



The Ultimate Guardian



Call: 1800-267-0008 Timing: 9:30 am to 6:30 pm (Monday - Saturday)

Polycab India Limited 771, Polycab House, Pandit Satawalekar Marg,
Mahim West, Mumbai - 400 016. enquiry@polycab.com Join us on: [f](#) [t](#) [in](#)

IGNIS
Polycab Fire Survival Cables

Index

| Sl. No. | | Page No. |
|---------|--|----------|
| 1 | About IGNIS Fire Survival Cable | 3 |
| 2 | Time-Temperature Curve | 5 |
| 3 | Performance of cables in the event of fire | 6 |
| 4 | Technical Data - Cable Construction / Electrical Characteristics | |
| | 1. POLYCAB IGNIS 200 | 8 |
| | 2. POLYCAB IGNIS 210 | 12 |
| | 3. POLYCAB IGNIS 220 | 16 |
| | 4. POLYCAB IGNIS 230 | 20 |
| | 5. POLYCAB IGNIS 211 | 24 |
| | 6. POLYCAB IGNIS 212 | 26 |
| | 7. POLYCAB IGNIS 213 | 28 |
| | 8. POLYCAB IGNIS 214 | 30 |
| | 9. POLYCAB IGNIS 215 | 32 |
| | 10. POLYCAB IGNIS 240 | 34 |
| | 11. POLYCAB IGNIS 241 | 36 |
| | 12. POLYCAB IGNIS 242 | 38 |

IGNIS Fire Survival Cable

In today's building & installation, electrical cables & wires have a significant role in fire safety. Generally electrical insulation and sheathing compound catch fire unless it is fire retardant or fire resistant. This results in overheating of wires & cables arching, short circuit or electrical fault. Cables contribute significantly to the spread of fire and heat emission, increased smoke emission, increased carbon monoxide level, production & release of corrosive gasses.

Polycab IGNIS fire survival cable (low smoke zero halogen - LSZH) are suitable for use in various indoor & outdoor applications where continuity of power supply during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people or the precision instruments in high rise building, schools, hospitals, hotels, Malls, Subways etc. Polycab IGNIS Fire Survival Cable conforms to various IEC and BS specification. The cables are tested in leading labs and approved by many Indian public sector company and other industries.

Polycab IGNIS Fire Survival cable is a result of continuous research & development and innovation in highly sophisticated and modern R& D centre.

In order to meet the latest demands of environmentally friendly cables with increased safety in the event of a fire, Polycab offers a high range of product that meets:

1. The green & healthy environment
2. Halogen free environment which contributes to less corrosive gases and prevents the damage of human beings and equipments near the fire.
3. No emission of toxic gases which allows fire fighters to work and people to exit.
4. No release of dense smoke that improves the visibility of the exit routes and facilitates the rescue operation.
5. Takes much more time than the traditional cables to catch fire which helps in the evacuation of operation.
6. Excellent flame retardant properties that prevent the spreading of fire.
7. Maintains the circuit integrity of those vital instruments which help in the rescue operation, fire fighting and exit as follows:

| | |
|---------------------------------|-----------------------|
| a. Booster pump system | e. Rescue elevators |
| b. Water sprinkling system | f. Alarm hooters |
| c. Emergency lighting | g. Ventilation system |
| d. Fire & smoke detector system | |



