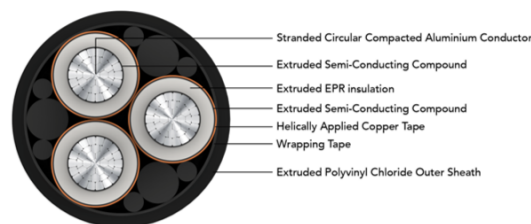


# POLYCAB MV MC SCR ICEA S-93-639 8KV

## 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 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

#### 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

### 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	100% level	133% level
8	23	28	6	8

# POLYCAB MV MC SCR ICEA S-93-639 8KV

## 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	
MVIC48ARUAYF003C002AA001P	3	2 AWG	16.4	16.9	40.5	1800	105	120
MVIC48ARUAYF003C001AA001P	3	1 AWG	17.2	17.7	42.5	1950	115	140
MVIC48ARUAYF003C1X0AA001P	3	1/0 AWG	18.1	18.6	46.0	2300	140	165
MVIC48ARUAYF003C2X0AA001P	3	2/0 AWG	19.2	19.7	48.0	2600	155	190
MVIC48ARUAYF003C3X0AA001P	3	3/0 AWG	20.4	20.9	50.5	2850	175	215
MVIC48ARUAYF003C4X0AA001P	3	4/0 AWG	21.7	22.2	53.5	3200	210	250
MVIC48ARUAYF003C250CA001P	3	250 MCM	23.0	23.5	56.5	3500	230	280
MVIC48ARUAYF003C350CA001P	3	350 MCM	25.4	25.9	61.5	4250	265	355
MVIC48ARUAYF003C500CA001P	3	500 MCM	28.4	28.9	68.0	5250	355	430
MVIC48ARUAYF003C600CA001P	3	600 MCM	31.0	31.5	75.0	6300	390	485
MVIC48ARUAYF003C750CA001P	3	750 MCM	33.4	33.9	80.0	7200	440	555
MVIC48ARUAYF003C01KCA001P	3	1000 MCM	36.9	37.4	87.5	8700	505	665

#### 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	
MVIC48ARUAYF003C002AA002P	3	2 AWG	15.1	15.6	37.5	1600	105	120
MVIC48ARUAYF003C001AA002P	3	1 AWG	15.9	16.4	39.5	1750	115	140
MVIC48ARUAYF003C1X0AA002P	3	1/0 AWG	16.9	17.4	41.5	1950	140	165
MVIC48ARUAYF003C2X0AA002P	3	2/0 AWG	17.9	18.4	44.0	2200	155	190
MVIC48ARUAYF003C3X0AA002P	3	3/0 AWG	19.1	19.6	48.0	2650	175	215
MVIC48ARUAYF003C4X0AA002P	3	4/0 AWG	20.4	20.9	51.0	2950	210	250
MVIC48ARUAYF003C250CA002P	3	250 MCM	21.7	22.2	53.5	3250	230	280
MVIC48ARUAYF003C350CA002P	3	350 MCM	24.1	24.6	59.0	4000	265	355
MVIC48ARUAYF003C500CA002P	3	500 MCM	27.2	27.7	65.5	4950	355	430
MVIC48ARUAYF003C600CA002P	3	600 MCM	29.7	30.2	72.0	6000	390	485
MVIC48ARUAYF003C750CA002P	3	750 MCM	32.1	32.7	77.5	6900	440	555
MVIC48ARUAYF003C01KCA002P	3	1000 MCM	35.7	36.2	85.0	8350	505	665

\* Current Rating is 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 MC SCR ICEA S-93-639 8KV

## 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	
											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	0.38	0.15	1.7	0.77	1.11	3.0	3.0	2.1
1	1 AWG	0.423	0.528	0.28	0.37	0.14	2.1	0.83	0.88	2.9	3.8	2.2
1	1/0 AWG	0.335	0.420	0.30	0.36	0.14	2.7	0.90	0.71	2.8	4.8	2.3
1	2/0 AWG	0.266	0.331	0.32	0.34	0.13	3.4	0.98	0.56	2.7	6.0	2.5
1	3/0 AWG	0.211	0.266	0.35	0.33	0.12	4.3	1.06	0.45	2.7	7.6	2.6
1	4/0 AWG	0.167	0.210	0.38	0.32	0.12	5.4	1.16	0.37	2.6	9.6	2.8
1	250 MCM	0.141	0.177	0.41	0.31	0.12	6.4	1.25	0.32	2.5	11.3	3.0
1	350 MCM	0.101	0.128	0.47	0.29	0.11	8.9	1.42	0.24	2.4	15.9	3.3
1	500 MCM	0.071	0.092	0.54	0.28	0.11	12.8	1.64	0.18	2.3	22.6	3.6
1	600 MCM	0.059	0.076	0.60	0.28	0.10	15.3	1.82	0.16	2.1	27.2	4.0
1	750 MCM	0.047	0.066	0.66	0.27	0.10	19.2	1.99	0.14	2.1	34.0	4.3
1	1000 MCM	0.035	0.052	0.74	0.26	0.10	25.5	2.24	0.12	2.1	45.3	4.7

#### 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	0.37	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

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



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	0.79	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

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