



Images not to scale. Follow table for dimensions

## APPLICATION

POLY CAB MV AL BS 7835 6.35/11 KV XLPE insulated with aluminium conductor single & multi core cable is designed for low smoke & low halogen evolution and this suitable to use for power networks, underground and in cable ducting.

## CHARACTERISTICS

### Voltage Rating

Nominal Voltage: 6.35/11 (12) kV

### Operation Temperature

Max. operating temperature: +90°C

Max. Short Circuit Temperature: 250°C

### Bending Radius:

Single core cable

Fixed Installation: 15 x Overall diameter

Three core cable

Fixed Installation: 12 x Overall diameter

## CONSTRUCTION

- Conductor: Circular Compacted Aluminium conductor as per BS EN/IEC 60228, class 2
  - Conductor Screen: Extruded Semi-conductive compound
  - Insulation: XLPE as per BS 7655-1.3 or EPR as per BS 7655-1.2
  - Non-Metallic Insulation Screen: Extruded Semi-conductive compound
  - Metallic Insulation Screen: Copper tape screen
  - Inner Covering: Extruded LSZH (Low Smoke Zero Halogen) compound
  - Armour:
- Single Core: Aluminium Round Wire Armoured (AWA)  
Multi Core: Galvanised Steel Round Wire Armoured (SWA)
- Outer Sheath: Extruded LSZH compound as per BS 7655-6.1, Colour: Black

### Test Voltage

25.5kV AC

### Impulse Test Voltage

Peak 95kV AC

## OUTSTANDING FEATURES

- Flame retardant
- High life
- UV resistant
- Oil resistant
- Low smoke emission

## STANDARD FOLLOWS

BS EN/IEC 60228

BS 7655-1.3/1.2

BS 7655-6.1

BS 7835

## COMPLIANCE

Conductor resistance BS EN/IEC 60228

Insulation resistance BS 7835

Flame Retardant test BS EN/IEC 60332-1-2

Partial Discharge test BS 7835

Smoke Emission test BS EN/IEC 61034-2

## OUR ACCREDITATIONS



## APPROVAL



**POLY CAB MV AL BS 7835 6.35/11 KV  
Medium Voltage Armoured Cable, 6.35/11 (12) KV AC**

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**WEIGHT & DIMENSION DATA :**

Product Code	No. of Cores	Nominal Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
		mm <sup>2</sup>	mm	mm	mm	Kg/Km
MVBS22AXAWLS001C070S	1	70	20.8	24.0	28.0	950
MVBS22AXAWLS001C095S	1	95	22.6	25.8	30.0	1150
MVBS22AXAWLS001C120S	1	120	24.2	27.4	31.0	1250
MVBS22AXAWLS001C150S	1	150	25.9	29.1	33.0	1450
MVBS22AXAWLS001C185S	1	185	28.0	32.0	36.0	1750
MVBS22AXAWLS001C240S	1	240	30.4	34.4	39.0	2000
MVBS22AXAWLS001C300S	1	300	32.9	36.9	41.0	2300
MVBS22AXAWLS001C400S	1	400	36.1	40.1	45.0	2750
MVBS22AXAWLS001C500S	1	500	39.4	44.4	49.0	3350
MVBS22AXAWLS001C630S	1	630	43.2	48.2	53.0	4000
MVBS22AXAWLS001C800S	1	800	47.3	52.3	58.0	4700
MVBS22AXAWLS001C01KS	1	1000	52.0	57.0	63.0	5550
MVBS22AXSWLS003C070S	3	70	43.6	48.6	54.0	4650
MVBS22AXSWLS003C095S	3	95	47.5	52.5	58.0	5300
MVBS22AXSWLS003C120S	3	120	51.2	56.2	62.0	6000
MVBS22AXSWLS003C150S	3	150	55.0	60.0	66.0	6700
MVBS22AXSWLS003C185S	3	185	58.6	63.6	70.0	7400
MVBS22AXSWLS003C240S	3	240	63.9	70.2	77.0	9400
MVBS22AXSWLS003C300S	3	300	69.7	76.0	83.0	10800
MVBS22AXSWLS003C400S	3	400	76.6	82.9	90.0	12600
MVBS22AXSWLS003C500S	3	500	83.7	90.0	98.0	14600
MVBS22AXSWLS003C630S	3	630	91.4	97.7	106.0	16900

