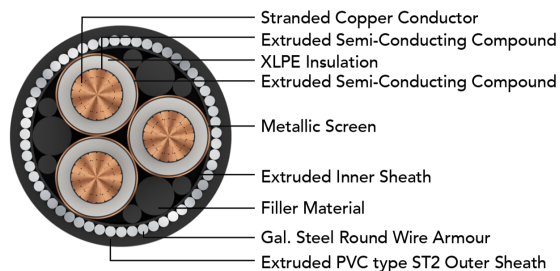


# POLYCAB MV AL IEC 60502-2 12/20 KV

## Medium Voltage Aluminium Armoured Cable, 12/20 (24) KV AC



Images not to scale. Follow table for dimensions

### APPLICATION

POLYCAB MV 12/20 KV XLPE insulated with Aluminium conductor single & multi core cable is suitable to use for power networks, underground and in cable ducting.

### CHARACTERISTICS

#### Voltage Rating

Nominal Voltage: 12/20 kV

#### Operation Temperature

Max. operating temperature: +90°C

Max. Short Circuit Temperature: 250°C

### CONSTRUCTION

- Conductor: Circular Compacted Aluminium conductor as per IEC 60228, 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:

Single Core: Aluminium Round Wire Armoured (AWA)

Multi Core: Galvanised Steel Round Wire (SWA)

Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black

#### Bending Radius:

Fixed Installation: 12D

D is overall diameter of cable

#### Test Voltage

42kV AC 50 Hz

#### Impulse Test Voltage

Peak 125kV AC

### OUTSTANDING FEATURES

- Flame retardant
- High life
- UV resistant
- Oil resistant

### STANDARD FOLLOWS

IEC 60228

IEC 60502-2

BS 6622

### COMPLIANCE

- Conductor resistance IEC 60228
- Insulation resistance IEC 60502-2
- Flammability test IEC 60332-1-2
- Partial Discharge test IEC 60502-2

### OUR ACCREDITATIONS



### APPROVAL



POLYCAB MV AL IEC 60502-2 12/20 KV  
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AC



DIMENSIONS AND WEIGHTS:

Product Code	No. of Cores	Core Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
	No.	mm <sup>2</sup>	mm	mm	mm	Kg/Km
MVIE19AXAWY2001C050SA001P	1	50	23.8	27.0	31.0	1150
MVIE19AXAWY2001C070SA001P	1	70	25.4	29.4	33.0	1350
MVIE19AXAWY2001C095SA001P	1	95	27.2	31.2	35.0	1500
MVIE19AXAWY2001C120SA001P	1	120	28.8	32.8	37.0	1650
MVIE19AXAWY2001C150SA001P	1	150	30.5	34.5	39.0	1850
MVIE19AXAWY2001C185SA001P	1	185	32.2	36.2	41.0	2050
MVIE19AXAWY2001C240SA001P	1	240	34.6	38.6	43.0	2350
MVIE19AXAWY2001C300SA001P	1	300	37.3	42.3	47.0	2800
MVIE19AXAWY2001C400SA001P	1	400	40.5	45.5	51.0	3250
MVIE19AXAWY2001C500SA001P	1	500	44.0	49.0	54.0	3800
MVIE19AXAWY2001C630SA001P	1	630	47.4	52.4	58.0	4400
MVIE19AXAWY2001C800SA001P	1	800	51.7	56.7	63.0	5150
MVIE19AXAWY2001C01KSA001P	1	1000	56.2	61.2	67.0	6000
MVIE19AXSWY2003C050SA001P	3	50	49.6	54.6	60.0	5400
MVIE19AXSWY2003C070SA001P	3	70	53.1	58.1	64.0	6000
MVIE19AXSWY2003C095SA001P	3	95	57.1	62.1	69.0	6750
MVIE19AXSWY2003C120SA001P	3	120	60.5	66.8	73.0	8200
MVIE19AXSWY2003C150SA001P	3	150	64.4	70.7	78.0	9050
MVIE19AXSWY2003C185SA001P	3	185	68.2	74.5	82.0	10000
MVIE19AXSWY2003C240SA001P	3	240	73.8	80.1	88.0	11250
MVIE19AXSWY2003C300SA001P	3	300	79.2	85.5	93.0	12650
MVIE19AXSWY2003C400SA001P	3	400	86.5	92.8	101.0	14500

