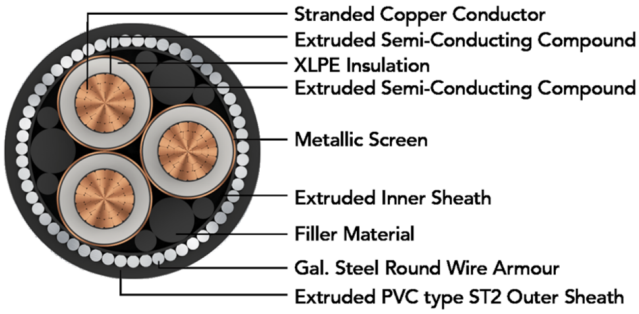
POLYCAB MV MC CU IS 7098-2, 12.7/22 KV(E)
Medium Voltage Multi Core Copper Armoured Cable,12.7/22 KV (E) AC



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 12.7/22 KV(E) XLPE insulated with copper 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 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: 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
			Under armour	Over armour	Overall	(Approx.)
2XWY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS12CXSWY2003C035SA001S	3C	35	46.3	51.3	55.7	5267
MVIS12CXSWY2003C050SA001S	3C	50	49.7	54.7	59.1	6053
MVIS12CXSWY2003C070SA001S	3C	70	53.1	58.1	62.8	6993
MVIS12CXSWY2003C095SA001S	3C	95	57.2	63.5	68.5	8983
MVIS12CXSWY2003C120SA001S	3C	120	60.5	66.8	72.2	10131
MVIS12CXSWY2003C150SA001S	3C	150	64.3	70.6	76.2	11550
MVIS12CXSWY2003C185SA001S	3C	185	67.9	74.2	79.8	12904
MVIS12CXSWY2003C240SA001S	3C	240	73.2	81.2	87.2	16451
MVIS12CXSWY2003C300SA001S	3C	300	78.6	86.6	92.6	18996
MVIS12CXSWY2003C400SA001S	3C	400	85.5	93.5	99.5	22671
MVIS12CXSWY2003C500SA001S	3C	500	92.6	100.6	106.6	26701
MVIS12CXSWY2003C630SA001S	3C	630	99.9	107.9	113.9	31290

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight
			Under armour	Over armour	Overall	(Approx.)
2XFY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS12CXSFY2003C035SA001S	3C	35	46.3	47.9	52.0	3664
MVIS12CXSFY2003C050SA001S	3C	50	49.7	51.3	55.7	4375
MVIS12CXSFY2003C070SA001S	3C	70	53.1	54.7	59.1	5170
MVIS12CXSFY2003C095SA001S	3C	95	57.2	58.8	63.5	6241
MVIS12CXSFY2003C120SA001S	3C	120	60.5	62.1	67.2	7257
MVIS12CXSFY2003C150SA001S	3C	150	64.3	65.9	71.2	8481
MVIS12CXSFY2003C185SA001S	3C	185	67.9	69.5	74.8	9706
MVIS12CXSFY2003C240SA001S	3C	240	73.2	74.8	80.5	11755
MVIS12CXSFY2003C300SA001S	3C	300	78.6	80.2	86.2	14044
MVIS12CXSFY2003C400SA001S	3C	400	85.5	87.1	93.1	17238
MVIS12CXSFY2003C500SA001S	3C	500	92.6	94.2	100.2	20869

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Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight
			Under armour	Over armour	Overall	(Approx.)
2XFY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS12CXSFY2003C630SA001S	3C	630	99.9	101.5	107.5	24978

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	
No.	mm^2	Ω/km	Ω/km	µF/km	mH/km		Ω/km	
					2XFY	2XWY	2XFY	2XWY
3	35	0.524	0.672	0.14	0.41	0.41	0.127	0.127
3	50	0.387	0.496	0.16	0.37	0.37	0.117	0.117
3	70	0.268	0.344	0.18	0.36	0.36	0.112	0.112
3	95	0.193	0.248	0.20	0.34	0.34	0.106	0.106
3	120	0.153	0.197	0.22	0.32	0.32	0.102	0.102
3	150	0.124	0.159	0.24	0.31	0.31	0.098	0.098
3	185	0.0991	0.128	0.26	0.30	0.30	0.096	0.096
3	240	0.0754	0.098	0.28	0.29	0.29	0.092	0.092
3	300	0.0601	0.078	0.31	0.28	0.28	0.089	0.089
3	400	0.047	0.062	0.35	0.27	0.27	0.086	0.086
3	500	0.0366	0.049	0.38	0.27	0.27	0.083	0.083
3	630	0.0283	0.038	0.42	0.26	0.26	0.081	0.081

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CURRENT CARRYING CAPACITY:

Nominal area of conductor	Buried direct in ground	In a buried duct	In air
Sqmm	A	A	A
35	143	125	164
50	167	150	196
70	204	183	243
95	243	217	293
120	276	246	336
150	307	275	378
185	346	313	431
240	398	360	503
300	446	403	571
400	503	453	655
500	563	507	745

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