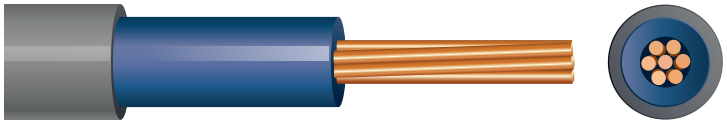
# 6181B Double Insulated LSZH 25mm²



Low Smoke Zero Halogen (LSZH) cable for use in installations where smoke and acid gas emission would pose a major hazard in the event of a fire. Designed for use in light industrial and domestic wiring. These cables are intended for fixed installation in dry or damp premises and can be installed in conduit, in cable trunking and in cable ducting. They can be clipped direct, on cable trays, embedded or in free air, but are not intended to be laid underground.

- 25mm² Stranded Copper core
- Rated Voltage: 450/750 V
- Usage: Consumer units
- Packaging: Drum (carboard and tin) / (wood and tin)
- Certifications & Standards: BASEC, CE, ISO 9001, UKCA / BS 7211:2012

**Available in:**

| | | | | |
|---|---|---|---|---|
| **Outer Sheath Colour** | ● | ● | ● | ● |
| **Inner Core Colour(s)** | ● | ● | ● | ● |
| **Coil Lengths (m)** | - | - | - | - |
| **Drum Lengths (m)** | 50, 100 | 50, 100 | 50 | 50 |

| | |
|---|---|
| **UK Code** | 6181B |
| **Harmonised Code** | - |
| **Cable Standards** | BS 7211:2012 |
| **Cable Certifications** | BASEC, CE, ISO 9001, UKCA |
| **Warranty** | 12 Months |
| **Usage** | Consumer units |

| | |
|---|---|
| **Conductor Type** | Stranded Copper |
| **Conductor Class** | Class 2 |
| **Number of Strands (approx.)** | 7 |

| | |
|---|---|
| **Cable Profile** | Round |
| **Low Smoke Zero Halogen** | Yes |
| **Armoured** | No |
| **Indoor/Outdoor Usage** | Indoor |
| **Insulation Material** | Cross linked polyethylene (PE) |
| **Outer Sheath Material** | - |
| **Filler Material** | N/A |
| **Braiding Material** | N/A |
| **Screen Material** | N/A |
| **Armour Material** | N/A |

| | |
|---|---|
| **Overall Cable Diameter (mm)** | 9.5 |
| **Minimum Bending Radius** | 8 x D |
| **Nominal Cross Section Area (mm²)** | 25 |
| **Diameter of Conductor (mm)** | 5.85 |
| **Conductor Cross Section Area (mm²)** | 25 |
| **Insulation Thickness (mm)** | 0.9 |
| **Outer Sheath Thickness (mm)** | 0.75 |
| **Net Weight kg per km (kg)** | 270 |

| | |
|---|---|
| **Minimum Operating Temperature (°C)** | -15°C |
| **Maximum Operating Temperature (°C)** | 90°C |
| **Maximum Short Circuit Temperature (°C)** | 250°C |
| **AC Test Voltage (kV)** | 2.5 |
| **Rated Voltage Uo/U (V)** | 450/750 V |
| **Conductor DC Resistance at 20°C** | 0.727 Ω/km |
| **Maximum Mass Supportable - Twin flexible cord (kg)** | 0 |
| **EV Charging** | N/A |
| **Number of Phases** | N/A |

# 6181B Double Insulated LSZH 25mm²

## VOLTAGE DROP

| Per A Per M | (mV/A/m) |
|---|---|
| DC or single phase AC (mV/A/m) | - |
| Three phase AC (mV/A/m) | - |

