

CU/MGT/XLPE/LSZH/SWA/LSZH (2 Cores - 5 Cores)

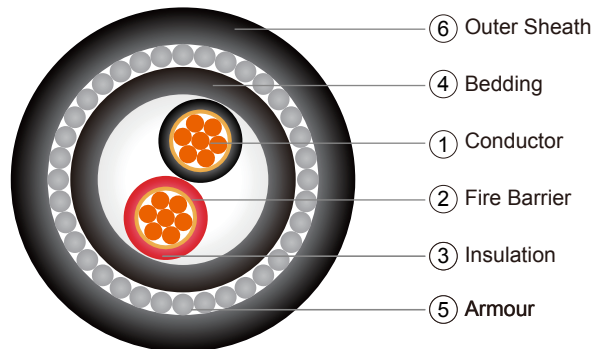
Mica Tape, XLPE Insulated, LSZH Bedded, Galvanised Steel Wire Armoured, LSZH Sheathed Cable

Application

These cables are suitable for indoor and outdoor applications, where a high safety against flame is required .
Public address and emergency voice communication system and traffic control centres.

Control and instrumentation service in industrial, commercial and residential buildings.

Such as: Schools&Universities, Hospital, Markets & Malls, Hotels, Theatres, Cinemas, Airports, Underground stations, Tunnels, Recreational places& Amusement parks, Indoor work places.



Construction

① Conductor: Plain annealed copper, class1 solid or class 2 stranded acc. to IEC 60228.
Flexible class 5 or tinned conductor could be offer upon request.

② Fire Barrier: Mica tape (MGT).

③ Insulation: Cross-linked polyethylene (XLPE) compound as per IEC 60502-1.
Insulation Color Code:

| Number of Cores | Color Code to IEC 60502-1 | Color Code to BS 5467 |
|-----------------|---|---|
| 2 | Red & Black | Brown & Blue |
| 3 | Red, Yellow and Blue | Brown, Black and Grey |
| 4 | Red, Yellow, Blue and Black | Blue, Brown, Black and Grey |
| 5 | Red, Yellow, Blue, Black and Green / Yellow | Green / Yellow, Blue, Brown, Black and Grey |

Assembly: Cores cabled together with PP filler and covered with non-woven tape.

④ Bedding: Low Smoke Zero Halogen (LSZH) Compound Type ST8 (90°C) of IEC 60502-1.
Bedding Colour: Black.

⑤ Armour: Galvanized steel wire armoured (SWA).

⑥ Outer Sheath: Low smoke zero halogen (LSZH) compound type ST1 (80°C), ST2 (90°C) of IEC 60502-1.
Outer Sheath Color: Orange or other color as per customer request.

Electrical Characteristics

Recommended rated voltages U_0

| Highest system voltage (U_m) (kV) | Rated voltage (U_0) (kV) | |
|--|------------------------------|------------|
| | Categories A and B | Category C |
| 1,2 | 0,6 | 0,6 |

Routine test voltages

| | |
|--------------------------|-----|
| Rated voltage U_0 (kV) | 0,6 |
| Test voltage (kV) | 3,5 |

Maximum conductor temperatures for different types of insulating compound

| Maximum conductor temperature (°C) | |
|------------------------------------|--------------------------------------|
| Normal operation | Short-circuit (5 s maximum duration) |
| 90 | 250 |

Operating Temperature: -15°C to 90°C

Test Voltage: 3.5 kV for 5 minutes

Reference Standards

Design Specification: IEC60502-1

Conductor: IEC60228, BS EN60228

Fire Resistance: BS6387(C,W,Z), SS299(C,W,Z), IEC60331

Flame Retardancy: IEC60332-3-22, BS EN60332-3-22

Low Smoke Zero Halogen: IEC61034-2, BS EN61034-2, IEC60754-1, IEC60754-2, BS EN50267-2-1, BS EN50267-2-2

