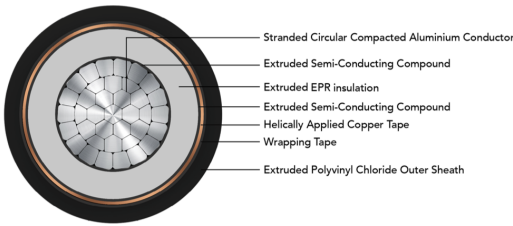


POLYCAB MV SC AL SCR ICEA S-93-639 25KV
MV Cable with Aluminium Conductor, EPR Insulation and Copper Screen



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 25KV 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: 25kV 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)	
	100% level	133% level
25	52	64

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

APPROVAL



POLYCAB MV SC AL SCR ICEA S-93-639 25KV

MV Cable with Aluminium Conductor, EPR Insulation and Copper Screen

DIMENSIONS, WEIGHT AND AMPACITY:

133% insulation:

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)	Current rating *	
			Under metallic screen	Over metallic screen	Overall		Directly buried in ground	In air
	No.	AWG / MCM	mm	mm	mm	Kg/Km	Amps	
MVIC32ARUAYF001C002AA001P	1	2 AWG	25.5	26.0	30.0	1050	110	165
MVIC32ARUAYF001C001AA001P	1	1 AWG	26.3	26.9	31.0	1100	125	195
MVIC32ARUAYF001C1X0AA001P	1	1/0 AWG	27.3	27.8	32.0	1150	150	225
MVIC32ARUAYF001C2X0AA001P	1	2/0 AWG	28.3	28.8	33.0	1250	165	260
MVIC32ARUAYF001C3X0AA001P	1	3/0 AWG	29.5	30.0	34.0	1350	190	300
MVIC32ARUAYF001C4X0AA001P	1	4/0 AWG	30.8	31.3	35.5	1500	225	345
MVIC32ARUAYF001C250CA001P	1	250 MCM	32.1	32.6	36.5	1600	250	390
MVIC32ARUAYF001C350CA001P	1	350 MCM	34.5	35.1	39.0	1850	285	490
MVIC32ARUAYF001C500CA001P	1	500 MCM	37.6	38.1	42.0	2200	385	600
MVIC32ARUAYF001C600CA001P	1	600 MCM	40.2	40.7	44.5	2500	420	675
MVIC32ARUAYF001C750CA001P	1	750 MCM	42.6	43.1	47.0	2850	475	770
MVIC32ARUAYF001C01KCA001P	1	1000 MCM	46.1	46.6	52.0	3550	545	925

100% insulation:

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)	Current rating *	
			Under metallic screen	Over metallic screen	Overall		Directly buried in ground	In air
	No.	AWG / MCM	mm	mm	mm	Kg/Km	Amps	
MVIC32ARUAYF001C002AA002P	1	2 AWG	22.5	23.0	27.0	850	110	165
MVIC32ARUAYF001C001AA002P	1	1 AWG	23.3	23.8	28.0	900	125	195
MVIC32ARUAYF001C1X0AA002P	1	1/0 AWG	24.2	24.7	29.0	1000	150	225
MVIC32ARUAYF001C2X0AA002P	1	2/0 AWG	25.3	25.8	30.0	1050	165	260
MVIC32ARUAYF001C3X0AA002P	1	3/0 AWG	26.5	27.0	31.0	1150	190	300
MVIC32ARUAYF001C4X0AA002P	1	4/0 AWG	27.8	28.3	32.5	1300	225	345
MVIC32ARUAYF001C250CA002P	1	250 MCM	29.1	29.6	33.5	1400	250	390
MVIC32ARUAYF001C350CA002P	1	350 MCM	31.5	32.0	36.0	1650	285	490
MVIC32ARUAYF001C500CA002P	1	500 MCM	34.5	35.0	39.0	1950	385	600
MVIC32ARUAYF001C600CA002P	1	600 MCM	36.5	37.1	42.5	2350	420	675
MVIC32ARUAYF001C750CA002P	1	750 MCM	39.0	39.5	45.0	2650	475	770
MVIC32ARUAYF001C01KCA002P	1	1000 MCM	42.5	43.0	48.5	3150	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

