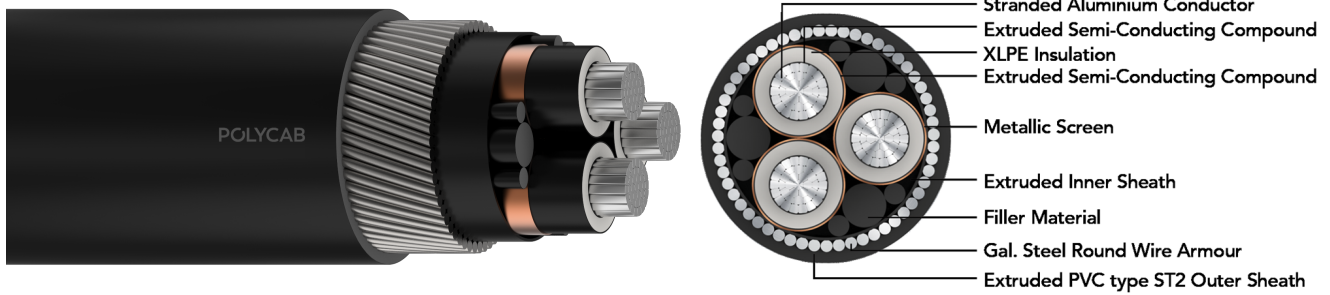


# POLYCAB MV MC AL IS 7098-2, 3.8/6.6 KV(E) Medium Voltage Multi Core Aluminium Armoured Cable, 3.8/6.6 KV (E) AC



Images not to scale. Follow table for dimensions

## APPLICATION

POLYCAB MV 3.8/6.6 KV(E) XLPE insulated with aluminium conductor Multi core cable is suitable to use for power distribution for external and direct burial applications in power network system.

## CHARACTERISTICS

### Voltage Rating

Nominal Voltage: 3.8/6.6 KV (E)

### Operation Temperature

Max. operating temperature: 90°C

Max. Short Circuit Temperature: 250°C

### Bending Radius:

Fixed Installation: 15D

D is overall diameter of cable

## CONSTRUCTION

- Conductor: Circular Compacted Aluminium conductor as per IS 8130, class 2
- Conductor Screen: Extruded Semi-conductive compound
- Insulation: XLPE
- Non-Metallic Insulation Screen: Extruded Semi-conductive compound
- Metallic Insulation Screen: Copper tape screen
- Inner Sheath: Extruded Polyvinyl Chloride
- Armour: Galvanised steel Round/Flat Wire Armoured
- Outer Sheath: Extruded Polyvinyl Chloride

Colour: Black

### Test Voltage

13kV AC 50 Hz

### Impulse voltage Test

60kV

## OUTSTANDING FEATURES

- Flame retardant
- High life
- UV resistant

## STANDARD FOLLOWS

IS 8130:2013

IS 5831:1984

IS 3975:1979

IS 7098-2:2011

## COMPLIANCE

- Conductor resistance IS 8130
- Insulation resistance IS 7098-2
- Flammability test IEC 60332-1-2
- Partial Discharge test IS 7098-2

## OUR ACCREDITATIONS



## APPROVAL



## NOTES

- Inner sheath available with FR/ FRLS
- Outer/ Inner available with FR/FRLS

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**Medium Voltage Multi Core Aluminium Armoured Cable,**  
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**DIMENSIONS AND WEIGHTS:**

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
A2XWY	No.	mm <sup>2</sup>	mm	mm	mm	Kg/Km
MVIS15AXSWY2003C025SA001S	3C	25	29.6	33.6	36.7	2206
MVIS15AXSWY2003C035SA001S	3C	35	32.1	36.1	39.5	2510
MVIS15AXSWY2003C050SA001S	3C	50	35.4	39.4	42.9	2894
MVIS15AXSWY2003C070SA001S	3C	70	39.1	43.1	46.8	3398
MVIS15AXSWY2003C095SA001S	3C	95	42.9	47.9	52.0	4367
MVIS15AXSWY2003C120SA001S	3C	120	46.5	51.5	55.9	4988
MVIS15AXSWY2003C150SA001S	3C	150	50.2	55.2	60.0	5668
MVIS15AXSWY2003C185SA001S	3C	185	53.8	58.8	63.5	6279
MVIS15AXSWY2003C240SA001S	3C	240	59.4	65.7	71.0	8213
MVIS15AXSWY2003C300SA001S	3C	300	65.6	71.9	77.6	9564
MVIS15AXSWY2003C400SA001S	3C	400	73.8	81.8	87.8	12660
MVIS15AXSWY2003C500SA001S	3C	500	81.8	89.8	95.8	14830
MVIS15AXSWY2003C630SA001S	3C	630	89.1	97.1	103.1	16856

