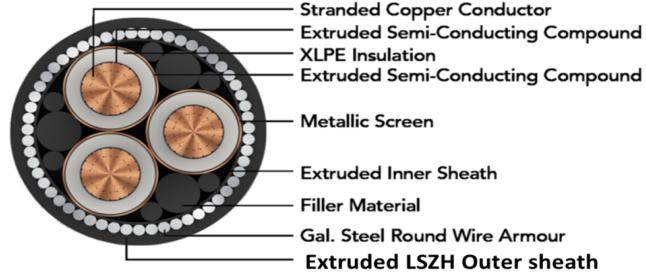


POLY CAB MV CU BS 7835 19/33 KV

Medium Voltage Armoured Cable, 19/33 (36) KV AC

POLY CAB
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Images not to scale. Follow table for dimensions

APPLICATION

POLY CAB MV CU BS 7835 19/33 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: 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 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

76kV AC

Impulse Test Voltage

Peak 194kV 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



APPROVAL



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WEIGHT & DIMENSIONAL DATA :

| Product Code | No. of Cores | Nominal Cross sectional Area mm ² | Nominal Diameter | | | Weight (Approx.) Kg/Km |
|----------------------|--------------|---|--------------------|-------------------|---------------|------------------------------|
| | | | Under armour mm | Over armour mm | Overall mm | |
| MVBS20CXAWS001C070S | 1 | 70 | 30.4 | 34.4 | 39.0 | 2200 |
| MVBS20CXAWS001C095S | 1 | 95 | 32.2 | 36.2 | 41.0 | 2550 |
| MVBS20CXAWS001C120S | 1 | 120 | 33.8 | 37.8 | 42.0 | 2900 |
| MVBS20CXAWS001C150S | 1 | 150 | 35.5 | 39.5 | 44.0 | 3250 |
| MVBS20CXAWS001C185S | 1 | 185 | 37.2 | 42.2 | 47.0 | 3850 |
| MVBS20CXAWS001C240S | 1 | 240 | 40.0 | 45.0 | 50.0 | 4600 |
| MVBS20CXAWS001C300S | 1 | 300 | 42.5 | 47.5 | 53.0 | 5350 |
| MVBS20CXAWS001C400S | 1 | 400 | 45.7 | 50.7 | 56.0 | 6450 |
| MVBS20CXAWS001C500S | 1 | 500 | 49.0 | 54.0 | 60.0 | 7650 |
| MVBS20CXAWS001C630S | 1 | 630 | 52.8 | 57.8 | 64.0 | 9150 |
| MVBS20CXAWS001C800S | 1 | 800 | 56.9 | 61.9 | 68.0 | 11000 |
| MVBS20CXAWS001C01KS | 1 | 1000 | 61.2 | 66.2 | 72.0 | 13150 |
| MVBS20CXSWLS003C070S | 3 | 70 | 64.3 | 70.6 | 77.0 | 10150 |
| MVBS20CXSWLS003C095S | 3 | 95 | 68.1 | 74.4 | 81.0 | 11400 |
| MVBS20CXSWLS003C120S | 3 | 120 | 71.5 | 77.8 | 85.0 | 12650 |
| MVBS20CXSWLS003C150S | 3 | 150 | 75.2 | 81.5 | 89.0 | 14100 |
| MVBS20CXSWLS003C185S | 3 | 185 | 78.8 | 85.1 | 93.0 | 15700 |
| MVBS20CXSWLS003C240S | 3 | 240 | 84.2 | 90.5 | 99.0 | 18100 |
| MVBS20CXSWLS003C300S | 3 | 300 | 90.0 | 96.3 | 105.0 | 21000 |
| MVBS20CXSWLS003C400S | 3 | 400 | 96.9 | 103.2 | 112.0 | 24800 |
| MVBS20CXSWLS003C500S | 3 | 500 | 104.0 | 110.3 | 120.0 | 29050 |
| MVBS20CXSWLS003C630S | 3 | 630 | 111.3 | 117.6 | 127.0 | 33900 |

