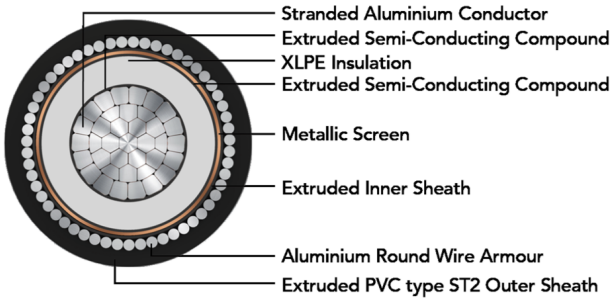
POLYCAB MV SC AL IS 7098-2, 12.7/22 KV(E)
Medium Voltage Single Core Aluminium Armoured Cable, 12.7/22 KV (E) AC



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 12.7/22 KV(E) XLPE insulated with aluminium 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 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: 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

NABL

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	
A2XWaY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS12AXAWY2001C035SA001S	1C	35	21.5	24.7	27.5	857
MVIS12AXAWY2001C050SA001S	1C	50	23.0	26.2	29.4	986
MVIS12AXAWY2001C070SA001S	1C	70	24.6	27.8	30.9	1104
MVIS12AXAWY2001C095SA001S	1C	95	26.6	30.6	33.7	1339
MVIS12AXAWY2001C120SA001S	1C	120	28.2	32.2	35.3	1482
MVIS12AXAWY2001C150SA001S	1C	150	29.9	33.9	37.0	1640
MVIS12AXAWY2001C185SA001S	1C	185	31.6	35.6	39.0	1841
MVIS12AXAWY2001C240SA001S	1C	240	34.0	38.0	41.5	2110
MVIS12AXAWY2001C300SA001S	1C	300	36.7	40.7	44.5	2455
MVIS12AXA\WY2001C400SA001S	1C	400	39.9	43.9	47.7	2862
MVIS12AXAWY2001C500SA001S	1C	500	43.2	48.2	52.3	3516
MVIS12AXAWY2001C630SA001S	1C	630	46.8	51.8	56.2	4096
MVIS12AXAWY2001C800SA001S	1C	800	50.9	55.9	60.6	4823
MVIS12AXAWY2001C01KSA001S	1C	1000	55.2	61.5	66.5	5925

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
A2XFaY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS12AXAFY2001C035SA001S	1C	35	21.5	23.1	25.9	731
MVIS12AXAFY2001C050SA001S	1C	50	23.0	24.6	27.4	834
MVIS12AXAFY2001C070SA001S	1C	70	24.6	26.2	29.3	965
MVIS12AXAFY2001C095SA001S	1C	95	26.6	28.2	31.3	1111
MVIS12AXAFY2001C120SA001S	1C	120	28.2	29.8	32.9	1242
MVIS12AXAFY2001C150SA001S	1C	150	29.9	31.5	34.6	1390
MVIS12AXAFY2001C185SA001S	1C	185	31.6	33.2	36.3	1542
MVIS12AXAFY2001C240SA001S	1C	240	34.0	35.6	39.1	1817
MVIS12AXAFY2001C300SA001S	1C	300	36.7	38.3	41.8	2107
MVIS12AXAFY2001C400SA001S	1C	400	39.9	41.5	45.3	2525
MVIS12AXAFY2001C500SA001S	1C	500	43.2	44.8	48.6	2948
MVIS12AXAFY2001C630SA001S	1C	630	46.8	48.4	52.5	3490

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Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight
			Under armour	Over armour	Overall	(Approx.)
A2XFaY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS12AXAFY2001C800SA001S	1C	800	50.9	52.5	56.9	4164
MVIS12AXAFY2001C01KSA001S	1C	1000	55.2	56.8	61.5	4943

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	
					A2XFaY	A2XWaY	A2XFaY	A2XWaY
1	35	0.868	1.113	0.14	0.45	0.46	0.14	0.14
1	50	0.641	0.822	0.16	0.41	0.43	0.13	0.13
1	70	0.443	0.568	0.18	0.40	0.41	0.12	0.13
1	95	0.32	0.410	0.20	0.38	0.39	0.12	0.12
1	120	0.253	0.325	0.22	0.36	0.38	0.11	0.12
1	150	0.206	0.264	0.24	0.35	0.36	0.11	0.11
1	185	0.164	0.211	0.26	0.34	0.35	0.11	0.11
1	240	0.125	0.161	0.28	0.32	0.34	0.10	0.11
1	300	0.1	0.129	0.31	0.31	0.33	0.10	0.10
1	400	0.0778	0.101	0.35	0.30	0.31	0.10	0.10
1	500	0.0605	0.079	0.38	0.29	0.31	0.09	0.10
1	630	0.0469	0.061	0.42	0.29	0.30	0.09	0.09
1	800	0.0367	0.049	0.47	0.28	0.29	0.09	0.09
1	1000	0.0291	0.039	0.51	0.27	0.29	0.09	0.09

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	A
35	116	119	102	101	144	146
50	137	139	120	117	174	177
70	167	169	146	142	217	220
95	198	200	172	167	262	264

120	224	225	195	188	302	303
150	249	249	217	207	339	340
185	280	279	243	231	389	387
240	321	316	278	261	455	449
300	355	343	307	282	515	501
400	400	380	345	312	594	571
500	447	417	384	340	678	641
630	496	453	424	367	770	715
800	543	486	475	402	866	789
1000	572	508	498	417	944	851

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