3	350 MCM	22.9	23.4	56.0	3750	265	355
MVIC36ARUAYF003C500CA002P	3	500 MCM	25.9	26.4	62.5	4700	355	430
MVIC36ARUAYF003C600CA002P	3	600 MCM	27.9	28.4	67.0	5400	390	485
MVIC36ARUAYF003C750CA002P	3	750 MCM	30.3	30.8	73.5	6450	440	555
MVIC36ARUAYF003C01KCA002P	3	1000 MCM	33.8	34.3	81.0	7850	505	665

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* Current Rating is in accordance with Table 310.16 (20°C Ambient Ground Temperature) and Table 310.17 (30°C Ambient Air Temperature) of National Electric Code

ELECTRICAL CHARACTERISTICS:

133% insulation:

No. of Cores	Core Cross sectional Area	Nom. DC Resistance at 25°C	Nom. AC Resistance at 90°C	Approx. Capacitance	Approx. Inductance	Approx. Reactance	Max. pulling tension on conductor	Charging Current per phase	Positive sequence impedance	Electric Stress at Conductor Screen	Short circuit rating	
											Phase conductor	Metallic screen
No.	AWG / MCM	Ω/km	Ω/km	µF/km	mH/km	Ω/km	kN	Amps/Km	Ohms/Km	kV/mm	kA/S	
1	2 AWG	0.531	0.666	0.30	0.37	0.14	1.7	0.56	1.11	2.1	3.0	2.0
1	1 AWG	0.423	0.528	0.32	0.36	0.13	2.1	0.60	0.88	2.1	3.8	2.1
1	1/0 AWG	0.335	0.420	0.35	0.34	0.13	2.7	0.66	0.71	2.0	4.8	2.2
1	2/0 AWG	0.266	0.331	0.38	0.32	0.12	3.4	0.71	0.56	1.9	6.0	2.3
1	3/0 AWG	0.211	0.266	0.41	0.31	0.12	4.3	0.78	0.45	1.9	7.6	2.5
1	4/0 AWG	0.167	0.210	0.45	0.30	0.11	5.4	0.85	0.37	1.9	9.6	2.6
1	250 MCM	0.141	0.177	0.49	0.30	0.11	6.4	0.92	0.31	1.8	11.3	2.8
1	350 MCM	0.101	0.128	0.56	0.28	0.11	8.9	1.05	0.24	1.7	15.9	3.1
1	500 MCM	0.071	0.092	0.64	0.27	0.10	12.8	1.21	0.18	1.7	22.6	3.5
1	600 MCM	0.059	0.076	0.72	0.27	0.10	15.3	1.35	0.16	1.5	27.2	3.8
1	750 MCM	0.047	0.066	0.79	0.26	0.10	19.2	1.48	0.14	1.5	34.0	4.1
1	1000 MCM	0.035	0.052	0.89	0.25	0.10	25.5	1.67	0.12	1.5	45.3	4.5

100% insulation:

No. of Cores	Core Cross sectional Area	Nom. DC Resistance at 25°C	Nom. AC Resistance at 90°C	Approx. Capacitance	Approx. Inductance	Approx. Reactance	Max. pulling tension on conductor	Charging Current per phase	Positive sequence impedance	Electric Stress at Conductor Screen	Short circuit rating	
											Phase conductor	Metallic screen
No.	AWG / MCM	Ω/km	Ω/km	µF/km	mH/km	Ω/km	kN	Amps/Km	Ohms/Km	kV/mm	kA/S	
1	2 AWG	0.531	0.666	0.36	0.35	0.13	1.7	0.68	1.11	2.5	3.0	1.8
1	1 AWG	0.423	0.528	0.39	0.34	0.13	2.1	0.73	0.88	2.4	3.8	1.9
1	1/0 AWG	0.335	0.420	0.42	0.33	0.12	2.7	0.80	0.71	2.4	4.8	2.0
1	2/0 AWG	0.266	0.331	0.46	0.31	0.12	3.4	0.87	0.56	2.3	6.0	2.2
1	3/0 AWG	0.211	0.266	0.51	0.30	0.11	4.3	0.95	0.45	2.2	7.6	2.3
1	4/0 AWG	0.167	0.210	0.56	0.29	0.11	5.4	1.05	0.36	2.2	9.6	2.5
1	250 MCM	0.141	0.177	0.60	0.29	0.11	6.4	1.14	0.31	2.1	11.3	2.6
1	350 MCM	0.101	0.128	0.69	0.27	0.10	8.9	1.30	0.24	2.0	15.9	2.9
1	500 MCM	0.071	0.092	0.80	0.26	0.10	12.8	1.51	0.18	2.0	22.6	3.3
1	600 MCM	0.059	0.076	0.88	0.26	0.10	15.3	1.65	0.16	1.9	27.2	3.6

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No. of Cores	Core Cross sectional Area	Nom. DC Resistance at 25°C	Nom. AC Resistance at 90°C	Approx. Capacitance	Approx. Inductance	Approx. Reactance	Max. pulling tension on conductor	Charging Current per phase	Positive sequence impedance	Electric Stress at Conductor Screen	Short circuit rating	
											Phase conductor	Metallic screen
No.	AWG / MCM	Ω/km	Ω/km	µF/km	mH/km	Ω/km	kN	Amps/Km	Ohms/Km	kV/mm	kA/S	
1	750 MCM	0.047	0.066	0.96	0.25	0.09	19.2	1.82	0.14	1.9	34.0	3.9
1	1000 MCM	0.035	0.052	1.09	0.24	0.09	25.5	2.06	0.12	1.9	45.3	4.3