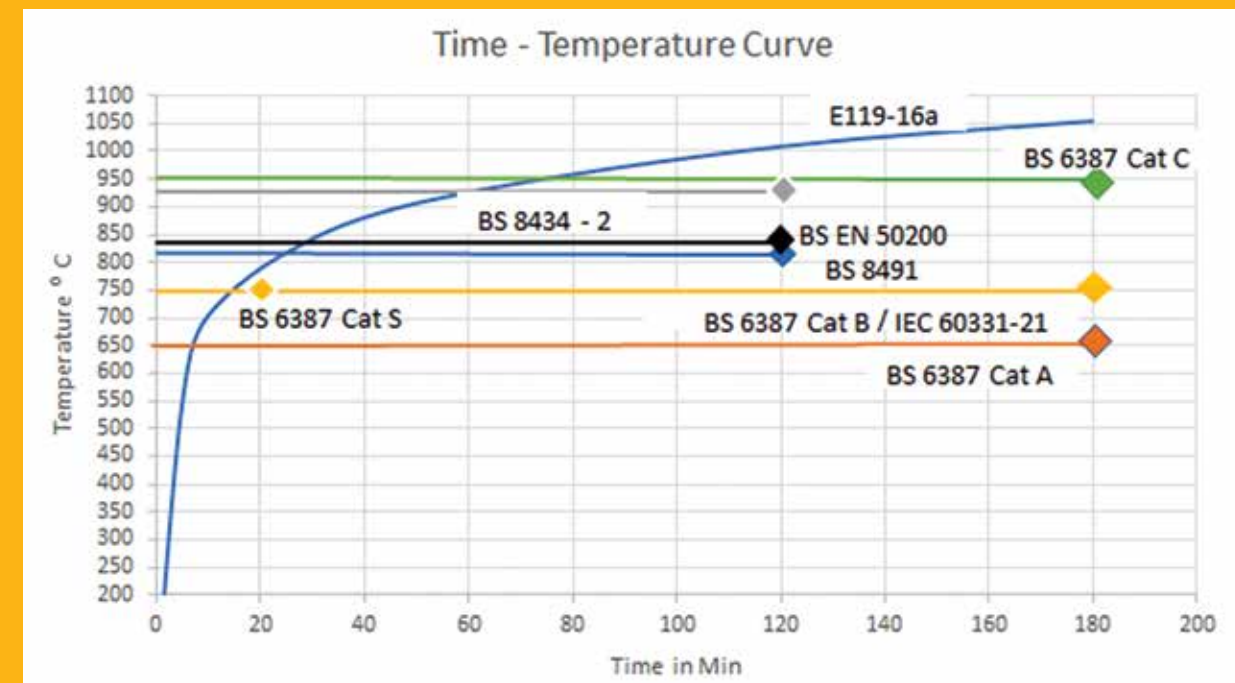


Polycab IGNIS Fire Survival Cables

Polycab fire rated cables are designed to maintain electrical continuity during high fire situation to keep essential life safety and fire-fighting equipment operational for as long as possible, to facilitate evacuation, visibility and firefighting devices to be operational.

Time -temperature Curve

The time-temperature curve shown in the picture below is the standard scale for measurement of fire test severity and shows the growth of fire propagation.



To assess the performance of the cable under different fire load, various specifications are described. The time-temperature curve for the standard fire endurance test, ASTM E 119 [13] goes up to 1260°C but this takes 8hrs. Therefore cable performance below this level has described in BS 6387CWZ, BS 8434-2, BS EN 50200, BS 8491 & IEC 60331-21.

Performance of cables in the event of Fire

In the event of fire, the cable develops hazards in respect of flame propagation, evaluation of smoke, heat development and toxic gasses etc. To evaluate the potential performance of the cable, many tests have been developed over the years.

The performance of the cable under fire condition is specified in several international standard as follows:

1. Flame Propagation Test : IEC 60332-1, BS EN 60332-1
2. Flame spread test : IEC 60332-3, BS EN 60332-3
3. Fire Resistance test : IEC 60331, BS 6387
4. Resistant to Fire with water : BS 6387
5. Acid Gas emission test : IEC 60754, BS EN 50267
6. Determination of Acidity : IEC 60754, BS EN 50267
7. Smoke emission test : IEC 61034, BS EN 61034
8. Limiting Oxygen Index (LOI) : BS EN ISO 4589, ASTM D 2863

Polycab IGNIS Fire Survival cable maintains Circuit Integrity in the following category

Category A 650 ±40°C for 3 hours

Category B 750 ±40°C for 3 hours

Category C 950 ±40°C for 3 hours

BS 6387-2013 describes following Circuit Integrity tests under CWZ conditions, as below:

- a) Protocol C subjects the cable under test to a flame via direct impingement corresponding to a temperature attack of 950°C ±40°C.
- b) Protocol W subjects the cable under test to a flame via direct impingement corresponding to a temperature attack of 650°C ±40°C with direct application of water simulating a sprinkler system.
- c) Protocol Z subjects the cable under test to a flame via direct impingement corresponding to a temperature attack of 950°C ±40°C with indirect application of mechanical shock.

