POLYCAB MV AL BS 6622 19/33 KV
Medium Voltage Armoured Cable, 19/33 (36) KV AC

Images not to scale. Follow table for dimensions

APPLICATION
POLYCAB MV AL BS 6622 19/33 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: 19/33 (36) 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 diamete

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 Polyvinyl Chloride or Halogen free compound
• Armour:
Single Core: Aluminium Round Wire Armoured (AWA)
Multi Core: Galvanised Steel Round Wire Armoured (SWA)
• Outer Sheath: Extruded Polyvinyl Chloride as per BS 7655-4.2 or Medium density polyethylene as per BS 7655-10.1, Colour: Black

Test Voltage
76kV AC
Impulse Test Voltage
Peak 194kV AC

OUTSTANDING FEATURES
• Flame retardant
• High life
• UV resistant
• Oil resistant

STANDARD FOLLOWS
BS EN/IEC 60228
BS 7655-1.3/1.2
BS 7655-4.2/10.1
BS 6622

COMPLIANCE
Conductor resistance BS EN/IEC 60228
Insulation resistance BS 6622
Flame Retardant test EN/IEC 60332-1-2
Partial Discharge test BS 6622

OUR ACCREDITATIONS
NABL

APPROVAL
FQC CE CPR COMPLIANT

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POLYCAB
IDEAS. CONNECTED.

WEIGHT & DIMENSION DATA :

Product Code	No. of Cores	Nominal Cross sectional Area	Nominal Diameter			Weight (Approx.)
			Under armour	Over armour	Overall	
		mm^2	mm	Mm	mm	Kg/Km
MVBS20AXAWY2001C070S	1	70	30.4	34.4	39.0	1750
MVBS20AXAWY2001C095S	1	95	32.2	36.2	41.0	1900
MVBS20AXAWY2001C120S	1	120	33.8	37.8	42.0	2100
MVBS20AXAWY2001C150S	1	150	35.5	39.5	44.0	2300
MVBS20AXAWY2001C185S	1	185	37.2	42.2	47.0	2650
MVBS20AXAWY2001C240S	1	240	40.0	45.0	50.0	3000
MVBS20AXAWY2001C300S	1	300	42.5	47.5	53.0	3400
MVBS20AXAWY2001C400S	1	400	45.7	50.7	56.0	3850
MVBS20AXAWY2001C500S	1	500	49.0	54.0	60.0	4400
MVBS20AXAWY2001C630S	1	630	52.8	57.8	64.0	5100
MVBS20AXAWY2001C800S	1	800	56.9	61.9	68.0	5850
MVBS20AXAWY2001C01KS	1	1000	61.2	66.2	72.0	6750
MVBS20AXSWY2003C070S	3	70	64.3	70.6	77.0	8700
MVBS20AXSWY2003C095S	3	95	68.1	74.4	81.0	9450
MVBS20AXSWY2003C120S	3	120	71.5	77.8	85.0	10250
MVBS20AXSWY2003C150S	3	150	75.2	81.5	89.0	11100
MVBS20AXSWY2003C185S	3	185	78.8	85.1	93.0	12050
MVBS20AXSWY2003C240S	3	240	84.2	90.5	99.0	13400
MVBS20AXSWY2003C300S	3	300	90.0	96.3	105.0	15000
MVBS20AXSWY2003C400S	3	400	96.9	103.2	112.0	17050
MVBS20AXSWY2003C500S	3	500	104.0	110.3	120.0	19250
MVBS20AXSWY2003C630S	3	630	111.3	117.6	127.0	21700

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^2	Ω/km	Ω/km	kA/s	µF/km	mH/km	Ω/km
1	70	0.443	0.568	6.61	0.15	0.45	0.14
1	95	0.320	0.411	8.98	0.16	0.43	0.13
1	120	0.253	0.325	11.34	0.18	0.41	0.13

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	mm^2	Ω/km	Ω/km	kA/s	µF/km	mH/km	Ω/km
1	150	0.206	0.265	14.17	0.19	0.40	0.12
1	185	0.164	0.211	17.48	0.21	0.39	0.12
1	240	0.125	0.161	22.68	0.23	0.37	0.12
1	300	0.100	0.129	28.35	0.25	0.36	0.11
1	400	0.0778	0.101	37.79	0.28	0.35	0.11
1	500	0.0605	0.080	47.24	0.321	0.283	0.089
1	630	0.0469	0.063	59.52	0.350	0.274	0.086
1	800	0.0367	0.051	75.59	0.386	0.263	0.083
1	1000	0.0291	0.042	94.48	0.424	0.254	0.080
3	70	0.443	0.568	6.61	0.15	0.39	0.12
3	95	0.320	0.411	8.98	0.16	0.37	0.12
3	120	0.253	0.325	11.34	0.18	0.36	0.11
3	150	0.206	0.265	14.17	0.19	0.35	0.11
3	185	0.164	0.211	17.48	0.21	0.34	0.11
3	240	0.125	0.161	22.68	0.23	0.32	0.10
3	300	0.100	0.129	28.35	0.25	0.31	0.10
3	400	0.0778	0.101	37.79	0.28	0.30	0.09
3	500	0.0605	0.080	47.24	0.31	0.289	0.091
3	630	0.0469	0.063	59.52	0.33	0.281	0.088

Current Carrying Capacity

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^2	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

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		Buried direct in the ground		In single-way ducts		In air	
		Trefoil	Flat spaced	Trefoil ducts	Flat touching	Trefoil	Flat touching
	mm²	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.
1	500	483	450	415	367	746	705
1	630	536	489	458	396	847	787
1	800	586	525	513	434	953	868
1	1000	618	549	538	450	1038	936

No. of core	Nominal cross sectional area	Continues current capacity		
		In ground at 20°C	In a buried duct	In air
	mm²	Amp.	Amp.	Amp.
3	70	171	150	196
3	95	204	180	238
3	120	232	206	274
3	150	259	231	309
3	185	293	262	354
3	240	338	304	415
3	300	380	343	472
3	400	432	393	545
3	500	490	441	658

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

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