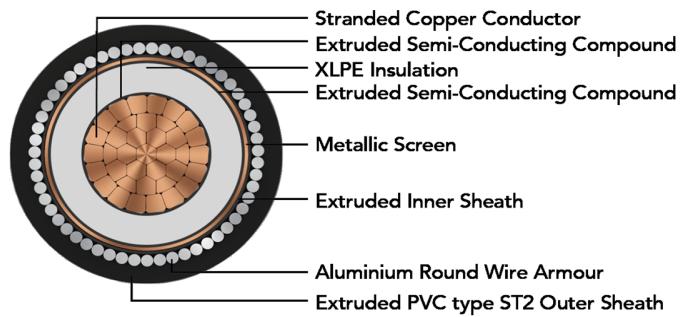


# POLY CAB MV SC CU IS 7098-2, 12.7/22 KV(E) Medium Voltage Single Core Copper Armoured Cable, 12.7/22 KV (E) AC

**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 copper conductor single 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: 20D

D is overall diameter of cable

## CONSTRUCTION

- Conductor: Circular Compacted Copper 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: Aluminium Round/Flat Wire Armoured
- Outer Sheath: Extruded Polyvinyl Chloride

Colour: Black

## 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

### Test Voltage

42kV AC 50 Hz

### Impulse test Voltage

125 KV

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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	
2XWaY	No.	mm <sup>2</sup>	mm	mm	mm	Kg/Km
MVIS12CXAWY2001C035SA001S	1C	35	21.5	24.7	27.5	1077
MVIS12CXAWY2001C050SA001S	1C	50	23.0	26.2	29.4	1305
MVIS12CXAWY2001C070SA001S	1C	70	24.6	27.8	30.9	1544
MVIS12CXAWY2001C095SA001S	1C	95	26.6	30.6	33.7	1937
MVIS12CXAWY2001C120SA001S	1C	120	28.2	32.2	35.3	2238
MVIS12CXAWY2001C150SA001S	1C	150	29.9	33.9	37.0	2594
MVIS12CXAWY2001C185SA001S	1C	185	31.6	35.6	39.0	3006
MVIS12CXAWY2001C240SA001S	1C	240	34.0	38.0	41.5	3627
MVIS12CXAWY2001C300SA001S	1C	300	36.7	40.7	44.5	4375
MVIS12CXAWY2001C400SA001S	1C	400	39.9	43.9	47.7	5370
MVIS12CXAWY2001C500SA001S	1C	500	43.2	48.2	52.3	6709
MVIS12CXAWY2001C630SA001S	1C	630	46.8	51.8	56.2	8075
MVIS12CXAWY2001C800SA001S	1C	800	50.9	55.9	60.6	9871
MVIS12CXAWY2001C01KSA001S	1C	1000	55.2	61.5	66.5	12234

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
2XFaY	No.	mm <sup>2</sup>	mm	mm	mm	Kg/Km
MVIS12CXAFY2001C035SA001S	1C	35	21.5	23.1	25.9	951
MVIS12CXAFY2001C050SA001S	1C	50	23.0	24.6	27.4	1153
MVIS12CXAFY2001C070SA001S	1C	70	24.6	26.2	29.3	1404
MVIS12CXAFY2001C095SA001S	1C	95	26.6	28.2	31.3	1709
MVIS12CXAFY2001C120SA001S	1C	120	28.2	29.8	32.9	1998
MVIS12CXAFY2001C150SA001S	1C	150	29.9	31.5	34.6	2343
MVIS12CXAFY2001C185SA001S	1C	185	31.6	33.2	36.3	2706
MVIS12CXAFY2001C240SA001S	1C	240	34.0	35.6	39.1	3334
MVIS12CXAFY2001C300SA001S	1C	300	36.7	38.3	41.8	4027
MVIS12CXAFY2001C400SA001S	1C	400	39.9	41.5	45.3	5032
MVIS12CXAFY2001C500SA001S	1C	500	43.2	44.8	48.6	6142
MVIS12CXAFY2001C630SA001S	1C	630	46.8	48.4	52.5	7469

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Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
2XFaY	No.	mm <sup>2</sup>	mm	mm	mm	Kg/Km
MVIS12CXAFY2001C800SA001S	1C	800	50.9	52.5	56.9	9212
MVIS12CXAFY2001C01KSA001S	1C	1000	55.2	56.8	61.5	11251

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	
					μF/km	mH/km	2XFaY	2XWaY
No.	mm <sup>2</sup>	Ω/km	Ω/km	μF/km			Ω/km	Ω/km
					2XFaY	2XWaY	2XFaY	2XWaY
1	35	0.524	0.672	0.14	0.45	0.46	0.14	0.14
1	50	0.387	0.496	0.16	0.41	0.43	0.13	0.13
1	70	0.268	0.344	0.18	0.40	0.41	0.12	0.13
1	95	0.193	0.248	0.20	0.38	0.39	0.12	0.12
1	120	0.153	0.197	0.22	0.36	0.38	0.11	0.12
1	150	0.124	0.159	0.24	0.35	0.36	0.11	0.11
1	185	0.0991	0.128	0.26	0.34	0.35	0.11	0.11
1	240	0.0754	0.098	0.28	0.32	0.34	0.10	0.11
1	300	0.0601	0.078	0.31	0.31	0.33	0.10	0.10
1	400	0.047	0.062	0.35	0.30	0.31	0.10	0.10
1	500	0.0366	0.049	0.38	0.29	0.31	0.09	0.10
1	630	0.0283	0.038	0.42	0.29	0.30	0.09	0.09
1	800	0.0221	0.031	0.47	0.28	0.29	0.09	0.09
1	1000	0.0176	0.026	0.51	0.27	0.29	0.09	0.09

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**CURRENT CARRYING CAPACITY:**

Nominal area of conductor	Buried direct in the ground		In single -way Ducts		In air	
	Trefoil	Flat touching	Trefoil ducts	Flat touching ducts	Trefoil	Flat Touching
	Sqmm	A	A	A	A	A
35	150	153	132	129	185	188
50	176	178	154	150	224	227
70	214	215	187	180	278	280
95	253	253	221	212	336	336
120	285	284	249	236	386	384
150	317	313	276	260	434	429
185	355	346	308	286	494	485
240	404	387	350	320	575	556
300	442	413	382	339	644	611
400	490	449	422	367	734	683
500	538	482	462	393	825	753
630	586	513	501	416	920	823
800	629	540	550	447	1014	890
1000	643	552	560	453	1074	938

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

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