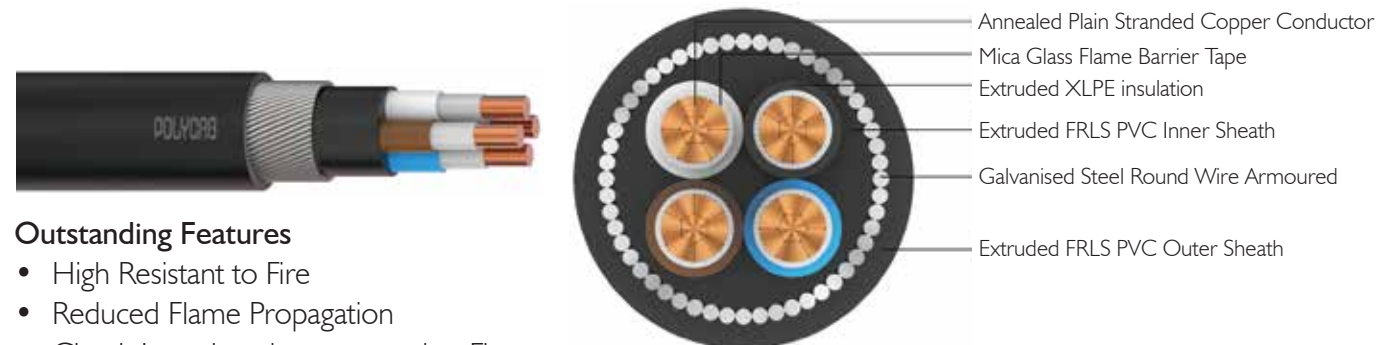
Also, BS 6387 specifies that

Cables shall be designated by category according to their fire resistance characteristics as follows:

- a) Category F2. Resistance to fire, resistance to fire with water, resistance to fire with mechanical shock, assessed separately, when tested in accordance with 17.6.2 of BS 7846;
- b) Category F30. Resistance to fire with direct mechanical impact and water jet assessed in combination, when tested in accordance with BS 8491 for 30 min;
- c) Category F60. Resistance to fire with direct mechanical impact and water jet assessed in combination, when tested in accordance with BS 8491 for 60 min;
- d) Category F120. Resistance to fire with direct mechanical impact and water jet assessed in combination, when tested in accordance with BS 8491 for 120 min.



POLYCAB IGNIS 200
Fire Survival Cable, 600/1000 V AC



Outstanding Features

- High Resistant to Fire
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS-YL Multicore core Armoured cable is suitable to use in various indoor & outdoor applications where continuity of power supply during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people or the precision instruments in high rise building, schools, hospitals, hotels, Malls, Subways etc.

Voltage Rating

0.6/1KV

Operation Temperature

-40°C to +90°C
Short Circuit Temperature 250°C

Construction

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded XLPE insulation.
- Insulated Cores assembled together.
- Extruded FRLS PVC Inner Sheath.
- Galvanised Steel Round Wire Armoured.
(also available with Galvanised Steel Flat Strip Armour, dimensions and weights changes accordingly)
- Extruded FRLS PVC Outer Sheath, Colour: Black.
(other colour as per request).

Core Identification

- 2 core: brown, blue;
- 3 core: brown, black, grey;
- 4 core: blue, brown, black, grey;
- 5 core: green-and-yellow, blue, brown, black, grey;
- Above 5 core can be supplied with number printing
- (All cores: optional number printing)

Bending Radius

Min. 12 x Overall Diameter

Standard Follows:

EN 60228:2005
BS 7846:2016

Test Voltage

3500V AC at (20±5)°C

Compliance

Fire Resistant BS 7846-F2 / BS 6387 CWZ/
BS EN 50200 (PH 60) /
BS 8434 / BS 8491 /
EN 60331-3
Flame Propagation EN 60332-1-2
Fire Retardant EN 60332-3-24 (Cat.C)
Halogen free material EN 60754-1
Smoke Density EN 61034-2
Toxicity NES 02-713