POLYCAB MV SC AL SCR ICEA S-93-639 25KV

MV Cable with Aluminium Conductor, EPR Insulation and Copper Screen

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	
No.	AWG / MCM	Ω/km	Ω/km	μF/km	mH/km	Ω/km	kN	Amps/Km	Ohms/Km	kV/mm	Phase conductor	Metallic screen
	2 AWG											
1		0.531	0.666	0.15	0.50	0.19	1.7	1.39	1.12	5.8	3.0	3.3
	1 AWG											
1		0.423	0.528	0.16	0.48	0.18	2.1	1.48	0.89	5.6	3.8	3.4
	1/0 AWG											
1		0.335	0.420	0.17	0.47	0.18	2.7	1.57	0.72	5.3	4.8	3.5
	2/0 AWG											
1		0.266	0.331	0.18	0.44	0.17	3.4	1.68	0.57	5.1	6.0	3.6
	3/0 AWG											
1		0.211	0.266	0.19	0.42	0.16	4.3	1.81	0.46	4.9	7.6	3.8
	4/0 AWG											
1		0.167	0.210	0.21	0.41	0.15	5.4	1.94	0.38	4.7	9.6	3.9
	250 MCM											
1		0.141	0.177	0.22	0.40	0.15	6.4	2.07	0.33	4.5	11.3	4.1
	350 MCM											
1		0.101	0.128	0.25	0.38	0.14	8.9	2.32	0.25	4.3	15.9	4.4
	500 MCM											
1		0.071	0.092	0.28	0.35	0.13	12.8	2.62	0.20	4.1	22.6	4.8
	600 MCM											
1		0.059	0.076	0.31	0.35	0.13	15.3	2.88	0.18	3.8	27.2	5.1
	750 MCM											
1		0.047	0.066	0.33	0.34	0.13	19.2	3.11	0.16	3.7	34.0	5.4
	1000 MCM											
1		0.035	0.052	0.37	0.33	0.12	25.5	3.46	0.14	3.6	45.3	5.9

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	0.17	0.48	0.18	1.7	1.58	1.11	6.5	3.0	2.9
1	1 AWG	0.423	0.528	0.18	0.46	0.17	2.1	1.68	0.89	6.2	3.8	3.0
1	1/0 AWG	0.335	0.420	0.19	0.45	0.17	2.7	1.80	0.71	6.0	4.8	3.1
1	2/0 AWG	0.266	0.331	0.21	0.42	0.16	3.4	1.94	0.57	5.7	6.0	3.2
1	3/0 AWG	0.211	0.266	0.22	0.41	0.15	4.3	2.08	0.46	5.5	7.6	3.4
1	4/0 AWG	0.167	0.210	0.24	0.39	0.15	5.4	2.25	0.38	5.3	9.6	3.6
1	250 MCM	0.141	0.177	0.26	0.38	0.14	6.4	2.41	0.33	5.1	11.3	3.7
1	350 MCM	0.101	0.128	0.29	0.36	0.14	8.9	2.70	0.25	4.9	15.9	4.0
1	500 MCM	0.071	0.092	0.33	0.34	0.13	12.8	3.07	0.20	4.7	22.6	4.4
1	600 MCM	0.059	0.076	0.35	0.34	0.13	15.3	3.32	0.18	4.5	27.2	4.7
1	750 MCM	0.047	0.066	0.38	0.33	0.12	19.2	3.61	0.16	4.4	34.0	5.0
1	1000 MCM	0.035	0.052	0.43	0.31	0.12	25.5	4.03	0.14	4.3	45.3	5.4