

POLY CAB MV MC CU CR ICEA S-93-639 5KV (or) 8KV MV Cable with Copper Conductor, EPR Insulation and Copper Screen

POLY CAB
IDEAS. CONNECTED.



Images not to scale. Follow table for dimensions

APPLICATION

POLY CAB MV 5 KV EPR insulated with Copper 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: 5kV AC (100% / 133%) or 8kV AC (100%)

Operation Temperature

Operating temperature: -35°C to +105°C

Emergency operating temperature: 140°C

Max. Short Circuit Temperature: 250°C

Bending Radius: 7D

D is overall diameter of cable

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 (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)

Voltage Rating (kV AC)	High Voltage Test (kV AC)	Min. Partial discharge test (kV AC)	
		100% level	133% level
5	18	4	5

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



POLY CAB MV MC CU CR ICEA S-93-639 5KV (or) 8KV MV Cable with Copper Conductor, EPR Insulation and Copper Screen

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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		
MVIC36CRUAYF003C002AA001P	3	2 AWG	15.1	15.6	37.5	2250	130	155
MVIC36CRUAYF003C001AA001P	3	1 AWG	15.9	16.4	39.5	2550	150	175
MVIC36CRUAYF003C1X0AA001P	3	1/0 AWG	16.9	17.4	41.5	2950	170	205
MVIC36CRUAYF003C2X0AA001P	3	2/0 AWG	17.9	18.4	44.0	3500	200	240
MVIC36CRUAYF003C3X0AA001P	3	3/0 AWG	19.1	19.6	48.0	4250	225	280
MVIC36CRUAYF003C4X0AA001P	3	4/0 AWG	20.4	20.9	51.0	5000	265	320
MVIC36CRUAYF003C250CA001P	3	250 MCM	21.7	22.2	53.5	5650	290	360
MVIC36CRUAYF003C350CA001P	3	350 MCM	24.1	24.6	59.0	7350	355	450
MVIC36CRUAYF003C500CA001P	3	500 MCM	27.2	27.7	65.5	9750	435	550
MVIC36CRUAYF003C600CA001P	3	600 MCM	29.7	30.2	72.0	11750	480	615
MVIC36CRUAYF003C750CA001P	3	750 MCM	32.1	32.7	77.5	14100	540	695
MVIC36CRUAYF003C01KCA001P	3	1000 MCM	35.7	36.2	85.0	17900	620	830

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		
MVIC36CRUAYF003C002AA002P	3	2 AWG	13.8	14.3	35.0	2100	130	155
MVIC36CRUAYF003C001AA002P	3	1 AWG	14.7	15.2	37.0	2400	150	175
MVIC36CRUAYF003C1X0AA002P	3	1/0 AWG	15.6	16.1	39.0	2750	170	205
MVIC36CRUAYF003C2X0AA002P	3	2/0 AWG	16.6	17.2	41.0	3300	200	240
MVIC36CRUAYF003C3X0AA002P	3	3/0 AWG	17.8	18.3	43.5	3900	225	280
MVIC36CRUAYF003C4X0AA002P	3	4/0 AWG	19.2	19.7	48.0	4800	265	320
MVIC36CRUAYF003C250CA002P	3	250 MCM	20.4	20.9	51.0	5450	290	360
MVIC36CRUAYF003C350CA002P	3	350 MCM	22.9	23.4	56.0	7100	355	450
MVIC36CRUAYF003C500CA002P	3	500 MCM	25.9	26.4	62.5	9500	435	550
MVIC36CRUAYF003C600CA002P	3	600 MCM	27.9	28.4	67.0	11150	480	615
MVIC36CRUAYF003C750CA002P	3	750 MCM	30.3	30.8	73.5	13650	540	695
MVIC36CRUAYF003C01KCA002P	3	1000 MCM	33.8	34.3	81.0	17450	620	830

* 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

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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		
1	2 AWG	0.531	0.666	0.30	0.37	0.14	2.4	0.56	0.68	2.1	4.8	2.0
1	1 AWG	0.423	0.528	0.32	0.36	0.13	3.0	0.60	0.55	2.1	6.1	2.1
1	1/0 AWG	0.335	0.420	0.35	0.34	0.13	3.7	0.66	0.44	2.0	7.7	2.2
1	2/0 AWG	0.266	0.331	0.38	0.32	0.12	4.7	0.71	0.36	1.9	9.7	2.3
1	3/0 AWG	0.211	0.266	0.41	0.31	0.12	6.0	0.78	0.29	1.9	12.2	2.5
1	4/0 AWG	0.167	0.210	0.45	0.30	0.11	7.5	0.85	0.24	1.9	15.3	2.6
1	250 MCM	0.141	0.177	0.49	0.30	0.11	8.9	0.92	0.21	1.8	18.1	2.8
1	350 MCM	0.101	0.128	0.56	0.28	0.11	12.4	1.05	0.17	1.7	25.4	3.1
1	500 MCM	0.071	0.092	0.64	0.27	0.10	17.7	1.21	0.14	1.7	36.2	3.5
1	600 MCM	0.059	0.076	0.72	0.27	0.10	21.3	1.35	0.13	1.5	43.5	3.8
1	750 MCM	0.047	0.066	0.79	0.26	0.10	26.6	1.48	0.12	1.5	54.4	4.1
1	1000 MCM	0.035	0.052	0.89	0.25	0.10	35.4	1.67	0.11	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 Phase conductor	Metallic screen
No.	AWG / MCM	Ω/km	Ω/km	μF/km	mH/km	Ω/km	kN	Amps/Km	Ohms/Km	kV/mm		
1	2 AWG	0.531	0.666	0.36	0.35	0.13	2.4	0.68	1.10	2.5	4.8	1.8
1	1 AWG	0.423	0.528	0.39	0.34	0.13	3.0	0.73	0.88	2.4	6.1	1.9
1	1/0 AWG	0.335	0.420	0.42	0.33	0.12	3.7	0.80	0.70	2.4	7.7	2.0
1	2/0 AWG	0.266	0.331	0.46	0.31	0.12	4.7	0.87	0.56	2.3	9.7	2.2
1	3/0 AWG	0.211	0.266	0.51	0.30	0.11	6.0	0.95	0.45	2.2	12.2	2.3
1	4/0 AWG	0.167	0.210	0.56	0.29	0.11	7.5	1.05	0.36	2.2	15.3	2.5
1	250 MCM	0.141	0.177	0.60	0.29	0.11	8.9	1.14	0.31	2.1	18.1	2.6
1	350 MCM	0.101	0.128	0.69	0.27	0.10	12.4	1.30	0.23	2.0	25.4	2.9
1	500 MCM	0.071	0.092	0.80	0.26	0.10	17.7	1.51	0.18	2.0	36.2	3.3
1	600 MCM	0.059	0.076	0.88	0.26	0.10	21.3	1.65	0.16	1.9	43.5	3.6
1	750 MCM	0.047	0.066	0.96	0.25	0.09	26.6	1.82	0.14	1.9	54.4	3.9
1	1000 MCM	0.035	0.052	1.09	0.24	0.09	35.4	2.06	0.12	1.9	72.5	4.3