POLYCAB IGNIS 200
Fire Survival Cable, 600/1000 V AC

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Insulation Thickness (mm) | Nom. Dia over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|--------------------------------|---------------------------|------------------------------|--------------------------------|
| FSBS07CXSWYL002C1.5SA00IP | 2 | 1.5 A) | 0.60 | 10.9 | 13.5 | 340 |
| FSBS07CXSWYL002C2.5SA00IP | 2 | 2.5 A) | 0.70 | 12.1 | 14.9 | 410 |
| FSBS07CXSWYL002C004SA00IP | 2 | 4 A) | 0.70 | 13.2 | 16.0 | 470 |
| FSBS07CXSWYL002C006SA00IP | 2 | 6 A) | 0.70 | 14.3 | 17.2 | 540 |
| FSBS07CXSWYL002C010SA00IP | 2 | 10 A) | 0.70 | 16.2 | 19.2 | 690 |
| FSBS07CXSWYL002C016SA00IP | 2 | 16 A) | 0.70 | 19.0 | 22.0 | 1010 |
| FSBS07CXSWYL002C025SA00IP | 2 | 25 A) | 0.90 | 22.4 | 25.7 | 1330 |
| FSBS07CXSWYL002C025SA00IP | 2 | 25 B) | 0.90 | 18.7 | 22.0 | 1170 |
| FSBS07CXSWYL002C035SA00IP | 2 | 35 A) | 0.90 | 25.8 | 29.2 | 1830 |
| FSBS07CXSWYL002C035SA00IP | 2 | 35 B) | 0.90 | 21.4 | 25.0 | 1590 |
| FSBS07CXSWYL002C050SA00IP | 2 | 50 B) | 1.00 | 24.0 | 27.8 | 2030 |
| FSBS07CXSWYL002C070SA00IP | 2 | 70 B) | 1.10 | 26.8 | 30.8 | 2550 |
| FSBS07CXSWYL002C095SA00IP | 2 | 95 B) | 1.10 | 30.4 | 34.6 | 3420 |
| FSBS07CXSWYL002C120SA00IP | 2 | 120 B) | 1.20 | 32.1 | 36.5 | 4020 |
| FSBS07CXSWYL002C150SA00IP | 2 | 150 B) | 1.40 | 35.1 | 39.7 | 4780 |
| FSBS07CXSWYL002C185SA00IP | 2 | 185 B) | 1.60 | 39.7 | 44.7 | 6100 |
| FSBS07CXSWYL002C240SA00IP | 2 | 240 B) | 1.70 | 43.3 | 48.6 | 7410 |
| FSBS07CXSWYL002C300SA00IP | 2 | 300 B) | 1.80 | 47.4 | 52.8 | 8890 |
| FSBS07CXSWYL002C400SA00IP | 2 | 400 B) | 2.00 | 51.7 | 57.6 | 10660 |
| FSBS07CXSWYL003C1.5SA00IP | 3 | 1.5 A) | 0.60 | 11.5 | 14.1 | 385 |
| FSBS07CXSWYL003C2.5SA00IP | 3 | 2.5 A) | 0.70 | 12.8 | 15.6 | 470 |
| FSBS07CXSWYL003C004SA00IP | 3 | 4 A) | 0.70 | 14.0 | 16.8 | 550 |
| FSBS07CXSWYL003C004SA00IP | 3 | 4 A) | 0.70 | 14.7 | 17.5 | 655 |
| FSBS07CXSWYL003C006SA00IP | 3 | 6 A) | 0.70 | 15.2 | 18.0 | 650 |
| FSBS07CXSWYL003C006SA00IP | 3 | 6 A) | 0.70 | 15.9 | 18.7 | 760 |
| FSBS07CXSWYL003C010SA00IP | 3 | 10 A) | 0.70 | 17.9 | 20.9 | 970 |
| FSBS07CXSWYL003C016SA00IP | 3 | 16 A) | 0.70 | 20.2 | 23.4 | 1250 |
| FSBS07CXSWYL003C025SA00IP | 3 | 25 A) | 0.90 | 25.0 | 28.4 | 1890 |
| FSBS07CXSWYL003C025SA00IP | 3 | 25 B) | 0.90 | 21.5 | 24.9 | 1700 |
| FSBS07CXSWYL003C035SA00IP | 3 | 35 A) | 0.90 | 27.5 | 31.0 | 2300 |
| FSBS07CXSWYL003C035SA00IP | 3 | 35 B) | 0.90 | 23.3 | 26.9 | 2070 |
| FSBS07CXSWYL003C050SA00IP | 3 | 50 B) | 1.00 | 26.2 | 30.0 | 2660 |
| FSBS07CXSWYL003C070SA00IP | 3 | 70 B) | 1.10 | 29.3 | 33.1 | 3400 |
| FSBS07CXSWYL003C095SA00IP | 3 | 95 B) | 1.10 | 33.3 | 37.6 | 4580 |
| FSBS07CXSWYL003C120SA00IP | 3 | 120 B) | 1.20 | 36.0 | 40.5 | 5470 |
| FSBS07CXSWYL003C150SA00IP | 3 | 150 B) | 1.40 | 40.5 | 45.1 | 6950 |
| FSBS07CXSWYL003C185SA00IP | 3 | 185 B) | 1.60 | 44.6 | 49.4 | 8300 |
| FSBS07CXSWYL003C240SA00IP | 3 | 240 B) | 1.70 | 48.9 | 54.1 | 10210 |
| FSBS07CXSWYL003C300SA00IP | 3 | 300 B) | 1.80 | 53.5 | 58.9 | 12350 |
| FSBS07CXSWYL003C400SA00IP | 3 | 400 B) | 2.00 | 58.6 | 64.4 | 14890 |

Note:

A) Circular or compacted circular stranded conductor (Class 2).

