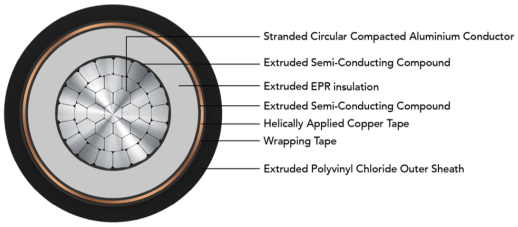
POLYCAB MV SC AL SCR ICEA S-93-639 8KV
MV Cable with Aluminium Conductor, EPR Insulation and Copper Screen



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 8KV EPR insulated with Aluminium conductor single 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

Voltage Rating
Nominal Voltage: 8kV AC

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

Bending Radius: 12D
D is overall diameter of cable

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 wire / Corrugated copper screen 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)

Voltage Rating (kV AC)	High Voltage Test (kV AC)		Min. Partial discharge test (kV AC)	
	100% level	133% level	100% level	133% level
8	23	28	6	8

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

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DIMENSIONS, WEIGHT AND AMPACITY:

133% insulation:

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	
MVIC48ARUAYF001C002AA001P	1	2 AWG	16.4	16.9	20.0	500	110	165
MVIC48ARUAYF001C001AA001P	1	1 AWG	17.2	17.7	21.0	550	125	195
MVIC48ARUAYF001C1X0AA001P	1	1/0 AWG	18.1	18.6	22.5	650	150	225
MVIC48ARUAYF001C2X0AA001P	1	2/0 AWG	19.2	19.7	24.0	700	165	260
MVIC48ARUAYF001C3X0AA001P	1	3/0 AWG	20.4	20.9	25.0	800	190	300
MVIC48ARUAYF001C4X0AA001P	1	4/0 AWG	21.7	22.2	26.5	900	225	345
MVIC48ARUAYF001C250CA001P	1	250 MCM	16.4	16.9	20.0	500	250	390
MVIC48ARUAYF001C350CA001P	1	350 MCM	17.2	17.7	21.0	550	285	490
MVIC48ARUAYF001C500CA001P	1	500 MCM	18.1	18.6	22.5	650	385	600
MVIC48ARUAYF001C600CA001P	1	600 MCM	19.2	19.7	24.0	700	420	675
MVIC48ARUAYF001C750CA001P	1	750 MCM	20.4	20.9	25.0	800	475	770
MVIC48ARUAYF001C01KCA001P	1	1000 MCM	21.7	22.2	26.5	900	545	925

100% insulation:

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	
MVIC48ARUAYF001C002AA002P	1	2 AWG	15.1	15.6	19.0	450	110	165
MVIC48ARUAYF001C001AA002P	1	1 AWG	15.9	16.4	19.5	500	125	195
MVIC48ARUAYF001C1X0AA002P	1	1/0 AWG	16.9	17.4	20.5	550	150	225
MVIC48ARUAYF001C2X0AA002P	1	2/0 AWG	17.9	18.4	21.5	650	165	260
MVIC48ARUAYF001C3X0AA002P	1	3/0 AWG	19.1	19.6	23.5	750	190	300
MVIC48ARUAYF001C4X0AA002P	1	4/0 AWG	20.4	20.9	25.0	850	225	345
MVIC48ARUAYF001C250CA002P	1	250 MCM	21.7	22.2	26.5	950	250	390
MVIC48ARUAYF001C350CA002P	1	350 MCM	24.1	24.6	28.5	1150	285	490
MVIC48ARUAYF001C500CA002P	1	500 MCM	27.2	27.7	31.5	1450	385	600
MVIC48ARUAYF001C600CA002P	1	600 MCM	29.7	30.2	34.5	1700	420	675
MVIC48ARUAYF001C750CA002P	1	750 MCM	32.1	32.7	36.5	2000	475	770
MVIC48ARUAYF001C01KCA002P	1	1000 MCM	35.7	36.2	40.0	2450	545	925

* Current Rating based on Table 310.16 (20°C Ambient Ground Temperature) and Table 310.17 (30°C Ambient Air Temperature) of National Electric Code

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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	0.26	0.42	0.16	1.7	0.77	1.11	3.0	3.0	2.1
1	1 AWG	0.423	0.528	0.28	0.41	0.15	2.1	0.83	0.89	2.9	3.8	2.2
1	1/0 AWG	0.335	0.420	0.30	0.40	0.15	2.7	0.90	0.71	2.8	4.8	2.3
1	2/0 AWG	0.266	0.331	0.32	0.38	0.14	3.4	0.98	0.57	2.7	6.0	2.5
1	3/0 AWG	0.211	0.266	0.35	0.36	0.14	4.3	1.06	0.46	2.7	7.6	2.6
1	4/0 AWG	0.167	0.210	0.38	0.35	0.13	5.4	1.16	0.37	2.6	9.6	2.8
1	250 MCM	0.141	0.177	0.41	0.34	0.13	6.4	1.25	0.32	2.5	11.3	3.0
1	350 MCM	0.101	0.128	0.47	0.32	0.12	8.9	1.42	0.24	2.4	15.9	3.3
1	500 MCM	0.071	0.092	0.54	0.31	0.12	12.8	1.64	0.19	2.3	22.6	3.6
1	600 MCM	0.059	0.076	0.59	0.30	0.11	15.3	1.78	0.17	2.2	27.2	3.9
1	750 MCM	0.047	0.066	0.65	0.29	0.11	19.2	1.95	0.15	2.2	34.0	4.2
1	1000 MCM	0.035	0.052	0.73	0.28	0.10	25.5	2.20	0.13	2.2	45.3	4.6

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	0.30	0.41	0.15	1.7	0.56	2.36	2.1	3.0	2.0
1	1 AWG	0.423	0.528	0.32	0.39	0.15	2.1	0.60	2.07	2.1	3.8	2.1
1	1/0 AWG	0.335	0.420	0.35	0.38	0.14	2.7	0.66	1.82	2.0	4.8	2.2
1	2/0 AWG	0.266	0.331	0.38	0.36	0.13	3.4	0.71	1.62	1.9	6.0	2.3
1	3/0 AWG	0.211	0.266	0.41	0.35	0.13	4.3	0.78	1.44	1.9	7.6	2.5
1	4/0 AWG	0.167	0.210	0.45	0.34	0.13	5.4	0.85	1.28	1.9	9.6	2.6
1	250 MCM	0.141	0.177	0.49	0.33	0.13	6.4	0.92	1.18	1.8	11.3	2.8
1	350 MCM	0.101	0.128	0.56	0.31	0.12	8.9	1.05	1.01	1.7	15.9	3.1
1	500 MCM	0.071	0.092	0.64	0.30	0.11	12.8	1.21	0.86	1.7	22.6	3.5
1	600 MCM	0.059	0.076	0.72	0.30	0.11	15.3	1.35	0.78	1.5	27.2	3.8
1	750 MCM	0.047	0.066	0.79	0.29	0.11	19.2	1.48	0.70	1.5	34.0	4.1
1	1000 MCM	0.035	0.052	0.89	0.27	0.10	25.5	1.67	0.62	1.5	45.3	4.5