# F2 Fire Resistant Mains Cable 1kV - BS7846, BS6387, MGT, XLPE, SWA,LSZH - 25mm² to 400mm²

## Description

Armoured fire resistant cable, suitable for fixed installations such as power circuits, fire alarm system and emergency.

## Key Features

**Voltage Rating**
600/1000 Volts

**Flame Retardancy**
BS EN 60332-3-24

## Core Colours

| | | | | | |
|---|---|---|---|---|---|
| 2 core - | Brown | Blue | | | |
| 3 core - | Brown | Black | Grey | | |
| 4 core - | Brown | Black | Grey | Blue | |
| 5 core - | Brown | Black | Grey | Blue | Green Yellow |

## Standards

## Construction

- **Conductor**: Plain Annealed Stranded Copper Conductor
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Bedding**: LSZH (Low smoke Zero Halogen)
- **Separator**: MICA/Glass Fire Barrier Tape
- **Armour**: Galvanised Steel Wire Armour (GSWA)
- **Sheath**: Low smoke Zero Halogen (LSZH) to BS 7655
- **Sheath Colour**: Black

## QA Lab

**Cleveland Cable Test & Training Lab**
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing. Where applicable, cables are independently tested and certified by BASEC to ensure full compliance.

**CPR**
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

## Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

**ecovadis**
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

## F2 Fire Resistant Mains Cable 1kV - BS7846, BS6387, MGT, XLPE, SWA,LSZH - 25mm² to 400mm² - Dimensions

| Reference | Conductor Size (mm2) | No Of Cores | Stranding(mm) | Overall Diameter(mm) | Weight(Kg/Km) | Helios | Gland Size | Solace | Thermis |
|---|---|---|---|---|---|---|---|---|---|
| FP2X25 | 25 | 2 | 7/2.14 | 21.4 | 1100 | FPC1923 | 25 | 1BC1923HT | NONE |
| FP3X25 | 25 | 3 | 7/2.14 | 26.6 | 1800 | FPC2327 | 32 | 1BC2327HT | NONE |
| FP4X25 | 25 | 4 | 7/2.14 | 28.8 | 2150 | FPC2732 | 32 | 1BC2732HT | NONE |
| FP5X25 | 25 | 5 | 7/2.14 | 32 | 2700 | FPC2732 | 32 | 1BC2732HT | NONE |
| FP2X35 | 35 | 2 | 7/2.52 | 24.3 | 1550 | FPC2327 | 25 | 1BC2327HT | NONE |
| FP3X35 | 35 | 3 | 7/2.52 | 29.1 | 2200 | FPC2732 | 32 | 1BC2732HT | NONE |
| FP4X35 | 35 | 4 | 7/2.52 | 31.6 | 2650 | FPC2732 | 32 | 1BC2732HT | NONE |
| FP5X35 | 35 | 5 | NONE | NONE | NONE | NONE | NONE | 1BC6571HT | 2BC070083HT |
| FP4X50 | 50 | 4 | 19/1.78 | 33.2 | 3100 | FPC3238 | 40 | 1BC3238HT | NONE |
| FP4X70 | 70 | 4 | 19/2.14 | 38.9 | 4400 | FPC3846 | 40 | 1BC3845HT | 2BC038048HT |
| FP2X120 | 120 | 2 | 37/2.03 | 37.1 | 3900 | FPC3238 | 40 | 1BC3238HT | NONE |
| FP2X150 | 150 | 2 | 37/2.25 | 40.3 | 4650 | FPC3846 | 50S | 1BC3845HT | 2BC038048HT |
| FP2X185 | 185 | 2 | 37/2.52 | 45.7 | 5950 | FPC3846 | 50 | 1BC4551HT | 2BC038048HT |
| FP2X240 | 240 | 2 | 61/2.25 | 50 | 7350 | FPC4651 | 50 | 1BC4551HT | 2BC048058HT |
| FP2X300 | 300 | 2 | 61/2.52 | 54.5 | 8700 | FPC5157 | 63S | 1BC5158HT | 2BC048058HT |

**Multicore 90°C thermosetting insulated and thermoplastic sheathed cables, non-armoured (COPPER CONDUCTORS) Reproduced from *BS7671:2018 Wiring Regulation***

