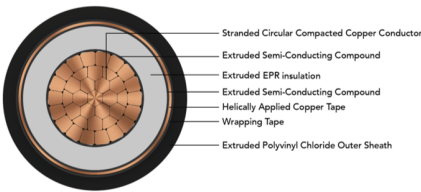


# POLYCAB MV SC SCR ICEA S-93-639 5KV (or) 8 KV

## MV Cable with Copper Conductor, EPR Insulation and Copper Screen



Images not to scale. Follow table for dimensions

### APPLICATION

POLYCAB MV 5 KV EPR insulated with Copper 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: 5 kV AC (100% / 133%) or 8 kV 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 Copper 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
- 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
5	18	4	5
8	23	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

Round wire / Corrugated copper screen will be provided on demand  
Alternative Sheath: CPE Outer Sheath or LSZH Outer sheath, and parameters will change accordingly

# POLYCAB MV SC SCR ICEA S-93-639 5KV (or) 8 KV

## MV Cable with Copper Conductor, EPR Insulation and Copper Screen



### DIMENSIONS, WEIGHT AND AMPACITY:

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

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	
MVIC36CRUAYF001C002AA001P	1	2 AWG	15.1	15.6	19.0	650	140	210
MVIC36CRUAYF001C001AA001P	1	1 AWG	15.9	16.4	19.5	750	160	240
MVIC36CRUAYF001C1X0AA001P	1	1/0 AWG	16.9	17.4	20.5	900	185	285
MVIC36CRUAYF001C2X0AA001P	1	2/0 AWG	17.9	18.4	21.5	1050	215	330
MVIC36CRUAYF001C3X0AA001P	1	3/0 AWG	19.1	19.6	23.5	1300	245	385
MVIC36CRUAYF001C4X0AA001P	1	4/0 AWG	20.4	20.9	25.0	1500	285	445
MVIC36CRUAYF001C250CA001P	1	250 MCM	21.7	22.2	26.5	1750	315	500
MVIC36CRUAYF001C350CA001P	1	350 MCM	24.1	24.6	28.5	2250	385	625
MVIC36CRUAYF001C500CA001P	1	500 MCM	27.2	27.7	31.5	3000	470	765
MVIC36CRUAYF001C600CA001P	1	600 MCM	29.7	30.2	34.5	3600	520	855
MVIC36CRUAYF001C750CA001P	1	750 MCM	32.1	32.7	36.5	4350	585	970
MVIC36CRUAYF001C01KCA001P	1	1000 MCM	35.7	36.2	40.0	5550	675	1155

#### 100% insulation (5kV):

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	
MVIC36CRUAYF001C002AA002P	1	2 AWG	13.8	14.3	17.5	600	140	210
MVIC36CRUAYF001C001AA002P	1	1 AWG	14.7	15.2	18.5	700	160	240
MVIC36CRUAYF001C1X0AA002P	1	1/0 AWG	15.6	16.1	19.5	850	185	285
MVIC36CRUAYF001C2X0AA002P	1	2/0 AWG	16.6	17.2	20.5	1000	215	330
MVIC36CRUAYF001C3X0AA002P	1	3/0 AWG	17.8	18.3	21.5	1200	245	385
MVIC36CRUAYF001C4X0AA002P	1	4/0 AWG	19.2	19.7	23.5	1450	285	445
MVIC36CRUAYF001C250CA002P	1	250 MCM	20.4	20.9	25.0	1650	315	500
MVIC36CRUAYF001C350CA002P	1	350 MCM	22.9	23.4	27.5	2200	385	625
MVIC36CRUAYF001C500CA002P	1	500 MCM	25.9	26.4	30.5	2950	470	765
MVIC36CRUAYF001C600CA002P	1	600 MCM	27.9	28.4	32.5	3450	520	855
MVIC36CRUAYF001C750CA002P	1	750 MCM	30.3	30.8	35.0	4200	585	970
MVIC36CRUAYF001C01KCA002P	1	1000 MCM	33.8	34.3	38.5	5400	675	1155

\* 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 SCR ICEA S-93-639 5KV (or) 8 KV**  
**MV Cable with Copper 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
1	2 AWG	0.531	0.666	0.30	0.41	0.15	2.4	0.56	0.68	2.1	4.8	2.0
1	1 AWG	0.423	0.528	0.32	0.39	0.15	3.0	0.60	0.55	2.1	6.1	2.1
1	1/0 AWG	0.335	0.420	0.35	0.38	0.14	3.7	0.66	0.44	2.0	7.7	2.2
1	2/0 AWG	0.266	0.331	0.38	0.36	0.13	4.7	0.71	0.36	1.9	9.7	2.3
1	3/0 AWG	0.211	0.266	0.41	0.35	0.13	6.0	0.78	0.30	1.9	12.2	2.5
1	4/0 AWG	0.167	0.210	0.45	0.34	0.13	7.5	0.85	0.25	1.9	15.3	2.6
1	250 MCM	0.141	0.177	0.49	0.33	0.13	8.9	0.92	0.22	1.8	18.1	2.8
1	350 MCM	0.101	0.128	0.56	0.31	0.12	12.4	1.05	0.17	1.7	25.4	3.1
1	500 MCM	0.071	0.092	0.64	0.30	0.11	17.7	1.21	0.15	1.7	36.2	3.5
1	600 MCM	0.059	0.076	0.72	0.30	0.11	21.3	1.35	0.13	1.5	43.5	3.8
1	750 MCM	0.047	0.066	0.79	0.29	0.11	26.6	1.48	0.13	1.5	54.4	4.1
1	1000 MCM	0.035	0.052	0.89	0.27	0.10	35.4	1.67	0.12	1.5	72.5	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	
No.	AWG / MCM	Ω/km	Ω/km	μF/km	mH/km	Ω/km	kN	Amps/Km	Ohms/Km	kV/mm	Phase conductor	Metallic screen
1	2 AWG	0.531	0.666	0.36	0.39	0.15	2.4	0.68	1.11	2.5	4.8	1.8
1	1 AWG	0.423	0.528	0.39	0.38	0.14	3.0	0.73	0.88	2.4	6.1	1.9
1	1/0 AWG	0.335	0.420	0.42	0.37	0.14	3.7	0.80	0.71	2.4	7.7	2.0
1	2/0 AWG	0.266	0.331	0.46	0.35	0.13	4.7	0.87	0.56	2.3	9.7	2.2
1	3/0 AWG	0.211	0.266	0.51	0.33	0.13	6.0	0.95	0.45	2.2	12.2	2.3
1	4/0 AWG	0.167	0.210	0.56	0.33	0.12	7.5	1.05	0.37	2.2	15.3	2.5
1	250 MCM	0.141	0.177	0.60	0.32	0.12	8.9	1.14	0.32	2.1	18.1	2.6
1	350 MCM	0.101	0.128	0.69	0.30	0.11	12.4	1.30	0.24	2.0	25.4	2.9
1	500 MCM	0.071	0.092	0.80	0.29	0.11	17.7	1.51	0.18	2.0	36.2	3.3
1	600 MCM	0.059	0.076	0.88	0.28	0.11	21.3	1.65	0.16	1.9	43.5	3.6
1	750 MCM	0.047	0.066	0.96	0.28	0.10	26.6	1.82	0.14	1.9	54.4	3.9
1	1000 MCM	0.035	0.052	1.09	0.27	0.10	35.4	2.06	0.13	1.9	72.5	4.3