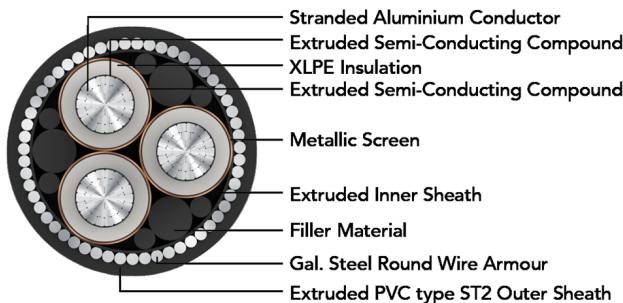


# POLY CAB MV MC AL IS 7098-2, 12.7/22 KV(E) Medium Voltage Multi Core Aluminium Armoured Cable, 12.7/22 KV (E) AC

**POLY CAB**  
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Images not to scale. Follow table for dimensions

## APPLICATION

POLY CAB MV 12.7/22 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: 12.7/22 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

42kV AC 50 Hz

### Impulse test Voltage

125 KV

## 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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**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
MVIS12AXSWY2003C035SA001S	3C	35	46.3	51.3	55.7	4606
MVIS12AXSWY2003C050SA001S	3C	50	49.7	54.7	59.1	5096
MVIS12AXSWY2003C070SA001S	3C	70	53.1	58.1	62.8	5675
MVIS12AXSWY2003C095SA001S	3C	95	57.2	63.5	68.5	7188
MVIS12AXSWY2003C120SA001S	3C	120	60.5	66.8	72.2	7864
MVIS12AXSWY2003C150SA001S	3C	150	64.3	70.6	76.2	8690
MVIS12AXSWY2003C185SA001S	3C	185	67.9	74.2	79.8	9411
MVIS12AXSWY2003C240SA001S	3C	240	73.2	81.2	87.2	11899
MVIS12AXSWY2003C300SA001S	3C	300	78.6	86.6	92.6	13236
MVIS12AXSWY2003C400SA001S	3C	400	85.5	93.5	99.5	15148
MVIS12AXSWY2003C500SA001S	3C	500	92.6	100.6	106.6	17121
MVIS12AXSWY2003C630SA001S	3C	630	99.9	107.9	113.9	19354

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
MVIS12AXSFY2003C035SA001S	3C	35	46.3	47.9	52.0	3003
MVIS12AXSFY2003C050SA001S	3C	50	49.7	51.3	55.7	3418
MVIS12AXSFY2003C070SA001S	3C	70	53.1	54.7	59.1	3852
MVIS12AXSFY2003C095SA001S	3C	95	57.2	58.8	63.5	4447
MVIS12AXSFY2003C120SA001S	3C	120	60.5	62.1	67.2	4989
MVIS12AXSFY2003C150SA001S	3C	150	64.3	65.9	71.2	5621
MVIS12AXSFY2003C185SA001S	3C	185	67.9	69.5	74.8	6213
MVIS12AXSFY2003C240SA001S	3C	240	73.2	74.8	80.5	7204
MVIS12AXSFY2003C300SA001S	3C	300	78.6	80.2	86.2	8284
MVIS12AXSFY2003C400SA001S	3C	400	85.5	87.1	93.1	9715
MVIS12AXSFY2003C500SA001S	3C	500	92.6	94.2	100.2	11288
MVIS12AXSFY2003C630SA001S	3C	630	99.9	101.5	107.5	13042

The above data is approximate & subject to manufacturing tolerance.

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**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 mH/km		Approx. Reactance Ω/km	
No.	mm <sup>2</sup>	Ω/km	Ω/km	μF/km	A2XFY	A2XWY	A2XFY	A2XWY
3	35	0.868	1.113	0.14	0.41	0.41	0.127	0.127
3	50	0.641	0.822	0.16	0.37	0.37	0.117	0.117
3	70	0.443	0.568	0.18	0.36	0.36	0.112	0.112
3	95	0.32	0.410	0.20	0.34	0.34	0.106	0.106
3	120	0.253	0.325	0.22	0.32	0.32	0.102	0.102
3	150	0.206	0.264	0.24	0.31	0.31	0.098	0.098
3	185	0.164	0.211	0.26	0.30	0.30	0.096	0.096
3	240	0.125	0.161	0.28	0.29	0.29	0.092	0.092
3	300	0.1	0.129	0.31	0.28	0.28	0.089	0.089
3	400	0.0778	0.101	0.35	0.27	0.27	0.086	0.086
3	500	0.0605	0.079	0.38	0.27	0.27	0.083	0.083
3	630	0.0469	0.061	0.42	0.26	0.26	0.081	0.081

**CURRENT CARRYING CAPACITY:**

Nominal area of conductor Sqmm	Buried direct in ground	In a buried duct	In air
	A	A	A
35	111	97	127
50	130	116	152
70	159	142	189
95	189	169	227
120	215	192	262
150	239	214	294
185	270	245	336

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Nominal area of conductor	Buried direct in ground	In a buried duct	In air
Sqmm	A	A	A
240	312	282	393
300	351	317	448
400	400	361	519
500	454	408	598

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

##### 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