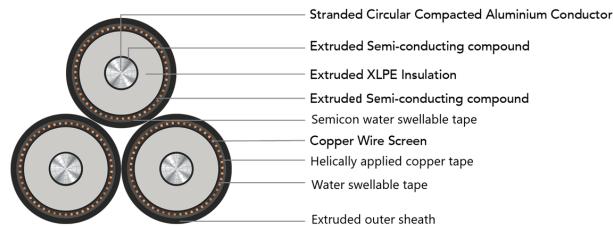


# POLY CAB MV AL BS 7870-4-10 19/33 KV Triplex Medium Voltage Copper wire screened Cable, 19/33 (36) KV AC

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Images not to scale. Follow table for dimensions

## APPLICATION

POLY CAB MV AL BS 7870-4-10 19/33 KV compacted aluminium conductor XLPE insulated, copper wire screened cable generally confirming 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 aluminium 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

### 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 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



**POLY CAB MV AL BS 7870-4-10 19/33 KV Triplex  
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**WEIGHT & DIMENSION DATA :**

Product Code	No. of Cores	Nominal Cross sectional Area mm <sup>2</sup>	Nominal area of metallic screen mm <sup>2</sup>	Overall diameter (Approx.) Mm	Weight (Approx.) Kg/Km
MVBS20AXAWPM001C070S	3 x 1 (triplex)	70	35	34.5	1200
MVBS20AXAWPM001C095S	3 x 1 (triplex)	95	35	36.3	1350
MVBS20AXAWPM001C120S	3 x 1 (triplex)	120	35	37.7	1500
MVBS20AXAWPM001C150S	3 x 1 (triplex)	150	35	39.5	1600
MVBS20AXAWPM001C185S	3 x 1 (triplex)	185	35	41.0	1850
MVBS20AXAWPM001C240S	3 x 1 (triplex)	240	35	43.4	2100
MVBS20AXAWPM001C300S	3 x 1 (triplex)	300	35	45.9	2400
MVBS20AXAWPM001C400S	3 x 1 (triplex)	400	35	49.0	2750
MVBS20AXAWPM001C500S	3 x 1 (triplex)	500	35	52.2	3200
MVBS20AXAWPM001C630S	3 x 1 (triplex)	630	35	55.6	3700
MVBS20AXAWPM001C800S	3 x 1 (triplex)	800	35	62.7	4450
MVBS20AXAWPM001C01KS	3 x 1 (triplex)	1000	35	67.4	5200

**Electrical Characteristics:**

Nominal Cross sectional Area mm <sup>2</sup>	Max. DC Resistance at 20°C Ω/km	Max. AC Resistance at 90°C Ω/km	Short circuit current rating of conductor kA/s	Short circuit current rating of metallic screen kA/s	Capacitance (Approx.) μF/km	Inductance (Approx.) mH/km	Reactance (Approx.) Ω/km
70	0.443	0.565	6.61	4.5	0.15	0.45	0.14
95	0.320	0.408	8.98	4.5	0.16	0.43	0.13
120	0.253	0.323	11.34	4.5	0.18	0.41	0.13
150	0.206	0.263	14.17	4.5	0.19	0.39	0.12
185	0.164	0.210	17.48	4.5	0.20	0.38	0.12

Document No.: 00325.Rev No.: 00 Date: 04-01-2024 / We reserve the rights to make technical changes.

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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	0.125	0.161	22.68	4.5	0.23	0.36	0.11
300	0.100	0.129	28.35	4.5	0.25	0.35	0.11
400	0.0778	0.101	37.79	4.5	0.27	0.34	0.11
500	0.0605	0.080	47.24	4.5	0.30	0.28	0.09
630	0.0469	0.063	59.52	4.5	0.33	0.27	0.08
800	0.0367	0.052	75.59	4.5	0.39	0.25	0.08
1000	0.0291	0.043	94.48	4.5	0.42	0.24	0.08

**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
mm <sup>2</sup>	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

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Thermal resistivity of soil                    1.5 K.m/W  
Thermal resistivity of earthenware duct    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