**Electrical Characteristics:**

No. of Cores	Nominal Cross sectional Area	Max. DC Resistance at 20°C	Max. AC Resistance at 90°C	Short circuit current rating	Capacitance (Approx.)	Inductance (Approx.)	Reactance (Approx.)
							mm <sup>2</sup>
							Ω/km
1	70	0.443	0.568	6.61	0.26	0.38	0.12
1	95	0.320	0.411	8.98	0.30	0.37	0.12

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**POLY CAB MV AL BS 7835 6.35/11 KV**  
**Medium Voltage Armoured Cable, 6.35/11 (12) KV AC**

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No. of Cores	Nominal Cross sectional Area	Max. DC Resistance at 20°C	Max. AC Resistance at 90°C	Short circuit current rating	Capacitance (Approx.)	Inductance (Approx.)	Reactance (Approx.)
	mm <sup>2</sup>	Ω/km	Ω/km	kA/s	μF/km	mH/km	Ω/km
1	120	0.253	0.325	11.34	0.33	0.35	0.11
1	150	0.206	0.265	14.17	0.36	0.34	0.11
1	185	0.164	0.211	17.48	0.39	0.34	0.11
1	240	0.125	0.161	22.68	0.44	0.32	0.10
1	300	0.100	0.129	28.35	0.49	0.31	0.10
1	400	0.0778	0.101	37.79	0.55	0.30	0.09
1	500	0.0605	0.080	47.24	0.670	0.245	0.077
1	630	0.0469	0.063	59.52	0.739	0.239	0.075
1	800	0.0367	0.051	75.59	0.823	0.231	0.073
1	1000	0.0291	0.042	94.48	0.911	0.225	0.071
3	70	0.443	0.568	6.61	0.26	0.31	0.098
3	95	0.320	0.411	8.98	0.30	0.30	0.094
3	120	0.253	0.325	11.34	0.33	0.29	0.090
3	150	0.206	0.265	14.17	0.36	0.28	0.088
3	185	0.164	0.211	17.48	0.39	0.27	0.086
3	240	0.125	0.161	22.68	0.44	0.26	0.083
3	300	0.100	0.129	28.35	0.49	0.26	0.081
3	400	0.0778	0.101	37.79	0.55	0.25	0.078
3	500	0.0605	0.080	47.24	0.61	0.244	0.077
3	630	0.0469	0.063	59.52	0.67	0.239	0.075

**Current Carrying Capacity :**

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No. of core	Nominal cross sectional area	Continues Current Rating					
		Buried direct in the ground		In single-way ducts		In air	
		Trefoil	Flat spaced	Trefoil ducts	Flat touching	Trefoil	Flat touching
	mm <sup>2</sup>	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.
1	70	186	192	176	178	230	236
1	95	221	229	210	213	280	287
1	120	252	260	240	242	324	332
1	150	281	288	267	271	368	376
1	185	317	324	303	307	424	432
1	240	367	373	351	356	502	511
1	300	414	419	397	402	577	586
1	400	470	466	451	457	673	676
1	500	498	471	433	389	748	712
1	630	555	514	481	421	856	798
1	800	597	536	514	436	949	859
1	1000	643	565	550	457	1049	931

No. of core	Nominal cross sectional area	Continues current capacity		
		In ground at 20°C		In a buried duct
		mm <sup>2</sup>	Amp.	Amp.
3	70		171	150
3	95		204	180
3	120		232	206
3	150		259	231
3	185		293	262
3	240		338	304
3	300		380	343
3	400		432	393
3	500		494	435

Maximum conductor temperature

90°C

Ambient air temperature

30°C

Ground temperature

20°C

Depth of laying

0.8 m

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Thermal resistivity of soil	1.5 K.m/W
Thermal resistivity of earthenware ducts	1.2 K.m/W

**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