B) Shaped stranded conductor (Class 2).

POLYCAB IGNIS 200
Fire Survival Cable, 600/1000 V AC

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Insulation Thickness (mm) | Nom. Dia over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|--------------------------------|---------------------------|------------------------------|--------------------------------|
| FSBS07CXSWYL004C1.5SA001P | 4 | 1.5 A) | 0.60 | 12.5 | 15.1 | 435 |
| FSBS07CXSWYL004C2.5SA001P | 4 | 2.5 A) | 0.70 | 14.0 | 16.7 | 530 |
| FSBS07CXSWYL004C004SA001P | 4 | 4 A) | 0.70 | 15.3 | 18.1 | 640 |
| FSBS07CXSWYL004C006SA001P | 4 | 6 A) | 0.70 | 17.3 | 20.3 | 890 |
| FSBS07CXSWYL004C010SA001P | 4 | 10 A) | 0.70 | 19.6 | 22.6 | 1140 |
| FSBS07CXSWYL004C016SA001P | 4 | 16 A) | 0.70 | 22.1 | 25.3 | 1470 |
| FSBS07CXSWYL004C025SA001P | 4 | 25 A) | 0.90 | 27.4 | 30.8 | 2250 |
| FSBS07CXSWYL004C025SA001P | 4 | 25 B) | 0.90 | 24.7 | 28.1 | 2100 |
| FSBS07CXSWYL004C035SA001P | 4 | 35 A) | 0.90 | 30.2 | 33.7 | 2780 |
| FSBS07CXSWYL004C035SA001P | 4 | 35 B) | 0.90 | 27.0 | 30.6 | 2580 |
| FSBS07CXSWYL004C050SA001P | 4 | 50 B) | 1.00 | 30.6 | 34.4 | 3360 |
| FSBS07CXSWYL004C070SA001P | 4 | 70 B) | 1.10 | 35.7 | 40.0 | 4680 |
| FSBS07CXSWYL004C095SA001P | 4 | 95 B) | 1.10 | 39.3 | 43.7 | 5840 |
| FSBS07CXSWYL004C120SA001P | 4 | 120 B) | 1.20 | 43.1 | 47.7 | 7420 |
| FSBS07CXSWYL004C150SA001P | 4 | 150 B) | 1.40 | 47.2 | 52.0 | 8910 |
| FSBS07CXSWYL004C185SA001P | 4 | 185 B) | 1.60 | 51.6 | 56.8 | 10620 |
| FSBS07CXSWYL004C240SA001P | 4 | 240 B) | 1.70 | 57.1 | 62.5 | 13130 |
| FSBS07CXSWYL004C300SA001P | 4 | 300 B) | 1.80 | 62.3 | 68.0 | 15890 |
| FSBS07CXSWYL004C400SA001P | 4 | 400 B) | 2.00 | 70.0 | 76.4 | 20250 |
| FSBS07CXSWYL005C1.5SA001P | 5 | 1.5 | 0.60 | 13.5 | 16.3 | 495 |
| FSBS07CXSWYL005C2.5SA001P | 5 | 2.5 | 0.70 | 15.2 | 18.0 | 605 |
| FSBS07CXSWYL005C004SA001P | 5 | 4 | 0.70 | 16.6 | 19.7 | 740 |
| FSBS07CXSWYL005C006SA001P | 5 | 6 | 0.70 | 18.9 | 21.9 | 1020 |
| FSBS07CXSWYL005C010SA001P | 5 | 10 | 0.70 | 21.4 | 24.6 | 1330 |
| FSBS07CXSWYL005C016SA001P | 5 | 16 | 0.70 | 25.3 | 28.7 | 1950 |
| FSBS07CXSWYL005C025SA001P | 5 | 25 | 0.90 | 30.0 | 33.6 | 2650 |
| FSBS07CXSWYL005C035SA001P | 5 | 35 | 0.90 | 33.0 | 36.9 | 3280 |
| FSBS07CXSWYL005C050SA001P | 5 | 50 | 1.00 | 39.1 | 43.0 | 4640 |
| FSBS07CXSWYL005C070SA001P | 5 | 70 | 1.10 | 43.8 | 48.2 | 5840 |
| FSBS07CXSWYL007C1.5SA001P | 7 | 1.5 | 0.60 | 14.6 | 17.5 | 580 |
| FSBS07CXSWYL012C1.5SA001P | 12 | 1.5 | 0.60 | 19.7 | 22.7 | 990 |
| FSBS07CXSWYL019C1.5SA001P | 19 | 1.5 | 0.60 | 22.8 | 26.1 | 1300 |
| FSBS07CXSWYL027C1.5SA001P | 27 | 1.5 | 0.60 | 28.2 | 31.7 | 1920 |
| FSBS07CXSWYL037C1.5SA001P | 37 | 1.5 | 0.60 | 31.4 | 34.9 | 2315 |
| FSBS07CXSWYL007C2.5SA001P | 7 | 2.5 | 0.70 | 16.5 | 19.3 | 720 |
| FSBS07CXSWYL012C2.5SA001P | 12 | 2.5 | 0.70 | 22.2 | 25.5 | 1230 |
| FSBS07CXSWYL019C2.5SA001P | 19 | 2.5 | 0.70 | 27.0 | 30.5 | 1860 |
| FSBS07CXSWYL027C2.5SA001P | 27 | 2.5 | 0.70 | 32.0 | 36.7 | 2410 |
| FSBS07CXSWYL037C2.5SA001P | 37 | 2.5 | 0.70 | 35.7 | 39.4 | 2970 |
| FSBS07CXSWYL007C004SA001P | 7 | 4.0 | 0.70 | 18.8 | 21.8 | 1020 |
| FSBS07CXSWYL012C004SA001P | 12 | 4.0 | 0.70 | 25.6 | 28.8 | 1725 |
| FSBS07CXSWYL019C004SA001P | 19 | 4.0 | 0.70 | 29.7 | 33.2 | 2300 |
| FSBS07CXSWYL027C004SA001P | 27 | 4.0 | 0.70 | 35.3 | 39.2 | 3025 |
| FSBS07CXSWYL037C004SA001P | 37 | 4.0 | 0.70 | 40.7 | 44.8 | 4140 |

