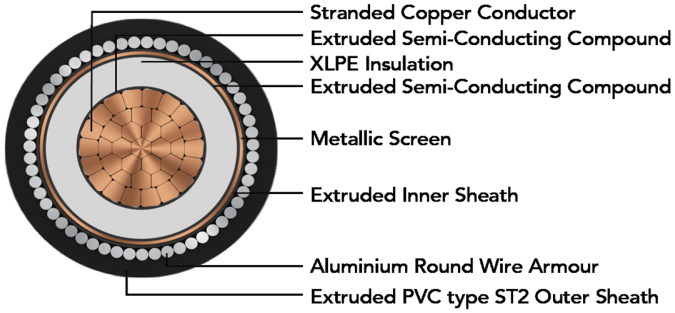
POLYCAB MV SC CU IS 7098-2, 3.8/6.6 KV(E)

Medium Voltage Single Core Copper 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 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: 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 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 Retardent
- UV resistant
- High life

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

NOTES

- Inner sheath available with FR/ FRLS
- Outer/ Inner available with FR/FRLS

Test Voltage
13kV AC 50 Hz

Impulse voltage test
60 kV

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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.)
2XWaY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS15CXAWY2001C025SA001S	1C	25	13.9	17.1	19.9	647
MVIS15CXAWY2001C035SA001S	1C	35	15.1	18.3	21.1	769
MVIS15CXAWY2001C050SA001S	1C	50	16.6	19.8	22.6	958
MVIS15CXAWY2001C070SA001S	1C	70	18.2	21.4	24.2	1180
MVIS15CXAWY2001C095SA001S	1C	95	20.0	23.2	26.0	1467
MVIS15CXAWY2001C120SA001S	1C	120	21.6	24.8	27.6	1741
MVIS15CXAWY2001C150SA001S	1C	150	23.3	26.5	29.6	2100
MVIS15CXAWY2001C185SA001S	1C	185	25.0	28.2	31.3	2461
MVIS15CXAWY2001C240SA001S	1C	240	27.6	31.6	34.8	3141
MVIS15CXAWY2001C300SA001S	1C	300	30.5	34.5	37.6	3831
MVIS15CXAWY2001C400SA001S	1C	400	34.3	38.3	41.8	4868
MVIS15CXAWY2001C500SA001S	1C	500	38.2	42.2	46.0	6076
MVIS15CXAWY2001C630SA001S	1C	630	41.6	46.6	50.7	7523
MVIS15CXAWY2001C800SA001S	1C	800	45.7	50.7	55.1	9279
MVIS15CXAWY2001C01KSA001S	1C	1000	50.4	55.4	60.1	11379

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight
			Under armour	Over armour	Overall	(Approx.)
2XFaY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS15CXAFY2001C025SA001S	1C	25	13.9	15.5	18.3	562
MVIS15CXAFY2001C035SA001S	1C	35	15.1	16.7	19.5	681
MVIS15CXAFY2001C050SA001S	1C	50	16.6	18.2	21.0	867
MVIS15CXAFY2001C070SA001S	1C	70	18.2	19.8	22.6	1079
MVIS15CXAFY2001C095SA001S	1C	95	20.0	21.6	24.4	1351
MVIS15CXAFY2001C120SA001S	1C	120	21.6	23.2	26.0	1615
MVIS15CXAFY2001C150SA001S	1C	150	23.3	24.9	27.7	1948
MVIS15CXAFY2001C185SA001S	1C	185	25.0	26.6	29.7	2315
MVIS15CXAFY2001C240SA001S	1C	240	27.6	29.2	32.4	2903
MVIS15CXAFY2001C300SA001S	1C	300	30.5	32.1	35.2	3572
MVIS15CXAFY2001C400SA001S	1C	400	34.3	35.9	39.4	4576

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Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight
			Under armour	Over armour	Overall	(Approx.)
2XFaY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS15CXAFY2001C500SA001S	1C	500	38.2	39.8	43.3	5715
MVIS15CXAFY2001C630SA001S	1C	630	41.6	43.2	46.9	6977
MVIS15CXAFY2001C800SA001S	1C	800	45.7	47.3	51.4	8680
MVIS15CXAFY2001C01KSA001S	1C	1000	50.4	52.0	56.4	10720

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	
					2XFaY	2XWaY	2XFaY	2XWaY
1	25	0.727	0.932	0.21	0.41	0.43	0.13	0.13
1	35	0.524	0.672	0.23	0.39	0.41	0.12	0.13
1	50	0.387	0.496	0.27	0.36	0.38	0.11	0.12
1	70	0.268	0.344	0.30	0.34	0.36	0.11	0.11
1	95	0.193	0.248	0.35	0.33	0.34	0.10	0.11
1	120	0.153	0.197	0.38	0.31	0.33	0.10	0.10
1	150	0.124	0.159	0.42	0.30	0.32	0.10	0.10
1	185	0.0991	0.128	0.46	0.30	0.31	0.09	0.10
1	240	0.0754	0.098	0.51	0.29	0.30	0.09	0.09
1	300	0.0601	0.078	0.54	0.28	0.29	0.09	0.09
1	400	0.047	0.062	0.56	0.28	0.29	0.09	0.09
1	500	0.0366	0.049	0.60	0.27	0.28	0.08	0.09
1	630	0.0283	0.038	0.66	0.26	0.28	0.08	0.09
1	800	0.0221	0.031	0.73	0.26	0.27	0.08	0.09
1	1000	0.0176	0.026	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	127	130	113	111	148	151

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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	151	155	135	132	179	183
50	178	181	158	154	214	218
70	216	220	192	187	267	271
95	256	260	227	220	323	327
120	290	292	257	247	374	376
150	323	323	285	272	422	422
185	362	359	319	302	484	481
240	411	398	361	333	565	550
300	456	435	400	363	641	615
400	508	474	443	393	734	690
500	559	509	486	420	828	761
630	611	543	529	446	929	834
800	638	549	549	447	1002	872
1000	672	569	575	460	1083	927

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