



Images not to scale. Follow table for dimensions

## APPLICATION

POLY CAB MV 35KV 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: 35kV 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 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 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)

## 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



## NOTES

Voltage Rating (kV AC)	High Voltage Test (kV AC)	
	100% level	133% level
35	69	84

# POLY CAB MV SC SCR ICEA S-93-639 35KV

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

**POLY CAB**  
IDEAS. CONNECTED.

### 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	
MVIC46CRUAYF001C1X0AA001P	1	1/0 AWG	32.4	32.9	37.0	1850	185	285
MVIC46CRUAYF001C2X0AA001P	1	2/0 AWG	33.4	33.9	38.0	2050	215	330
MVIC46CRUAYF001C3X0AA001P	1	3/0 AWG	34.6	35.1	39.0	2250	245	385
MVIC46CRUAYF001C4X0AA001P	1	4/0 AWG	35.9	36.4	40.5	2550	285	445
MVIC46CRUAYF001C250CA001P	1	250 MCM	37.2	37.7	42.0	2800	315	500
MVIC46CRUAYF001C350CA001P	1	350 MCM	39.6	40.1	44.0	3400	385	625
MVIC46CRUAYF001C500CA001P	1	500 MCM	42.7	43.2	48.5	4400	470	765
MVIC46CRUAYF001C600CA001P	1	600 MCM	45.2	45.7	51.5	5050	520	855
MVIC46CRUAYF001C750CA001P	1	750 MCM	47.6	48.1	53.5	5900	585	970
MVIC46CRUAYF001C01KCA001P	1	1000 MCM	51.2	51.7	57.5	7250	675	1155

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	
MVIC46CRUAYF001C1X0AA002P	1	1/0 AWG	28.5	29.1	33.0	1600	185	285
MVIC46CRUAYF001C2X0AA002P	1	2/0 AWG	29.6	30.1	34.0	1750	215	330
MVIC46CRUAYF001C3X0AA002P	1	3/0 AWG	30.8	31.3	35.5	2000	245	385
MVIC46CRUAYF001C4X0AA002P	1	4/0 AWG	32.1	32.6	36.5	2250	285	445
MVIC46CRUAYF001C250CA002P	1	250 MCM	33.4	33.9	38.0	2500	315	500
MVIC46CRUAYF001C350CA002P	1	350 MCM	35.8	36.3	40.5	3050	385	625
MVIC46CRUAYF001C500CA002P	1	500 MCM	38.8	39.4	43.5	3900	470	765
MVIC46CRUAYF001C600CA002P	1	600 MCM	40.9	41.4	47.0	4600	520	855
MVIC46CRUAYF001C750CA002P	1	750 MCM	43.3	43.8	49.5	5450	585	970
MVIC46CRUAYF001C01KCA002P	1	1000 MCM	46.8	47.3	53.0	6750	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

**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	kA/S
1	1/0 AWG	0.335	0.420	0.14	0.50	0.19	3.7	1.87	0.46	6.4	7.7
1	2/0 AWG	0.266	0.331	0.15	0.47	0.18	4.7	1.99	0.38	6.1	9.7
1	3/0 AWG	0.211	0.266	0.16	0.45	0.17	6.0	2.12	0.32	5.8	12.2
1	4/0 AWG	0.167	0.210	0.17	0.44	0.16	7.5	2.27	0.27	5.5	15.3
1	250 MCM	0.141	0.177	0.18	0.42	0.16	8.9	2.41	0.24	5.3	18.1
1	350 MCM	0.101	0.128	0.20	0.40	0.15	12.4	2.68	0.20	5.0	25.4
1	500 MCM	0.071	0.092	0.23	0.38	0.15	17.7	3.01	0.17	4.7	36.2
1	600 MCM	0.059	0.076	0.25	0.38	0.14	21.3	3.28	0.16	4.5	43.5
1	750 MCM	0.047	0.066	0.27	0.36	0.14	26.6	3.54	0.15	4.4	54.4
1	1000 MCM	0.035	0.052	0.30	0.35	0.13	35.4	3.91	0.14	4.2	72.5
											6.5

**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	kA/S
1	1/0 AWG	0.335	0.420	0.16	0.47	0.18	3.7	2.10	0.46	7.1	7.7
1	2/0 AWG	0.266	0.331	0.17	0.45	0.17	4.7	2.25	0.37	6.8	9.7
1	3/0 AWG	0.211	0.266	0.18	0.43	0.16	6.0	2.41	0.31	6.5	12.2
1	4/0 AWG	0.167	0.210	0.20	0.42	0.16	7.5	2.58	0.26	6.2	15.3
1	250 MCM	0.141	0.177	0.21	0.41	0.15	8.9	2.75	0.23	6.0	18.1
1	350 MCM	0.101	0.128	0.23	0.38	0.14	12.4	3.07	0.19	5.7	25.4
1	500 MCM	0.071	0.092	0.26	0.36	0.14	17.7	3.47	0.16	5.4	36.2
1	600 MCM	0.059	0.076	0.28	0.36	0.14	21.3	3.73	0.16	5.2	43.5
1	750 MCM	0.047	0.066	0.31	0.35	0.13	26.6	4.04	0.15	5.1	54.4
1	1000 MCM	0.035	0.052	0.34	0.33	0.12	35.4	4.49	0.14	4.9	72.5
											5.9