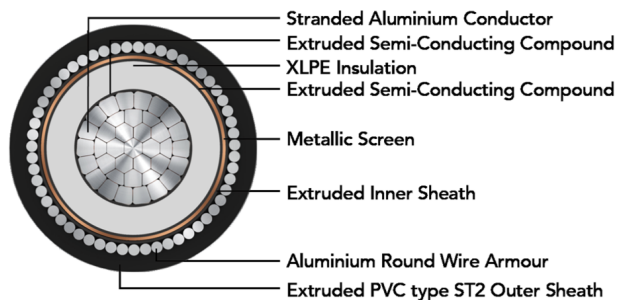


POLYCAB MV SC AL IS 7098-2, 3.8/6.6 KV(E) Medium Voltage Single Core Aluminium Armoured Cable, 3.8/6.6 KV (E) AC



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 3.8/6.6 KV(E) XLPE insulated with aluminium conductor 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: 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: 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

13kV AC 50 Hz

Impulse voltage Test

60kV

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DIMENSIONS AND WEIGHTS:

Product Code A2XWαY	No. of Cores No.	Core Cross sectional Area mm ²	Nominal Diameter			Weight (Approx.) Kg/Km
			Under armour mm	Over armour mm	Overall mm	
MVIS15AXAWY2001C025SA001S	1C	25	13.9	17.1	19.9	488
MVIS15AXAWY2001C035SA001S	1C	35	15.1	18.3	21.1	549
MVIS15AXAWY2001C050SA001S	1C	50	16.6	19.8	22.6	640
MVIS15AXAWY2001C070SA001S	1C	70	18.2	21.4	24.2	741
MVIS15AXAWY2001C095SA001S	1C	95	20.0	23.2	26.0	869
MVIS15AXAWY2001C120SA001S	1C	120	21.6	24.8	27.6	986
MVIS15AXAWY2001C150SA001S	1C	150	23.3	26.5	29.6	1147
MVIS15AXAWY2001C185SA001S	1C	185	25.0	28.2	31.3	1296
MVIS15AXAWY2001C240SA001S	1C	240	27.6	31.6	34.8	1624
MVIS15AXAWY2001C300SA001S	1C	300	30.5	34.5	37.6	1911
MVIS15AXAWY2001C400SA001S	1C	400	34.3	38.3	41.8	2360
MVIS15AXAWY2001C500SA001S	1C	500	38.2	42.2	46.0	2883
MVIS15AXAWY2001C630SA001S	1C	630	41.6	46.6	50.7	3545
MVIS15AXAWY2001C800SA001S	1C	800	45.7	50.7	55.1	4231
MVIS15AXAWY2001C01KSA001S	1C	1000	50.4	55.4	60.1	5071

Product Code A2XFαY	No. of Cores No.	Core Cross sectional Area mm ²	Nominal Diameter			Weight (Approx.) Kg/Km
			Under armour mm	Over armour mm	Overall mm	
MVIS15AXAFY2001C025SA001S	1C	25	13.9	15.5	18.3	403
MVIS15AXAFY2001C035SA001S	1C	35	15.1	16.7	19.5	460
MVIS15AXAFY2001C050SA001S	1C	50	16.6	18.2	21.0	548
MVIS15AXAFY2001C070SA001S	1C	70	18.2	19.8	22.6	640
MVIS15AXAFY2001C095SA001S	1C	95	20.0	21.6	24.4	752
MVIS15AXAFY2001C120SA001S	1C	120	21.6	23.2	26.0	860
MVIS15AXAFY2001C150SA001S	1C	150	23.3	24.9	27.7	995
MVIS15AXAFY2001C185SA001S	1C	185	25.0	26.6	29.7	1151
MVIS15AXAFY2001C240SA001S	1C	240	27.6	29.2	32.4	1386
MVIS15AXAFY2001C300SA001S	1C	300	30.5	32.1	35.2	1652
MVIS15AXAFY2001C400SA001S	1C	400	34.3	35.9	39.4	2068

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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
MVIS15AXAFY2001C500SA001S	1C	500	38.2	39.8	43.3	2522
MVIS15AXAFY2001C630SA001S	1C	630	41.6	43.2	46.9	2999
MVIS15AXAFY2001C800SA001S	1C	800	45.7	47.3	51.4	3632
MVIS15AXAFY2001C01KSA001S	1C	1000	50.4	52.0	56.4	4412

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 ²	Ω/km	Ω/km	μF/km	A2XFaY	A2XWaY	A2XFaY	A2XWaY
1	25	1.2	1.539	0.21	0.41	0.43	0.13	0.13
1	35	0.868	1.113	0.23	0.39	0.41	0.12	0.13
1	50	0.641	0.822	0.27	0.36	0.38	0.11	0.12
1	70	0.443	0.568	0.30	0.34	0.36	0.11	0.11
1	95	0.32	0.410	0.35	0.33	0.34	0.10	0.11
1	120	0.253	0.325	0.38	0.31	0.33	0.10	0.10
1	150	0.206	0.264	0.42	0.30	0.32	0.10	0.10
1	185	0.164	0.211	0.46	0.30	0.31	0.09	0.10
1	240	0.125	0.161	0.51	0.29	0.30	0.09	0.09
1	300	0.1	0.129	0.54	0.28	0.29	0.09	0.09
1	400	0.0778	0.101	0.56	0.28	0.29	0.09	0.09
1	500	0.0605	0.079	0.60	0.27	0.28	0.08	0.09
1	630	0.0469	0.061	0.66	0.26	0.28	0.08	0.09
1	800	0.0367	0.049	0.73	0.26	0.27	0.08	0.09
1	1000	0.0291	0.039	0.79	0.26	0.27	0.08	0.08

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
25	99	101	88	87	115	118

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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	117	120	104	103	139	142
50	138	141	123	120	166	169
70	168	172	149	146	208	212
95	200	204	177	172	252	256
120	227	230	201	195	292	296
150	252	255	223	215	329	333
185	285	287	251	241	380	383
240	326	323	286	270	448	444
300	365	357	319	298	511	502
400	412	397	359	329	593	574
500	461	436	401	360	680	647
630	514	475	445	390	777	725
800	552	495	476	403	863	780
1000	595	523	509	423	954	846

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