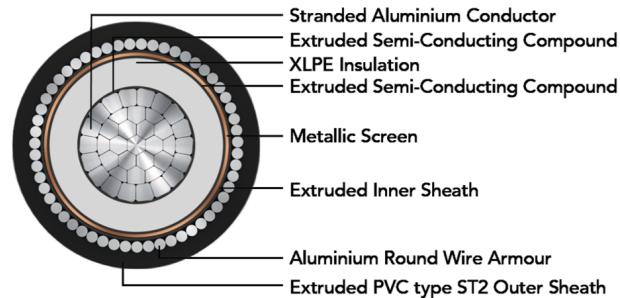


# POLY CAB MV SC AL IS 7098-2, 19/33 KV(E)

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

**POLY CAB**  
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Images not to scale. Follow table for dimensions

### APPLICATION

POLY CAB MV 19/33 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: 19/33 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



### APPROVAL



### NOTES

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

#### Test Voltage

63kV AC 50 Hz

#### Impulse test Voltage

170 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 <sup>2</sup>	mm	mm	mm	Kg/Km
MVIS13AXAWY2001C035SA001S	1C	35	27.3	31.3	34.4	1294
MVIS13AXAWY2001C050SA001S	1C	50	28.8	32.8	36.0	1424
MVIS13AXAWY2001C070SA001S	1C	70	30.4	34.4	37.5	1558
MVIS13AXAWY2001C095SA001S	1C	95	32.2	36.2	39.7	1756
MVIS13AXAWY2001C120SA001S	1C	120	33.8	37.8	41.2	1914
MVIS13AXAWY2001C150SA001S	1C	150	35.5	39.5	42.9	2089
MVIS13AXAWY2001C185SA001S	1C	185	37.4	41.4	45.1	2330
MVIS13AXAWY2001C240SA001S	1C	240	39.8	43.8	47.6	2623
MVIS13AXAWY2001C300SA001S	1C	300	42.3	47.3	51.4	3134
MVIS13AXAWY2001C400SA001S	1C	400	45.5	50.5	54.9	3625
MVIS13AXAWY2001C500SA001S	1C	500	49.0	54.0	58.4	4149
MVIS13AXAWY2001C630SA001S	1C	630	52.4	57.4	62.1	4743
MVIS13AXAWY2001C800SA001S	1C	800	56.7	63.0	68.0	5815
MVIS13AXAWY2001C01KSA001S	1C	1000	61.0	67.3	72.6	6706

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
A2XFaY	No.	mm <sup>2</sup>	mm	mm	mm	Kg/Km
MVIS13AXAFY2001C035SA001S	1C	35	27.3	28.9	32.0	1064
MVIS13AXAFY2001C050SA001S	1C	50	28.8	30.4	33.6	1176
MVIS13AXAFY2001C070SA001S	1C	70	30.4	32.0	35.1	1299
MVIS13AXAFY2001C095SA001S	1C	95	32.2	33.8	36.9	1454
MVIS13AXAFY2001C120SA001S	1C	120	33.8	35.4	38.8	1622
MVIS13AXAFY2001C150SA001S	1C	150	35.5	37.1	40.5	1786
MVIS13AXAFY2001C185SA001S	1C	185	37.4	39.0	42.4	1981
MVIS13AXAFY2001C240SA001S	1C	240	39.8	41.4	45.2	2286
MVIS13AXAFY2001C300SA001S	1C	300	42.3	43.9	47.7	2581
MVIS13AXAFY2001C400SA001S	1C	400	45.5	47.1	51.2	3026
MVIS13AXAFY2001C500SA001S	1C	500	49.0	50.6	55.0	3557
MVIS13AXAFY2001C630SA001S	1C	630	52.4	54.0	58.4	4069

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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 <sup>2</sup>	mm	mm	mm	Kg/Km
MVIS13AXAFY2001C800SA001S	1C	800	56.7	58.3	63.0	4816
MVIS13AXAFY2001C01KSA001S	1C	1000	61.0	62.6	67.6	5635

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	
					μF/km	mH/km	A2XFaY	A2XWaY
No.	mm <sup>2</sup>	Ω/km	Ω/km	μF/km	A2XFaY	A2XWaY	A2XFaY	A2XWaY
1	35	0.868	1.113	0.11	0.49	0.50	0.15	0.16
1	50	0.641	0.822	0.13	0.45	0.47	0.14	0.15
1	70	0.443	0.568	0.14	0.43	0.44	0.14	0.14
1	95	0.32	0.410	0.15	0.41	0.42	0.13	0.13
1	120	0.253	0.325	0.17	0.39	0.41	0.12	0.13
1	150	0.206	0.264	0.18	0.38	0.39	0.12	0.12
1	185	0.164	0.211	0.19	0.37	0.38	0.12	0.12
1	240	0.125	0.161	0.21	0.35	0.36	0.11	0.11
1	300	0.1	0.129	0.23	0.34	0.36	0.11	0.11
1	400	0.0778	0.101	0.26	0.33	0.34	0.10	0.11
1	500	0.0605	0.079	0.28	0.32	0.33	0.10	0.10
1	630	0.0469	0.061	0.31	0.31	0.32	0.10	0.10
1	800	0.0367	0.049	0.34	0.30	0.32	0.09	0.10
1	1000	0.0291	0.039	0.38	0.29	0.31	0.09	0.10

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**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

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**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