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Installation Reference

Min.Bending Radius (mm): 10 x cable overall diameter

Max.Pulling Tension (N/mm²): 70

Dimension

2 Cores

| Nominal Conductor Area (mm ²) | No. and Diameter of Wires (no./mm) | Thickness of Insulation (mm) | Thickness of Bedding (mm) | Diameter Under Armour (mm) | Diameter of Armour Wire (mm) | Thickness of Sheath (mm) | Overall Diameter (mm) | Approximate Weight (kg/km) |
|---|------------------------------------|------------------------------|---------------------------|----------------------------|------------------------------|--------------------------|-----------------------|----------------------------|
| 2x1.5 | 7/0.53 | 0.7 | 1.0 | 9.8 | 0.80 | 1.8 | 15.0 | 379 |
| 2x2.5 | 7/0.67 | 0.7 | 1.0 | 10.6 | 1.25 | 1.8 | 16.7 | 545 |
| 2x4 | 7/0.85 | 0.7 | 1.0 | 11.7 | 1.25 | 1.8 | 17.8 | 624 |
| 2x6 | 7/1.04 | 0.7 | 1.0 | 12.8 | 1.25 | 1.8 | 18.9 | 717 |
| 2x10 | 7/1.35 | 0.7 | 1.0 | 14.7 | 1.25 | 1.8 | 20.8 | 886 |
| 2x16 | 7/1.70 | 0.7 | 1.0 | 16.8 | 1.60 | 1.8 | 23.6 | 1244 |
| 2x25 | 7/2.14 | 0.9 | 1.0 | 20.2 | 1.60 | 1.8 | 27.0 | 1627 |
| 2x35 | 7/2.52 | 0.9 | 1.0 | 22.5 | 1.60 | 1.9 | 29.5 | 1967 |
| 2x50 | 19/1.78 | 1.0 | 1.0 | 25.6 | 2.00 | 2.0 | 33.6 | 2652 |
| 2x70 | 19/2.14 | 1.1 | 1.2 | 30.0 | 2.00 | 2.1 | 38.2 | 3423 |
| 2x95 | 19/2.52 | 1.1 | 1.2 | 33.8 | 2.00 | 2.3 | 42.4 | 4266 |
| 2x120 | 37/2.03 | 1.2 | 1.4 | 37.8 | 2.50 | 2.4 | 47.6 | 5555 |
| 2x150 | 37/2.25 | 1.4 | 1.4 | 41.7 | 2.50 | 2.6 | 51.9 | 6505 |
| 2x185 | 37/2.52 | 1.6 | 1.4 | 46.3 | 2.50 | 2.7 | 56.7 | 7713 |
| 2x240 | 61/2.25 | 1.7 | 1.6 | 52.3 | 2.50 | 3.0 | 63.3 | 9578 |
| 2x300 | 61/2.52 | 1.8 | 1.6 | 57.6 | 2.50 | 3.1 | 68.8 | 11376 |
| 2x400 | 61/2.85 | 2.0 | 1.8 | 64.7 | 3.15 | 3.4 | 77.8 | 14918 |
| 2x500 | 61/3.20 | 2.2 | 1.8 | 71.8 | 3.15 | 3.7 | 85.5 | 17952 |
| 2x630 | 127/2.52 | 2.4 | 1.8 | 80.5 | 3.15 | 4.0 | 94.8 | 22069 |
| 2x800 | 127/2.85 | 2.6 | 2.0 | 90.3 | 3.15 | 4.3 | 105.2 | 27146 |
| 2x1000 | 127/3.20 | 2.8 | 2.0 | 100.2 | 3.15 | 4.7 | 115.9 | 32996 |

