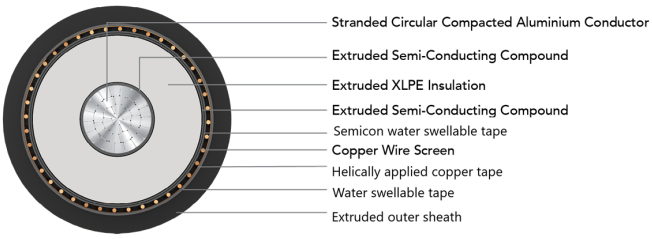
POLYCAB MV AL BS 7870-4-10 12.7/22 KV
Medium Voltage Copper wire screened Cable, 12.7/22 (24) KV AC



Images not to scale. Follow table for dimensions

APPLICATION
POLYCAB MV AL BS 7870-4-10 12.7/22 KV compacted aluminium conductor XLPE insulated, copper wire screened single core cable is designed to use for power networks, underground direct buried or in cable ducting.

CHARACTERISTICS
Voltage Rating
Nominal Voltage: 12.7/22 (24) kV

Operation Temperature
Max. operating temperature: +90°C
Max. Short Circuit Temperature: 250°C

Bending Radius:
Fixed Installation: 20 x Overall diameter

CONSTRUCTION
• Conductor: Circular Compacted aluminium conductor as per BS EN/IEC 60228, class 2
• Conductor Screen: Extruded Semi-conductive compound
• Insulation: Insulation: XLPE as per BS 7870-1
• EPR can be provided on demand as per BS 7870-1
• Non-Metallic Insulation Screen: Extruded Semi-conductive compound (Bonded or Cold strippble)
• Separation tape: Semicon water swellable tape
• Metallic Insulation Screen: Copper wire & Copper tape screen
• Separation tape: Plain water swellable tape
• Outer Sheath: Extruded medium density polyethylene or Low smoke zero halogen compound as per BS 7870-1, Colour: Black

Test Voltage
51kV AC

Impulse Test Voltage
Peak 144kV AC

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

STANDARD FOLLOWS
BS EN/IEC 60228
BS 7870-1
BS 7870-4-10

COMPLIANCE
Conductor resistance BS EN/IEC 60228
Insulation resistance BS 7870-4-10
Flame Retardant test BS EN/IEC 60332-1-2
Partial Discharge test BS 7870-4-10
Smoke Emission test BS EN/IEC 61034-2

OUR ACCREDITATIONS
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POLYCAB
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WEIGHT & DIMENSION DATA :

Product Code	No. of Cores	Nominal Cross sectional Area	Nominal area of metallic screen	Overall diameter (Approx.)	Weight (Approx.)
		mm^2	mm^2	mm	Kg/Km
MVBS19AXAWPM001C070S	1	70	35	29.3	1050
MVBS19AXAWPM001C095S	1	95	35	30.9	1150
MVBS19AXAWPM001C120S	1	120	35	32.5	1300
MVBS19AXAWPM001C150S	1	150	35	34.1	1400
MVBS19AXAWPM001C185S	1	185	35	35.8	1550
MVBS19AXAWPM001C240S	1	240	35	38.2	1800
MVBS19AXAWPM001C300S	1	300	35	40.5	2050
MVBS19AXAWPM001C400S	1	400	35	43.6	2400
MVBS19AXAWPM001C500S	1	500	35	46.8	2800
MVBS19AXAWPM001C630S	1	630	35	50.2	3250
MVBS19AXAWPM001C800S	1	800	35	57.5	3950
MVBS19AXAWPM001C01KS	1	1000	35	62.0	4650

Electrical Characteristics:

Nominal Cross sectional Area	Max. DC Resistance at 20°C	Max. AC Resistance at 90°C	Short circuit current rating of conductor	Short circuit current rating of metallic screen	Capacitance (Approx.)	Inductance (Approx.)	Reactance (Approx.)
mm^2	Ω/km	Ω/km	kA/s	kA/s	µF/km	mH/km	Ω/km
70	0.443	0.565	6.61	4.5	0.19	0.41	0.13
95	0.320	0.408	8.98	4.5	0.21	0.39	0.12
120	0.253	0.323	11.34	4.5	0.23	0.38	0.12
150	0.206	0.263	14.17	4.5	0.25	0.36	0.11
185	0.164	0.210	17.48	4.5	0.27	0.35	0.11
240	0.125	0.161	22.68	4.5	0.30	0.34	0.11
300	0.100	0.129	28.35	4.5	0.33	0.33	0.10
400	0.0778	0.101	37.79	4.5	0.37	0.31	0.10
500	0.0605	0.080	47.24	4.5	0.41	0.25	0.08
630	0.0469	0.064	59.52	4.5	0.45	0.24	0.08

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Nominal Cross sectional Area	Max. DC Resistance at 20°C	Max. AC Resistance at 90°C	Short circuit current rating of conductor	Short circuit current rating of metallic screen	Capacitance (Approx.)	Inductance (Approx.)	Reactance (Approx.)
mm²	Ω/km	Ω/km	kA/s	kA/s	µF/km	mH/km	Ω/km
800	0.0367	0.052	75.59	4.5	0.53	0.23	0.07
1000	0.0291	0.044	94.48	4.5	0.59	0.22	0.07

Current Carrying Capacity

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
mm²	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.
70	186	192	176	178	230	236
95	221	229	210	213	280	287
120	252	260	240	242	324	332
150	281	288	267	271	368	376
185	317	324	303	307	424	432
240	367	373	351	356	502	511
300	414	419	397	402	577	586
400	470	466	451	457	673	676
500	507	480	441	396	748	712
630	565	524	490	429	856	798
800	608	546	524	444	949	859
1000	655	575	560	465	1049	931

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