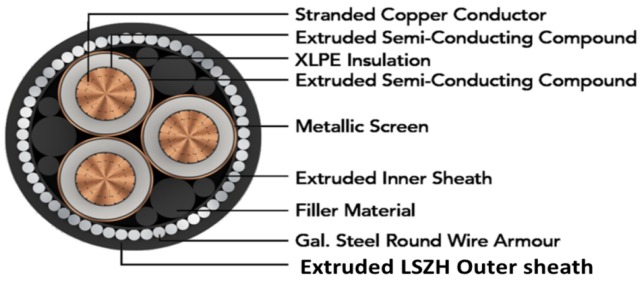
POLYCAB MV CU BS 7835 12.7/22 KV
Medium Voltage Armoured Cable, 12.7/22 (24) KV AC



Images not to scale. Follow table for dimensions

APPLICATION
POLYCAB MV CU BS 7835 12.7/22 KV XLPE insulated with copper 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: 12.7/22 (24) 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 Copper 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
51kV AC

Impulse Test Voltage
Peak 144kV 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
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
MVBS19CXAWLS001C070S	1	70	25.0	28.2	32.0	1800
MVBS19CXAWLS001C095S	1	95	26.8	30.8	35.0	2100
MVBS19CXAWLS001C120S	1	120	28.8	32.8	37.0	2450
MVBS19CXAWLS001C150S	1	150	30.5	34.5	39.0	2850
MVBS19CXAWLS001C185S	1	185	32.2	36.2	41.0	3250
MVBS19CXAWLS001C240S	1	240	34.6	38.6	43.0	3900
MVBS19CXAWLS001C300S	1	300	37.1	41.1	46.0	4600
MVBS19CXAWLS001C400S	1	400	40.7	45.7	51.0	5850
MVBS19CXAWLS001C500S	1	500	44.0	49.0	54.0	7050
MVBS19CXAWLS001C630S	1	630	47.4	52.4	58.0	8450
MVBS19CXAWLS001C800S	1	800	51.9	56.9	63.0	10300
MVBS19CXAWLS001C01KS	1	1000	56.2	61.2	67.0	12450
MVBS19CXSWLS003C070S	3	70	53.1	58.1	64.0	7350
MVBS19CXSWLS003C095S	3	95	56.9	61.9	68.0	8500
MVBS19CXSWLS003C120S	3	120	60.3	65.3	72.0	9650
MVBS19CXSWLS003C150S	3	150	64.4	70.7	78.0	11900
MVBS19CXSWLS003C185S	3	185	68.0	74.3	81.0	13350
MVBS19CXSWLS003C240S	3	240	73.4	79.7	87.0	15700
MVBS19CXSWLS003C300S	3	300	78.8	85.1	93.0	18250
MVBS19CXSWLS003C400S	3	400	85.7	92.0	100.0	21900
MVBS19CXAWLS003C500S	3	500	93.2	99.5	108.0	26100
MVBS19CXAWLS003C630S	3	630	100.5	106.8	116.0	30800

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	0.268	0.342	10.02	0.19	0.41	0.13
1	95	0.193	0.247	13.59	0.21	0.40	0.13
1	120	0.153	0.196	17.17	0.23	0.38	0.12

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	mm^2	Ω/km	Ω/km	kA/s	µF/km	mH/km	Ω/km
1	150	0.124	0.159	21.46	0.25	0.37	0.12
1	185	0.0991	0.128	26.47	0.27	0.36	0.11
1	240	0.0754	0.098	34.34	0.30	0.34	0.11
1	300	0.0601	0.080	42.93	0.33	0.33	0.10
1	400	0.047	0.064	57.23	0.37	0.33	0.10
1	500	0.0366	0.052	71.54	0.439	0.264	0.083
1	630	0.0283	0.042	90.14	0.481	0.255	0.080
1	800	0.0221	0.036	10.02	0.533	0.247	0.078
1	1000	0.0176	0.032	13.59	0.588	0.239	0.075
3	70	0.268	0.342	10.02	0.19	0.35	0.11
3	95	0.193	0.247	13.59	0.21	0.34	0.11
3	120	0.153	0.196	17.17	0.23	0.32	0.10
3	150	0.124	0.159	21.46	0.25	0.31	0.10
3	185	0.0991	0.128	26.47	0.27	0.30	0.10
3	240	0.0754	0.098	34.34	0.30	0.29	0.09
3	300	0.0601	0.080	42.93	0.33	0.28	0.09
3	400	0.047	0.064	57.23	0.37	0.27	0.09
3	500	0.0366	0.052	71.54	0.41	0.27	0.08
3	630	0.0283	0.042	90.14	0.45	0.26	0.08

Current Carrying Capacity

No. of core	Nominal cross sectional area	Continuous Current Rating					
		Ground at 20°C		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	239	246	227	229	296	303
1	95	285	293	271	274	361	369
1	120	323	332	308	311	417	426
1	150	361	366	343	347	473	481
1	185	406	410	387	391	543	550

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		Ground at 20°C		In single-way ducts		In air	
		Trefoil	Flat spaced	Trefoil ducts	Flat touching	Trefoil	Flat touching
	mm²	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.
1	240	469	470	447	453	641	647
1	300	526	524	504	510	735	739
1	400	590	572	564	571	845	837
1	500	581	521	499	424	908	828
1	630	633	554	541	449	1012	905
1	800	679	583	594	483	1115	979
1	1000	694	596	605	489	1181	1032

No. of core	Nominal cross sectional area	Continuous Current Rating		
		In ground at 20°C	In a buried duct	In air
	mm²	Amp.	Amp.	Amp.
3	70	220	194	253
3	95	263	232	307
3	120	298	264	352
3	150	332	296	397
3	185	374	335	453
3	240	431	387	529
3	300	482	435	599
3	400	541	492	683
3	500	608	548	820

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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