Electrical Characteristics:

| No. of Cores | Nominal Cross sectional Area mm ² | Max. DC Resistance at 20°C Ω/km | Max. AC Resistance at 90°C Ω/km | Short circuit current rating kA/s | Capacitance (Approx.) μF/km | Inductance (Approx.) mH/km | Reactance (Approx.) Ω/km |
|--------------|---|------------------------------------|------------------------------------|--------------------------------------|--------------------------------|-------------------------------|-----------------------------|
| | | | | | | | Ω/km |
| 1 | 70 | 0.268 | 0.342 | 10.02 | 0.15 | 0.45 | 0.14 |
| 1 | 95 | 0.193 | 0.247 | 13.59 | 0.16 | 0.43 | 0.13 |

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| 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 | 120 | 0.153 | 0.196 | 17.17 | 0.18 | 0.41 | 0.13 |
| 1 | 150 | 0.124 | 0.159 | 21.46 | 0.19 | 0.40 | 0.12 |
| 1 | 185 | 0.0991 | 0.128 | 26.47 | 0.21 | 0.39 | 0.12 |
| 1 | 240 | 0.0754 | 0.098 | 34.34 | 0.23 | 0.37 | 0.12 |
| 1 | 300 | 0.0601 | 0.080 | 42.93 | 0.25 | 0.36 | 0.11 |
| 1 | 400 | 0.047 | 0.064 | 57.23 | 0.28 | 0.35 | 0.11 |
| 1 | 500 | 0.0366 | 0.052 | 71.54 | 0.321 | 0.283 | 0.089 |
| 1 | 630 | 0.0283 | 0.042 | 90.14 | 0.350 | 0.274 | 0.086 |
| 1 | 800 | 0.0221 | 0.036 | 10.02 | 0.386 | 0.263 | 0.083 |
| 1 | 1000 | 0.0176 | 0.032 | 13.59 | 0.424 | 0.254 | 0.080 |
| 3 | 70 | 0.268 | 0.342 | 10.02 | 0.15 | 0.39 | 0.12 |
| 3 | 95 | 0.193 | 0.247 | 13.59 | 0.16 | 0.37 | 0.12 |
| 3 | 120 | 0.153 | 0.196 | 17.17 | 0.18 | 0.36 | 0.11 |
| 3 | 150 | 0.124 | 0.159 | 21.46 | 0.19 | 0.35 | 0.11 |
| 3 | 185 | 0.0991 | 0.128 | 26.47 | 0.21 | 0.34 | 0.11 |
| 3 | 240 | 0.0754 | 0.098 | 34.34 | 0.23 | 0.32 | 0.10 |
| 3 | 300 | 0.0601 | 0.080 | 42.93 | 0.25 | 0.31 | 0.10 |
| 3 | 400 | 0.047 | 0.064 | 57.23 | 0.28 | 0.30 | 0.09 |
| 3 | 500 | 0.0366 | 0.052 | 71.54 | 0.31 | 0.289 | 0.091 |
| 3 | 630 | 0.0283 | 0.042 | 90.14 | 0.33 | 0.281 | 0.088 |

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 |

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| No. of core | Nominal cross sectional area mm ² | Continuous Current Rating | | | | | |
|-------------|---|---------------------------|-------------|---------------------|---------------|---------|---------------|
| | | Ground at 20°C | | In single-way ducts | | In air | |
| | | Trefoil | Flat spaced | Trefoil ducts | Flat touching | Trefoil | Flat touching |
| | | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. |
| 1 | 120 | 323 | 332 | 308 | 311 | 417 | 426 |
| 1 | 150 | 361 | 366 | 343 | 347 | 473 | 481 |
| 1 | 185 | 406 | 410 | 387 | 391 | 543 | 550 |
| 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 mm ² | Continuous Current Rating | | |
|-------------|---|---------------------------|------|------------------|
| | | In ground at 20°C | | In a buried duct |
| | | 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 |

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 |