3 Cores

| Nominal Conductor Area (mm ²) | No. and Diameter of Wires (no./mm) | Thickness of Insulation (mm) | Thickness of Bedding (mm) | Diameter Under Armour (mm) | Diameter of Armour Wire (mm) | Thickness of Sheath (mm) | Overall Diameter (mm) | Approximate Weight (kg/km) |
|---|------------------------------------|------------------------------|---------------------------|----------------------------|------------------------------|--------------------------|-----------------------|----------------------------|
| 3x1.5 | 7/0.53 | 0.7 | 1.0 | 10.4 | 1.25 | 1.8 | 16.5 | 540 |
| 3x2.5 | 7/0.67 | 0.7 | 1.0 | 11.3 | 1.25 | 1.8 | 17.4 | 611 |
| 3x4 | 7/0.85 | 0.7 | 1.0 | 12.4 | 1.25 | 1.8 | 18.5 | 712 |
| 3x6 | 7/1.04 | 0.7 | 1.0 | 13.7 | 1.25 | 1.8 | 19.8 | 832 |
| 3x10 | 7/1.35 | 0.7 | 1.0 | 15.7 | 1.60 | 1.8 | 22.5 | 1186 |
| 3x16 | 7/1.70 | 0.7 | 1.0 | 17.9 | 1.60 | 1.8 | 24.7 | 1494 |
| 3x25 | 7/2.14 | 0.9 | 1.0 | 21.6 | 1.60 | 1.8 | 28.4 | 2001 |
| 3x35 | 7/2.52 | 0.9 | 1.0 | 24.1 | 1.60 | 1.9 | 31.1 | 2459 |
| 3x50 | 19/1.78 | 1.0 | 1.2 | 27.8 | 2.00 | 2.1 | 36.0 | 3379 |
| 3x70 | 19/2.14 | 1.1 | 1.2 | 32.1 | 2.00 | 2.2 | 40.5 | 4363 |
| 3x95 | 19/2.52 | 1.1 | 1.2 | 36.2 | 2.50 | 2.4 | 46.0 | 5937 |
| 3x120 | 37/2.03 | 1.2 | 1.4 | 40.5 | 2.50 | 2.5 | 50.5 | 7143 |
| 3x150 | 37/2.25 | 1.4 | 1.4 | 44.7 | 2.50 | 2.7 | 55.1 | 8434 |
| 3x185 | 37/2.52 | 1.6 | 1.6 | 50.0 | 2.50 | 2.9 | 60.8 | 10204 |
| 3x240 | 61/2.25 | 1.7 | 1.6 | 56.1 | 2.50 | 3.1 | 67.3 | 12656 |
| 3x300 | 61/2.52 | 1.8 | 1.6 | 61.7 | 3.15 | 3.3 | 74.6 | 16105 |
| 3x400 | 61/2.85 | 2.0 | 1.8 | 69.4 | 3.15 | 3.6 | 82.9 | 19827 |
| 3x500 | 61/3.20 | 2.2 | 1.8 | 77.1 | 3.15 | 3.9 | 91.2 | 24061 |
| 3x630 | 127/2.52 | 2.4 | 2.0 | 86.8 | 3.15 | 4.2 | 101.5 | 29971 |
| 3x800 | 127/2.85 | 2.6 | 2.0 | 96.9 | 3.15 | 4.6 | 112.4 | 37036 |
| 3x1000 | 127/3.20 | 2.8 | 2.0 | 107.6 | 3.15 | 4.9 | 123.7 | 45272 |

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4 Cores

| Nominal Conductor Area (mm ²) | No. and Diameter of Wires (no./mm) | Thickness of Insulation (mm) | Thickness of Bedding (mm) | Diameter Under Armour (mm) | Diameter of Armour Wire (mm) | Thickness of Sheath (mm) | Overall Diameter (mm) | Approximate Weight (kg/km) |
|---|------------------------------------|------------------------------|---------------------------|----------------------------|------------------------------|--------------------------|-----------------------|----------------------------|
| 4x1.5 | 7/0.53 | 0.7 | 1.0 | 11.4 | 1.25 | 1.8 | 17.5 | 608 |
| 4x2.5 | 7/0.67 | 0.7 | 1.0 | 12.4 | 1.25 | 1.8 | 18.5 | 695 |
| 4x4 | 7/0.85 | 0.7 | 1.0 | 13.7 | 1.25 | 1.8 | 19.8 | 821 |
| 4x6 | 7/1.04 | 0.7 | 1.0 | 15.1 | 1.60 | 1.8 | 21.9 | 1098 |
| 4x10 | 7/1.35 | 0.7 | 1.0 | 17.3 | 1.60 | 1.8 | 24.1 | 1393 |
| 4x16 | 7/1.70 | 0.7 | 1.0 | 19.9 | 1.60 | 1.8 | 26.7 | 1781 |
| 4x25 | 7/2.14 | 0.9 | 1.0 | 24.0 | 1.60 | 1.9 | 31.0 | 2434 |
| 4x35 | 7/2.52 | 0.9 | 1.0 | 26.8 | 2.00 | 2.0 | 34.8 | 3267 |
| 4x50 | 19/1.78 | 1 | 1.2 | 30.9 | 2.00 | 2.2 | 39.3 | 4134 |
| 4x70 | 19/2.14 | 1.1 | 1.2 | 35.7 | 2.50 | 2.4 | 45.5 | 5823 |
| 4x95 | 19/2.52 | 1.1 | 1.4 | 40.7 | 2.50 | 2.5 | 50.7 | 7402 |
| 4x120 | 37/2.03 | 1.2 | 1.4 | 45.1 | 2.50 | 2.7 | 55.5 | 8891 |
| 4x150 | 37/2.25 | 1.4 | 1.6 | 50.2 | 2.50 | 2.9 | 61.0 | 10620 |
| 4x185 | 37/2.52 | 1.6 | 1.6 | 55.7 | 2.50 | 3.1 | 66.9 | 12801 |
| 4x240 | 61/2.25 | 1.7 | 1.6 | 62.5 | 3.15 | 3.4 | 75.6 | 16907 |
| 4x300 | 61/2.52 | 1.8 | 1.8 | 69.2 | 3.15 | 3.6 | 82.7 | 20405 |
| 4x400 | 61/2.85 | 2 | 1.8 | 77.3 | 3.15 | 3.9 | 91.4 | 25088 |
| 4x500 | 61/3.20 | 2.2 | 2.0 | 86.3 | 3.15 | 4.2 | 101.0 | 30691 |
| 4x630 | 127/2.52 | 2.4 | 2.0 | 96.8 | 3.15 | 4.6 | 112.3 | 38271 |
| 4x800 | 127/2.85 | 2.6 | 2.0 | 108.2 | 3.15 | 5.0 | 124.5 | 47462 |
| 4x1000 | 127/3.20 | 2.8 | 2.0 | 120.1 | 3.15 | 5.4 | 137.2 | 58272 |

