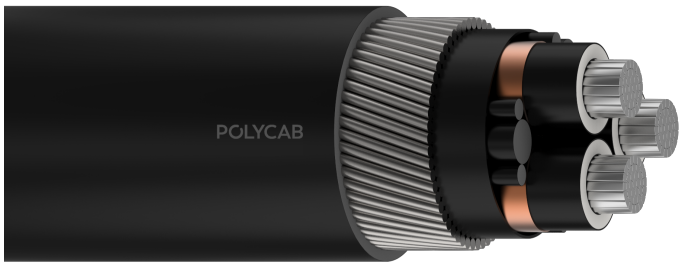
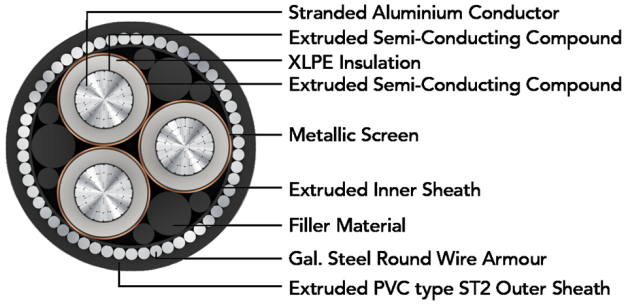
POLYCAB MV MC AL IS 7098-2, 19/33 KV(E)

Medium Voltage Multi Core Aluminium Armoured Cable, 19/33 KV (E) AC





Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB MV 19/33 KV(E) XLPE insulated with aluminium conductor multi core cable is suitable to use for power distribution for external and direct burial applications in power network system.

OUTSTANDING FEATURES

- Flame retardant
- High life
- UV resistant

CHARACTERISTICS

Voltage Rating
Nominal Voltage: 19/33 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

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

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: Galvanised steel Round/Flat Wire Armoured
- Outer Sheath: Extruded Polyvinyl Chloride

Colour: Black

Test Voltage
63kV AC 50 Hz

Impulse test Voltage
170 KV

OUR ACCREDITATIONS

APPROVAL

NOTES

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

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POLYCAB
IDEAS. CONNECTED.

DIMENSIONS AND WEIGHTS:

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight
			Under armour	Over armour	Overall	(Approx.)
A2XWY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS13AXSWY2003C035SA001S	3C	35	58.6	64.9	70.0	7129
MVIS13AXSWY2003C050SA001S	3C	50	62.0	68.3	73.6	7769
MVIS13AXSWY2003C070SA001S	3C	70	65.4	71.7	77.4	8518
MVIS13AXSWY2003C095SA001S	3C	95	69.3	75.6	81.6	9363
MVIS13AXSWY2003C120SA001S	3C	120	72.6	80.6	86.6	11306
MVIS13AXSWY2003C150SA001S	3C	150	76.4	84.4	90.4	12093
MVIS13AXSWY2003C185SA001S	3C	185	79.9	87.9	93.9	12990
MVIS13AXSWY2003C240SA001S	3C	240	85.3	93.3	99.3	14336
MVIS13AXSWY2003C300SA001S	3C	300	90.7	98.7	104.7	15862
MVIS13AXSWY2003C400SA001S	3C	400	97.6	105.6	111.6	17789
MVIS13AXSWY2003C500SA001S	3C	500	104.7	112.7	118.7	19981
MVIS13AXSWY2003C630SA001S	3C	630	112.0	120.0	126.0	22236

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight
			Under armour	Over armour	Overall	(Approx.)
A2XFY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS13AXSFY2003C035SA001S	3C	35	58.6	60.2	65.3	4415
MVIS13AXSFY2003C050SA001S	3C	50	62.0	63.6	68.6	4851
MVIS13AXSFY2003C070SA001S	3C	70	65.4	67.0	72.3	5406
MVIS13AXSFY2003C095SA001S	3C	95	69.3	70.9	76.5	6056
MVIS13AXSFY2003C120SA001S	3C	120	72.6	74.2	79.9	6610
MVIS13AXSFY2003C150SA001S	3C	150	76.4	78.0	84.0	7300
MVIS13AXSFY2003C185SA001S	3C	185	79.9	81.5	87.5	7957
MVIS13AXSFY2003C240SA001S	3C	240	85.3	86.9	92.9	8983
MVIS13AXSFY2003C300SA001S	3C	300	90.7	92.3	98.3	10110
MVIS13AXSFY2003C400SA001S	3C	400	97.6	99.2	105.2	11637
MVIS13AXSFY2003C500SA001S	3C	500	104.7	106.3	112.3	13349

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Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight
			Under armour	Over armour	Overall	(Approx.)
A2XFY	No.	mm^2	mm	mm	mm	Kg/Km
MVIS13AXSFY2003C630SA001S	3C	630	112.0	113.6	119.6	15203

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	A2XFY	A2XWY	A2XFY	A2XWY
1	35	0.868	1.113	0.11	0.45	0.45	0.142	0.142
1	50	0.641	0.822	0.13	0.42	0.42	0.131	0.131
1	70	0.443	0.568	0.14	0.40	0.40	0.125	0.125
1	95	0.32	0.410	0.15	0.38	0.38	0.119	0.119
1	120	0.253	0.325	0.17	0.36	0.36	0.114	0.114
1	150	0.206	0.264	0.18	0.35	0.35	0.110	0.110
1	185	0.164	0.211	0.19	0.34	0.34	0.106	0.106
1	240	0.125	0.161	0.21	0.32	0.32	0.102	0.102
1	300	0.1	0.129	0.23	0.31	0.31	0.098	0.098
1	400	0.0778	0.101	0.26	0.30	0.30	0.094	0.094
1	500	0.0605	0.079	0.28	0.29	0.29	0.091	0.091
1	630	0.0469	0.061	0.31	0.28	0.28	0.089	0.089

CURRENT CARRYING CAPACITY:

Nominal area of conductor	Buried direct in ground	In a buried duct	In air
Sqmm	A	A	A
35	111	97	127
50	130	116	152
70	159	142	189

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Nominal area of conductor	Buried direct in ground	In a buried duct	In air
Sqmm	A	A	A
95	189	169	227
120	215	192	262
150	239	214	294
185	270	245	336
240	312	282	393
300	351	317	448
400	400	361	519
500	454	408	598

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