

# FS SINGLE CORE FIRE SURVIVAL CABLE

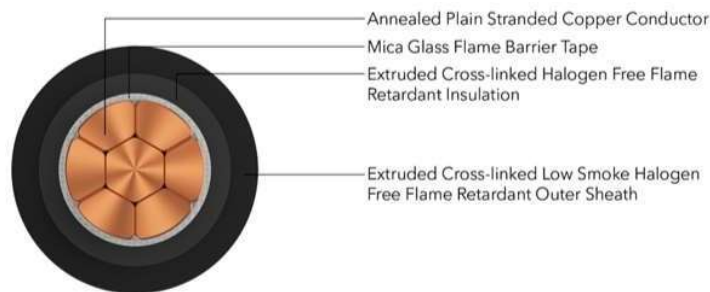
450/750 V AC

MICA GLASS + XLPE HF

LSZH SHEATH

1 CORE · 4-240 SQMM

UNARMoured



Images not to scale. Follow table for dimensions

## APPLICATION

INDOCABLES FS Single Core sheathed cable is suitable to use in various indoor and outdoor application such as tunnels, high rise buildings, schools, hospitals, hotels, malls, subways for emergency lighting during the event of fire.

## CONSTRUCTION

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded Cross-linked Halogen Free Flame Retardant Insulation
- Extruded Cross-linked Low Smoke Halogen Free Flame Retardant Sheath

**CORE IDENTIFICATION** Black or any mono colour

**BENDING RADIUS** Min. 8 x Overall Diameter

**TEST VOLTAGE** 3500 V AC at (20±5)°C

## STANDARD FOLLOWS

EN 60228:2005

Generally conforming to BS 7211

## CHARACTERISTICS

|                           |                                         |
|---------------------------|-----------------------------------------|
| Voltage Rating            | 450/750V AC<br>Can be extended to 1000V |
| Operation Temperature     | -40°C to +90°C                          |
| Short Circuit Temperature | 250°C                                   |

## OUTSTANDING FEATURES

**HIGH  
RESISTANT  
TO FIRE**
**HALOGEN  
FREE**
**REDUCED  
FLAME  
PROPAGATION**
**CIRCUIT  
INTEGRITY  
IN FIRE**
**LOW  
TOXICITY**
**FIRE  
BARRIER**

## COMPLIANCE

|                       |                    |
|-----------------------|--------------------|
| Fire Resistant        | IEC 60331-3        |
| Flame Propagation     | EN 60332-1-2       |
| Fire Retardant        | EN 60332-3 (Cat.C) |
| Halogen free material | EN 60754-1         |
| Smoke Density         | EN 61034-2         |
| Toxicity              | NES 02-713         |

FIRE SURVIVAL · SINGLE CORE LSZH · 450/750 V AC

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PRODUCT CODES, DIMENSION & ELECTRICAL DATA

FULL ITEM CODE IC-FS-01-~~size~~-CU-2XL-FS2XH-0450-IS17505P1-ZHFR

| code slot | provisional            | nos. | sqmm | mm  | Ω/km   | Ω/km   | kg/km |
|-----------|------------------------|------|------|-----|--------|--------|-------|
| 01-00400  | IC1006584 <sup>†</sup> | 1    | 4    | 6.9 | 4.61   | 5.88   | 80    |
| 01-00600  | IC1006585 <sup>†</sup> | 1    | 6    | 7.5 | 3.08   | 3.93   | 100   |
| 01-01000  | IC1006586 <sup>†</sup> | 1    | 10   | 7.9 | 1.83   | 2.33   | 140   |
| 01-01600  | IC1006587 <sup>†</sup> | 1    | 16   | 8.9 | 1.15   | 1.47   | 200   |
| 01-02500  | IC1006588 <sup>†</sup> | 1    | 25   | 11  | 0.727  | 0.927  | 310   |
| 01-03500  | IC1006589 <sup>†</sup> | 1    | 35   | 11* | 0.524  | 0.668  | 400   |
| 01-05000  | IC1006590 <sup>†</sup> | 1    | 50   | 13  | 0.387  | 0.494  | 525   |
| 01-07000  | IC1006591 <sup>†</sup> | 1    | 70   | 15  | 0.268  | 0.342  | 735   |
| 01-09500  | IC1006592 <sup>†</sup> | 1    | 95   | 17  | 0.193  | 0.247  | 980   |
| 01-12000  | IC1006593 <sup>†</sup> | 1    | 120  | 19  | 0.153  | 0.196  | 1250  |
| 01-15000  | IC1006594 <sup>†</sup> | 1    | 150  | 20  | 0.124  | 0.16   | 1540  |
| 01-18500  | IC1006595 <sup>†</sup> | 1    | 185  | 22  | 0.0991 | 0.129  | 1890  |
| 01-24000  | IC1006596 <sup>†</sup> | 1    | 240  | 25  | 0.0754 | 0.0988 | 2500  |

The above data is approximate & subject to manufacturing tolerance.

CODING NOTES

All thirteen items are **DRAFT** and marked <sup>†</sup> — the codes are built entirely from values that already exist on tab 5 REF TABLES (line FS, insulation 2XL, designation FS2XH, voltage grade 0450, standard IS17505P1, option ZHFR), but this combination is not yet in the Item Master: the register carries fire-survival single core only at 1100 V to BS7846. Item IDs IC1006584–IC1006596 are provisional, taken as the next free block after sheet FC-08, and need one row each on tab 4 ITEM MASTER before release. The mica glass flame barrier tape is carried in the item description, not in the code — the grammar has one insulation position only.