## CAPACITY

| Reference Method A | (A) |
|---|---|
| 2 cables/single phase AC/DC | 106 |
| 3-4 cables/three phase AC | 95 |

| Reference Method B | (A) |
|---|---|
| 2 cables/single phase AC/DC | 133 |
| 3-4 cables/three phase AC | 117 |

| Reference Method C | (A) |
|---|---|
| 2 cables/single phase AC/DC | 143 |
| 3-4 cables/three phase AC | 130 |

| Reference Method D | (A) |
|---|---|
| 2 cables/single phase AC/DC | - |
| 3-4 cables/three phase AC | - |

| Reference Method E | (A) |
|---|---|
| 2 cables/single phase AC/DC | - |
| 3-4 cables/three phase AC | - |

| Reference Method F | (A) |
|---|---|
| 2 cables/single phase AC/DC flat touching | 161 |
| 3 cables/three phase AC flat touching | 141 |
| 3 cables/three phase AC trefoil touching | 135 |
| 2 cables/single phase AC/DC or 3 cables/three phase AC flat horizontally spaced | 182 |
| 2 cables/single phase AC/DC or 3 cables/three phase AC flat vertically spaced | 161 |

| TWIN & EARTH ONLY | (A) |
|---|---|
| **Reference Method 100** | N/A |
| **Reference Method 101** | N/A |
| **Reference Method 102** | N/A |
| **Reference Method 103** | N/A |

## CAPACITY REFERENCE METHODS

**Reference Method A**
**Enclosed in conduit in thermally insulated wall**

The wall consists of an outer weatherproof skin, thermal insulation and an inner skin of wood or wood-like material having a thermal conductance of at least 10W/m²K. The conduit is fixed such that it is close to, but not necessarily touching, the inner skin. Heat from cables is assumed to escape through the inner skin only. The conduit can be metal or plastic.

**Reference Method B**
**Enclosed in conduit or trunking on a wall**

The conduit is mounted on a wooden wall such that the gap between the conduit and the surface is less than 0.3 times the conduit diameter. The conduit can be metal or plastic. Where the conduit is fixed to a masonry wall the current-carrying capacity of the non-sheathed or sheathed cable may be higher.

**Reference Method C**
**Clipped direct**

Cable mounted on a wooden wall so that the gap between the cable and the surface is less than 0.3 times the cable diameter. Where the cable is fixed to or embedded in a masonry wall the current-carrying capacity may be higher. Note: The term 'masonry' is taken to include brickwork, concrete, plaster and similar (but excluding thermally insulating materials).

**Reference Method D**
**Direct in ground or in ducting in ground**

The cable is drawn into a 100mm diameter plastic, earthenware or metallic duct laid in direct contact with soil having thermal resistivity of 2.5K.m/W and at a depth of 0.7m. The values given for this method are those stated in Appendix 4 of BS 7671 and are based on conservative installation parameters. If the specific installation parameters are known (thermal resistance of the ground, ground ambient temperature, cable depth), reference can be made to the cable manufacturer or the ERA 69-30 series of publications, which may result in a smaller cable size being selected.

**Reference Method E, F**
**In free air - multicore or single core cables in free air**

The cable is supported such that the total heat dissipation is not impeded. Heating due to solar radiation and other sources is to be taken into account. Care is to be taken that natural air convection is not impeded. In practice, a clearance between a cable and any adjacent surface of at least 0.3 times the cable external diameter for multicore cables or 1.0 times the cable diameter for single-core cables is sufficient to permit the use of current-carrying capacities appropriate to free-air conditions.

**Reference Method 100**
**Flat Twin and Earth cables**

Installation methods for flat twin and earth cable clipped direct to a wooden joist, or touching the plasterboard ceiling surface, above a plasterboard ceiling with thermal insulation not exceeding 100mm in thickness having a minimum U value of 0.1 W/m²K.

**Reference Method 101**
**Flat Twin and Earth cables**

Installation methods for flat twin and earth cable clipped direct to a wooden joist, or touching the plasterboard ceiling surface, above a plasterboard ceiling with thermal insulation exceeding 100mm in thickness having a minimum U value of 0.1 W/m²K.

**Reference Method 102**
**Flat Twin and Earth cables**

Installation methods for flat twin and earth cable in a stud wall with thermal insulation with a minimum U value of 0.1 W/m²K with the cable touching the inner wall surface, or touching the plasterboard ceiling surface, and the inner skin having a minimum U value of 10 W/m²K.

**Reference Method 103**
**Flat Twin and Earth cables**

Installation methods for flat twin and earth cable in a stud wall with thermal insulation with a minimum U value of 0.1 W/m²K with the cable not touching the inner wall surface.

**SCAN QR CODE**
to download the Pitacs Cable Guide