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	Continuous Current Rating					
							In ground at 20°C		In Ducts		In air at 30°C	
							Flat	Trefoil	Flat	Trefoil	Flat	Trefoil
No.	mm <sup>2</sup>	Ω/km	Ω/km	μF/km	mH/km	Ω/km	Amps					
1	50	0.641	0.822	0.17	0.44	0.14	157	152	146	142	189	184
1	70	0.443	0.568	0.19	0.42	0.13	192	186	178	176	236	230
1	95	0.320	0.410	0.21	0.40	0.13	229	221	213	210	287	280
1	120	0.253	0.325	0.23	0.38	0.12	260	252	242	240	332	324

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### AC

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	Continuous Current Rating					
							In ground at 20°C		In Ducts		In air at 30°C	
							Flat	Trefoil	Flat	Trefoil	Flat	Trefoil
No.	mm <sup>2</sup>	Ω/km	Ω/km	μF/km	mH/km	Ω/km	Amps					
1	150	0.206	0.264	0.25	0.37	0.12	288	281	271	267	376	368
1	185	0.164	0.211	0.27	0.36	0.11	324	317	307	303	432	424
1	240	0.125	0.161	0.30	0.34	0.11	373	367	356	351	511	502
1	300	0.100	0.129	0.33	0.34	0.11	419	414	402	397	586	577
1	400	0.0778	0.101	0.37	0.33	0.10	466	470	457	451	676	673
1	500	0.0605	0.080	0.44	0.26	0.08	525	530	510	505	760	750
1	630	0.0469	0.063	0.48	0.26	0.08	580	585	560	555	860	850
1	800	0.0367	0.051	0.53	0.25	0.08	650	655	620	615	960	950
1	1000	0.0291	0.042	0.59	0.24	0.07	715	705	670	665	1060	1050

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	Continuous Current Rating		
							In ground at 20°C	In Ducts	In air at 30°C
							Amps		
No.	mm <sup>2</sup>	Ω/km	Ω/km	μF/km	mH/km	Ω/km			
3	50	0.641	0.822	0.17	0.37	0.12	140	122	158
3	70	0.443	0.568	0.19	0.35	0.11	171	150	196
3	95	0.320	0.410	0.21	0.34	0.11	203	179	236
3	120	0.253	0.325	0.23	0.32	0.10	232	205	273
3	150	0.206	0.264	0.25	0.31	0.10	260	231	309
3	185	0.164	0.211	0.27	0.30	0.10	294	262	355
3	240	0.125	0.161	0.30	0.29	0.09	340	305	415
3	300	0.100	0.129	0.33	0.28	0.09	384	346	475
3	400	0.0778	0.101	0.37	0.27	0.09	438	398	552

Maximum conductor temperature 90°C  
 Ambient air temperature 30°C  
 Ground temperature 20°C  
 Depth of laying 0.8 m  
 Thermal resistivity of soil 1.5 K.m/W  
 Thermal resistivity of earthenware ducts 1.2 K.m/W

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De-Rating Factor

Current rating de-rating factors for other than 30°C ambient air temperature.

Air Temperature	20	25	35	40	45	50	55	60
De-rating factor	1.08	1.04	0.96	0.91	0.87	0.82	0.76	0.71

Current rating de-rating factors for other than 20°C ground temperature.

Ground Temperature	10	15	25	30	35	40	45	50
De-rating factor	1.07	1.04	0.96	0.93	0.89	0.85	0.8	0.76

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