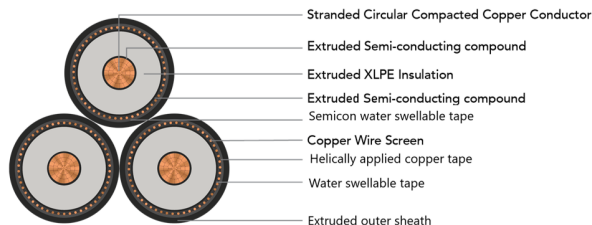


# POLYCAB MV CU BS 7870-4-10 19/33 KV Triplex Medium Voltage Copper wire screened Cable, 19/33 (36) KV AC



Images not to scale. Follow table for dimensions

## APPLICATION

POLYCAB MV CU BS 7870-4-10 19/33 KV compacted copper conductor XLPE insulated, copper wire screened cable generally conforming to BS 7870-4-10. These cables are designed for power networks, underground direct buried or 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:

Fixed Installation: 20 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 7870-1
- EPR can be provided on demand as per BS 7870-1
- Non-Metallic Insulation Screen: Extruded Semi-conductive compound (Bonded or Cold strippable)
- 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

## 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

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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 <sup>2</sup>	mm <sup>2</sup>	mm	Kg/Km
MVBS20CXAWPM001C070S	3 x 1 (triplex)	70	35	34.5	1700
MVBS20CXAWPM001C095S	3 x 1 (triplex)	95	35	36.3	2000
MVBS20CXAWPM001C120S	3 x 1 (triplex)	120	35	37.7	2300
MVBS20CXAWPM001C150S	3 x 1 (triplex)	150	35	39.5	2650
MVBS20CXAWPM001C185S	3 x 1 (triplex)	185	35	41.0	3000
MVBS20CXAWPM001C240S	3 x 1 (triplex)	240	35	43.4	3600
MVBS20CXAWPM001C300S	3 x 1 (triplex)	300	35	45.9	4300
MVBS20CXAWPM001C400S	3 x 1 (triplex)	400	35	49.0	5250
MVBS20CXAWPM001C500S	3 x 1 (triplex)	500	35	52.2	6400
MVBS20CXAWPM001C630S	3 x 1 (triplex)	630	35	55.6	7700
MVBS20CXAWPM001C800S	3 x 1 (triplex)	800	35	62.7	9500
MVBS20CXAWPM001C01KS	3 x 1 (triplex)	1000	35	67.4	11500

## 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 <sup>2</sup>	Ω/km	Ω/km	kA/s	kA/s	μF/km	mH/km	Ω/km
70	0.268	0.342	10.02	4.5	0.15	0.45	0.14
95	0.193	0.247	13.59	4.5	0.16	0.43	0.13
120	0.153	0.196	17.17	4.5	0.18	0.41	0.13
150	0.124	0.159	21.46	4.5	0.19	0.39	0.12
185	0.0991	0.128	26.47	4.5	0.20	0.38	0.12

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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.)
mm <sup>2</sup>	Ω/km	Ω/km	kA/s	kA/s	μF/km	mH/km	Ω/km
240	0.0754	0.098	34.34	4.5	0.23	0.36	0.11
300	0.0601	0.079	42.93	4.5	0.25	0.35	0.11
400	0.047	0.063	57.23	4.5	0.27	0.34	0.11
500	0.0366	0.051	71.54	4.5	0.30	0.28	0.09
630	0.0283	0.042	90.14	4.5	0.33	0.27	0.08
800	0.0221	0.036	114.47	4.5	0.39	0.25	0.08
1000	0.0176	0.032	143.08	4.5	0.42	0.24	0.08

## Current Carrying Capacity:

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 <sup>2</sup>	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.
70	239	246	227	229	296	303
95	285	293	271	274	361	369
120	323	332	308	311	417	426
150	361	366	343	347	473	481
185	406	410	387	391	543	550
240	469	470	447	453	641	647
300	526	524	504	510	735	739
400	590	572	564	571	845	837
500	615	561	535	462	911	837
630	672	598	582	491	1023	919
800	703	605	605	493	1103	960
1000	739	626	633	506	1191	1020

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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