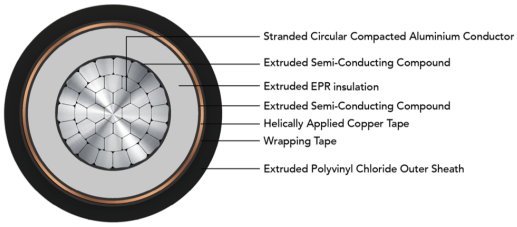
POLYCAB MV SC AL SCR ICEA S-93-639 15KV
MV Cable with Aluminium Conductor, EPR Insulation and Copper Screen



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 15KV 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: 15kV 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
• 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
15	35	44	11	15

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

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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	
MVIC37ARUAYF001C002AA001P	1	2 AWG	20.4	20.9	25.0	750	110	165
MVIC37ARUAYF001C001AA001P	1	1 AWG	21.3	21.8	26.0	800	125	195
MVIC37ARUAYF001C1X0AA001P	1	1/0 AWG	22.2	22.7	27.0	850	150	225
MVIC37ARUAYF001C2X0AA001P	1	2/0 AWG	23.3	23.8	28.0	950	165	260
MVIC37ARUAYF001C3X0AA001P	1	3/0 AWG	24.4	24.9	29.0	1050	190	300
MVIC37ARUAYF001C4X0AA001P	1	4/0 AWG	25.8	26.3	30.5	1150	225	345
MVIC37ARUAYF001C250CA001P	1	250 MCM	27.0	27.6	31.5	1250	250	390
MVIC37ARUAYF001C350CA001P	1	350 MCM	29.5	30.0	34.0	1500	285	490
MVIC37ARUAYF001C500CA001P	1	500 MCM	32.5	33.0	37.0	1800	385	600
MVIC37ARUAYF001C600CA001P	1	600 MCM	35.1	35.6	39.5	2050	420	675
MVIC37ARUAYF001C750CA001P	1	750 MCM	37.5	38.0	42.0	2400	475	770
MVIC37ARUAYF001C01KCA001P	1	1000 MCM	41.0	41.5	47.0	3050	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	
MVIC37ARUAYF001C002AA002P	1	2 AWG	18.1	18.7	22.5	600	110	165
MVIC37ARUAYF001C001AA002P	1	1 AWG	19.0	19.5	23.5	700	125	195
MVIC37ARUAYF001C1X0AA002P	1	1/0 AWG	19.9	20.4	24.5	750	150	225
MVIC37ARUAYF001C2X0AA002P	1	2/0 AWG	21.0	21.5	25.5	800	165	260
MVIC37ARUAYF001C3X0AA002P	1	3/0 AWG	22.2	22.7	26.5	900	190	300
MVIC37ARUAYF001C4X0AA002P	1	4/0 AWG	23.5	24.0	28.0	1000	225	345
MVIC37ARUAYF001C250CA002P	1	250 MCM	24.8	25.3	29.5	1100	250	390
MVIC37ARUAYF001C350CA002P	1	350 MCM	27.2	27.7	31.5	1350	285	490
MVIC37ARUAYF001C500CA002P	1	500 MCM	30.2	30.7	35.0	1650	385	600
MVIC37ARUAYF001C600CA002P	1	600 MCM	32.2	32.7	37.0	1850	420	675
MVIC37ARUAYF001C750CA002P	1	750 MCM	34.6	35.1	39.0	2150	475	770
MVIC37ARUAYF001C01KCA002P	1	1000 MCM	38.2	38.7	44.5	2750	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	0.19	0.46	0.18	1.7	1.05	1.11	4.3	3.0	2.6
1	1 AWG	0.423	0.528	0.20	0.45	0.17	2.1	1.13	0.89	4.1	3.8	2.7
1	1/0 AWG	0.335	0.420	0.21	0.43	0.16	2.7	1.21	0.71	4.0	4.8	2.9
1	2/0 AWG	0.266	0.331	0.23	0.41	0.15	3.4	1.30	0.57	3.8	6.0	3.0
1	3/0 AWG	0.211	0.266	0.25	0.39	0.15	4.3	1.41	0.46	3.7	7.6	3.1
1	4/0 AWG	0.167	0.210	0.27	0.38	0.14	5.4	1.52	0.38	3.6	9.6	3.3
1	250 MCM	0.141	0.177	0.29	0.37	0.14	6.4	1.64	0.33	3.4	11.3	3.5
1	350 MCM	0.101	0.128	0.33	0.35	0.13	8.9	1.84	0.25	3.3	15.9	3.8
1	500 MCM	0.071	0.092	0.37	0.33	0.12	12.8	2.11	0.19	3.2	22.6	4.1
1	600 MCM	0.059	0.076	0.41	0.32	0.12	15.3	2.33	0.17	3.0	27.2	4.5
1	750 MCM	0.047	0.066	0.45	0.31	0.12	19.2	2.53	0.16	2.9	34.0	4.8
1	1000 MCM	0.035	0.052	0.50	0.31	0.12	25.5	2.83	0.14	2.8	45.3	5.2

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	0.22	0.44	0.17	1.7	1.23	1.11	4.9	3.0	2.3
1	1 AWG	0.423	0.528	0.23	0.43	0.16	2.1	1.32	0.89	4.8	3.8	2.5
1	1/0 AWG	0.335	0.420	0.25	0.41	0.16	2.7	1.43	0.71	4.6	4.8	2.6
1	2/0 AWG	0.266	0.331	0.27	0.39	0.15	3.4	1.54	0.57	4.4	6.0	2.7
1	3/0 AWG	0.211	0.266	0.30	0.38	0.14	4.3	1.67	0.46	4.3	7.6	2.9
1	4/0 AWG	0.167	0.210	0.32	0.36	0.14	5.4	1.81	0.37	4.2	9.6	3.0
1	250 MCM	0.141	0.177	0.35	0.35	0.13	6.4	1.95	0.32	4.0	11.3	3.2
1	350 MCM	0.101	0.128	0.39	0.33	0.13	8.9	2.22	0.25	3.9	15.9	3.5
1	500 MCM	0.071	0.092	0.45	0.32	0.12	12.8	2.54	0.19	3.7	22.6	3.9
1	600 MCM	0.059	0.076	0.49	0.31	0.12	15.3	2.76	0.17	3.6	27.2	4.1
1	750 MCM	0.047	0.066	0.53	0.30	0.11	19.2	3.01	0.15	3.5	34.0	4.4
1	1000 MCM	0.035	0.052	0.60	0.29	0.11	25.5	3.39	0.13	3.5	45.3	4.9