\* The overall diameter for 35 sqmm is printed as 11 mm in the source data, the same value as 25 sqmm. Reproduced as supplied — confirm before release.





EVERY CONNECTION MATTERS

PRODUCT DATASHEET

FS SC LSZH · IS 17505 Part 1

FP-09

SHEET NO.

FIRE SURVIVAL · SINGLE CORE LSZH · 450/750 V AC

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CURRENT CARRYING CAPACITY Amperes · air ambient 30°C · conductor operating 90°C

| CONDUCTOR<br>CROSS-<br>SECTIONAL<br>AREA | REFERENCE METHOD A<br>enclosed in conduit in thermally<br>insulating wall etc. |                                  | REFERENCE METHOD B<br>enclosed in conduit on a wall or<br>in trunking etc. |                                  | REFERENCE METHOD C<br>clipped direct                       |                                                                        | REFERENCE METHOD F<br>in free air or on a perforated cable tray etc<br>horizontal or vertical, touching |                                   |                                      | REFERENCE METHOD G<br>in free air, spaced by one cable<br>diameter                          |                                                                                        | Amp. |
|------------------------------------------|--------------------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------|
|                                          | 2 cables,<br>single-phase<br>AC or DC                                          | 3 or 4 cables,<br>three-phase AC | 2 cables,<br>single-phase<br>AC or DC                                      | 3 or 4 cables,<br>three-phase AC | 2 cables,<br>single-phase<br>AC or DC flat<br>and touching | 3 or 4 cables,<br>three-phase AC<br>flat and<br>touching or<br>trefoil | 2 cables,<br>single-phase<br>AC or DC flat                                                              | 3 cables, three-<br>phase AC flat | 3 cables, three-<br>phase AC trefoil | 2 cables<br>single-phase<br>AC or DC or 3<br>cables three-<br>phase AC flat<br>— horizontal | 2 cables single-<br>phase AC or DC<br>or 3 cables<br>three-phase AC<br>flat — vertical |      |
|                                          | mm2                                                                            | Amp.                             | Amp.                                                                       | Amp.                             | Amp.                                                       | Amp.                                                                   | Amp.                                                                                                    | Amp.                              | Amp.                                 | Amp.                                                                                        | Amp.                                                                                   |      |
| 4                                        | 35                                                                             | 31                               | 42                                                                         | 37                               | 46                                                         | 41                                                                     | —                                                                                                       | —                                 | —                                    | —                                                                                           | —                                                                                      |      |
| 6                                        | 45                                                                             | 40                               | 54                                                                         | 48                               | 59                                                         | 54                                                                     | —                                                                                                       | —                                 | —                                    | —                                                                                           | —                                                                                      |      |
| 10                                       | 61                                                                             | 54                               | 75                                                                         | 66                               | 81                                                         | 74                                                                     | —                                                                                                       | —                                 | —                                    | —                                                                                           | —                                                                                      |      |
| 16                                       | 81                                                                             | 73                               | 100                                                                        | 88                               | 109                                                        | 99                                                                     | —                                                                                                       | —                                 | —                                    | —                                                                                           | —                                                                                      |      |
| 25                                       | 106                                                                            | 95                               | 133                                                                        | 117                              | 143                                                        | 130                                                                    | 161                                                                                                     | 141                               | 135                                  | 182                                                                                         | 161                                                                                    |      |
| 35                                       | 131                                                                            | 117                              | 164                                                                        | 144                              | 176                                                        | 161                                                                    | 200                                                                                                     | 176                               | 169                                  | 226                                                                                         | 201                                                                                    |      |
| 50                                       | 158                                                                            | 141                              | 198                                                                        | 175                              | 228                                                        | 209                                                                    | 242                                                                                                     | 216                               | 207                                  | 275                                                                                         | 246                                                                                    |      |
| 70                                       | 200                                                                            | 179                              | 253                                                                        | 222                              | 293                                                        | 268                                                                    | 310                                                                                                     | 279                               | 268                                  | 353                                                                                         | 318                                                                                    |      |
| 95                                       | 241                                                                            | 216                              | 306                                                                        | 269                              | 355                                                        | 326                                                                    | 377                                                                                                     | 342                               | 328                                  | 430                                                                                         | 389                                                                                    |      |
| 120                                      | 278                                                                            | 249                              | 354                                                                        | 312                              | 413                                                        | 379                                                                    | 437                                                                                                     | 400                               | 383                                  | 500                                                                                         | 454                                                                                    |      |
| 150                                      | 318                                                                            | 285                              | 393                                                                        | 342                              | 476                                                        | 436                                                                    | 504                                                                                                     | 464                               | 444                                  | 577                                                                                         | 527                                                                                    |      |
| 185                                      | 362                                                                            | 324                              | 449                                                                        | 384                              | 545                                                        | 500                                                                    | 575                                                                                                     | 533                               | 510                                  | 661                                                                                         | 605                                                                                    |      |
| 240                                      | 424                                                                            | 380                              | 528                                                                        | 450                              | 644                                                        | 590                                                                    | 679                                                                                                     | 634                               | 607                                  | 781                                                                                         | 719                                                                                    |      |

The above table is in accordance with Table 4E1A of BS 7671-2018.

DE-RATING FACTORS for other than 30°C ambient air temperature

| AIR TEMPERATURE °C | 25   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 65   | 70   | 75   | 80   |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| De-rating factor   | 1.02 | 1.00 | 0.96 | 0.91 | 0.87 | 0.82 | 0.76 | 0.71 | 0.65 | 0.58 | 0.50 | 0.41 |