5 Cores

| Nominal Conductor Area (mm ²) | No. and Diameter of Wires (no./mm) | Thickness of Insulation (mm) | Thickness of Bedding (mm) | Diameter Under Armour (mm) | Diameter of Armour Wire (mm) | Thickness of Sheath (mm) | Overall Diameter (mm) | Approximate Weight (kg/km) |
|---|------------------------------------|------------------------------|---------------------------|----------------------------|------------------------------|--------------------------|-----------------------|----------------------------|
| 5x1.5 | 7/0.53 | 0.7 | 1.0 | 12.5 | 1.25 | 1.8 | 18.6 | 680.8 |
| 5x2.5 | 7/0.67 | 0.7 | 1.0 | 13.6 | 1.25 | 1.8 | 19.7 | 784.3 |
| 5x4 | 7/0.85 | 0.7 | 1.0 | 15.1 | 1.60 | 1.8 | 21.9 | 1062.4 |
| 5x6 | 7/1.04 | 0.7 | 1.0 | 16.6 | 1.60 | 1.8 | 23.4 | 1252.3 |
| 5x10 | 7/1.35 | 0.7 | 1.0 | 19.1 | 1.60 | 1.8 | 25.9 | 1607.6 |
| 5x16 | 7/1.70 | 0.7 | 1.0 | 22.0 | 1.60 | 1.8 | 28.8 | 2076.5 |
| 5x25 | 7/2.14 | 0.9 | 1.0 | 26.6 | 2.00 | 2.0 | 34.6 | 3127.7 |
| 5x35 | 7/2.52 | 0.9 | 1.2 | 30.1 | 2.00 | 2.1 | 38.3 | 3916.6 |
| 5x50 | 19/1.78 | 1.0 | 1.2 | 34.3 | 2.00 | 2.3 | 42.9 | 4909.7 |
| 5x70 | 19/2.14 | 1.1 | 1.4 | 40.1 | 2.50 | 2.5 | 50.1 | 6984.4 |
| 5x95 | 19/2.52 | 1.1 | 1.4 | 45.2 | 2.50 | 2.7 | 55.6 | 8863.6 |
| 5x120 | 37/2.03 | 1.2 | 1.6 | 50.5 | 2.50 | 2.9 | 61.3 | 10758.9 |
| 5x150 | 37/2.25 | 1.4 | 1.6 | 55.7 | 2.50 | 3.1 | 66.9 | 12783.6 |
| 5x185 | 37/2.52 | 1.6 | 1.6 | 61.9 | 3.15 | 3.3 | 74.8 | 16349.9 |
| 5x240 | 61/2.25 | 1.7 | 1.8 | 69.9 | 3.15 | 3.6 | 83.4 | 20482.6 |
| 5x300 | 61/2.52 | 1.8 | 1.8 | 77.0 | 3.15 | 3.9 | 91.1 | 24698.4 |
| 5x400 | 61/2.85 | 2.0 | 2.0 | 86.5 | 3.15 | 4.2 | 101.2 | 30571.5 |
| 5x500 | 61/3.20 | 2.2 | 2.0 | 96.1 | 3.15 | 4.5 | 111.4 | 37322.7 |
| 5x630 | 127/2.52 | 2.4 | 2.0 | 107.8 | 3.15 | 4.9 | 123.9 | 46653.7 |
| 5x800 | 127/2.85 | 2.6 | 2.0 | 120.5 | 3.15 | 5.4 | 137.6 | 58048.8 |
| 5x1000 | 127/3.20 | 2.8 | 2.0 | 133.9 | 3.15 | 5.9 | 152.0 | 71469.4 |