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
A2XFY	No.	mm <sup>2</sup>	mm	mm	mm	Kg/Km
MVIS15AXSFY2003C025SA001S	3C	25	29.6	31.2	34.3	1518

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Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
A2XFY	No.	mm <sup>2</sup>	mm	mm	mm	Kg/Km
MVIS15AXSFY2003C035SA001S	3C	35	32.1	33.7	36.8	1731
MVIS15AXSFY2003C050SA001S	3C	50	35.4	37.0	40.5	2059
MVIS15AXSFY2003C070SA001S	3C	70	39.1	40.7	44.4	2471
MVIS15AXSFY2003C095SA001S	3C	95	42.9	44.5	48.3	2905
MVIS15AXSFY2003C120SA001S	3C	120	46.5	48.1	52.2	3386
MVIS15AXSFY2003C150SA001S	3C	150	50.2	51.8	56.2	3924
MVIS15AXSFY2003C185SA001S	3C	185	53.8	55.4	60.1	4484
MVIS15AXSFY2003C240SA001S	3C	240	59.4	61.0	66.0	5382
MVIS15AXSFY2003C300SA001S	3C	300	65.6	67.2	72.6	6451
MVIS15AXSFY2003C400SA001S	3C	400	73.8	75.4	81.4	8027
MVIS15AXSFY2003C500SA001S	3C	500	81.8	83.4	89.4	9638
MVIS15AXSFY2003C630SA001S	3C	630	89.1	90.7	96.7	11263

The above data is approximate & subject to manufacturing tolerance.

**ELECTRICAL CHARACTERISTICS:**

No. of Cores	Core Cross sectional Area	Max. DC Resistance at 20°C	Max. AC Resistance at 90°C	Approx. Capacitance	Approx. Inductance		Approx. Reactance	
					mH/km		Ω/km	
No.	mm <sup>2</sup>	Ω/km	Ω/km	μF/km	A2XFY	A2XWY	A2XFY	A2XWY
3	25	1.2	1.539	0.21	0.35	0.35	0.109	0.109

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No. of Cores	Core Cross sectional Area	Max. DC Resistance at 20°C	Max. AC Resistance at 90°C	Approx. Capacitance	Approx. Inductance		Approx. Reactance	
					mH/km		Ω/km	
					No.	mm <sup>2</sup>	Ω/km	Ω/km
3	35	0.868	1.113	0.23	0.33	0.33	0.104	0.104
3	50	0.641	0.822	0.27	0.31	0.31	0.096	0.096
3	70	0.443	0.568	0.30	0.29	0.29	0.092	0.092
3	95	0.32	0.410	0.35	0.28	0.28	0.089	0.089
3	120	0.253	0.325	0.38	0.27	0.27	0.085	0.085
3	150	0.206	0.264	0.42	0.26	0.26	0.083	0.083
3	185	0.164	0.211	0.46	0.26	0.26	0.081	0.081
3	240	0.125	0.161	0.51	0.25	0.25	0.078	0.078
3	300	0.1	0.129	0.54	0.25	0.25	0.077	0.077
3	400	0.0778	0.101	0.56	0.24	0.24	0.077	0.077
3	500	0.0605	0.079	0.60	0.24	0.24	0.076	0.076
3	630	0.0469	0.061	0.66	0.24	0.24	0.074	0.074

**CURRENT CARRYING CAPACITY:**

Nominal area of conductor	Buried direct in ground	In a buried duct	In air
Sqmm	A	A	A
25	94	81	102
35	112	96	123

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Nominal area of conductor	Buried direct in ground	In a buried duct	In air
Sqmm	A	A	A
50	131	113	146
70	160	138	182
95	191	165	221
120	216	187	254
150	241	208	286
185	273	236	330
240	315	277	385
300	354	312	440
400	403	355	512
500	457	403	590

Air Ambient temperature: 40°C  
 Ground ambient temperature: 30°C  
 Conductor operating temperature: 90°C  
 The above table is in accordance with IS 3961(part 7):2016

**De-Rating Factor**

**Rating factor for variation in ambient air temperature for cable in free air**

Ambient air Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
De-Rating Factor	1.14	1.10	1.05	1.00	0.95	0.89	0.84	0.77

Maximum conductor temperature 90°C

**Rating factor for variation in ground temperature for direct buried cables.**

Ground Temperature	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C
De-Rating Factor	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82

Maximum conductor temperature 90°C

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## Rating factor for variation in ground temperature for cable in duct.

Ground Temperature	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C
De-Rating Factor	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82

Maximum conductor temperature 90°C