# TABLE 4E2A

## CURRENT-CARRYING CAPACITY (amperes)

Ambient temperature: 30°C
Conductor operating temperature:90°C

| Conductor cross sectional area | Reference Method A (enclosed in conduit in thermally insulating wall etc.) | | Reference Method B (enclosed in conduit on a wall or in trunking etc.) | | Reference Method C (clipped direct) | | Reference Method E (free air or on a perforated cable tray etc, horizontal or vertical) | |
|---|---|---|---|---|---|---|---|---|
| | 1 two-core cable*, single-phase AC or DC | 1 three- or four-core cable*, three-phase AC | 1 two-core cable*, single-phase AC or DC | 1 three- or four-core cable*, three-phase AC | 1 two-core cable*, single-phase AC or DC | 1 three- or four-core cable*, three-phase AC | 1 two-core cable*, single-phase AC or DC | 1 three- or four-core cable*, three-phase AC |
| (mm2) | (A) | (A) | (A) | (A) | (A) | (A) | (A) | (A) |
| 1 | 14.5 | 13 | 17 | 15 | 19 | 17 | 21 | 18 |
| 1.5 | 18.5 | 16.5 | 22 | 19.5 | 24 | 22 | 26 | 23 |
| 2.5 | 25 | 22 | 30 | 26 | 33 | 30 | 36 | 32 |
| 4 | 33 | 30 | 40 | 35 | 45 | 40 | 49 | 42 |
| 6 | 42 | 38 | 51 | 44 | 58 | 52 | 63 | 54 |
| 10 | 57 | 51 | 69 | 60 | 80 | 71 | 86 | 75 |
| 16 | 76 | 68 | 91 | 80 | 107 | 96 | 115 | 100 |
| 25 | 99 | 89 | 119 | 105 | 138 | 119 | 149 | 127 |
| 35 | 121 | 109 | 146 | 128 | 171 | 147 | 185 | 158 |
| 50 | 145 | 130 | 175 | 154 | 209 | 179 | 225 | 192 |
| 70 | 183 | 164 | 221 | 194 | 269 | 229 | 289 | 246 |
| 95 | 220 | 197 | 265 | 233 | 328 | 278 | 352 | 298 |
| 120 | 253 | 227 | 305 | 268 | 382 | 322 | 410 | 346 |
| 150 | 290 | 259 | 334 | 300 | 441 | 371 | 473 | 399 |
| 185 | 329 | 295 | 384 | 340 | 506 | 424 | 542 | 456 |
| 240 | 386 | 346 | 459 | 398 | 599 | 500 | 641 | 538 |
| 300 | 442 | 396 | 532 | 455 | 693 | 576 | 741 | 621 |
| 400 | - | - | 625 | 536 | 803 | 667 | 865 | 741 |

* with or without a protective conductor

1. Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5).
2. Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 512.1.5).
3. For cables having flexible conductors see section 2.4 of this appendix for adjustment factors for current-carrying capacity and voltage drop.

Multicore 90°C thermosetting insulated and thermoplastic sheathed cables, non-armoured (COPPER CONDUCTORS) Reproduced from *BS7671:2018 Wiring Regulations*

## TABLE 4E2B

### VOLTAGE DROP (per ampere per metre)

Conductor operating temperature:90°C

| Conductor cross- sectional area | Two-core cable DC | Two-core cable, single-phase AC | | | Three- or four-core cable, three-phase AC | | |
|---|---|---|---|---|---|---|---|
| (mm2) | (mV/A/m) | (mV/A/m) | | | (mV/A/m) | | |
| 1 | 46 | 46 | | | 40 | | |
| 1.5 | 31 | 31 | | | 27 | | |
| 2.5 | 19 | 19 | | | 16 | | |
| 4 | 12 | 12 | | | 10 | | |
| 6 | 7.9 | 7.9 | | | 6.8 | | |
| 10 | 4.7 | 4.7 | | | 4.0 | | |
| 16 | 2.9 | 2.9 | | | 2.5 | | |
| | | R | X | Z | R | X | Z |
| 25 | 1.85 | 1.85 | 0.160 | 1.90 | 0.160 | 0.140 | 1.65 |
| 35 | 1.35 | 1.35 | 0.151 | 1.35 | 1.15 | 0.135 | 1.15 |
| 50 | 0.98 | 0.99 | 0.155 | 1.00 | 0.86 | 0.1351 | 0.87 |
| 70 | 0.67 | 0.67 | 0.150 | 0.69 | 0.59 | 0.130 | 0.60 |
| 95 | 0.49 | 0.50 | 0.150 | 0.52 | 0.43 | 0.130 | 0.45 |
| 120 | 0.39 | 0.40 | 0.145 | 0.42 | 0.34 | 0.130 | 0.37 |
| 150 | 0.31 | 0.32 | 0.145 | 0.35 | 0.28 | 0.125 | 0.30 |
| 185 | 0.25 | 0.26 | 0.145 | 0.29 | 0.22 | 0.125 | 0.26 |
| 240 | 0.195 | 0.200 | 0.140 | 0.24 | 0.175 | 0.125 | 0.21 |
| 300 | 0.155 | 0.160 | 0.140 | 0.21 | 0.140 | 0.120 | 0.185 |
| 400 | 0.120 | 0.130 | 0.140 | 0.115 | 0.115 | 0.120 | 0.165 |

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