Note: A) Circular or compacted circular stranded conductor (Class 2). B) Shaped stranded conductor (Class 2).

POLYCAB IGNIS 200
Fire Survival Cable, 600/1000 V AC

ELECTRICAL CHARACTERISTICS:

| Conductor cross-sectional area | Max. Conductor Resistance | | Current Carrying Capacity (Amperes) | | | | | |
|--------------------------------|---------------------------|--------|-------------------------------------|------|--|------|---|------|
| | | | Reference Method C (clipped direct) | | Reference Method E (in free air or on a perforated cable tray etc, horizontal or vertical) | | Reference Method D (direct in ground or in ducting in ground, in or around buildings) | |
| | mm ² | Ohm/km | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. |
| 1.5 | 12.1 | 15.4 | 27 | 23 | 29 | 25 | 25 | 21 |
| 2.5 | 7.41 | 9.45 | 36 | 31 | 39 | 33 | 33 | 28 |
| 4 | 4.61 | 5.88 | 49 | 42 | 52 | 44 | 43 | 36 |
| 6 | 3.08 | 3.93 | 62 | 53 | 66 | 56 | 53 | 44 |
| 10 | 1.83 | 2.33 | 85 | 73 | 90 | 78 | 71 | 58 |
| 16 | 1.15 | 1.47 | 110 | 94 | 115 | 99 | 91 | 75 |
| 25 | 0.727 | 0.927 | 146 | 124 | 152 | 131 | 116 | 96 |
| 35 | 0.524 | 0.668 | 180 | 154 | 188 | 162 | 139 | 115 |
| 50 | 0.387 | 0.493 | 219 | 187 | 228 | 197 | 164 | 135 |
| 70 | 0.268 | 0.342 | 279 | 238 | 291 | 251 | 203 | 167 |
| 95 | 0.193 | 0.246 | 338 | 289 | 354 | 304 | 239 | 197 |
| 120 | 0.153 | 0.195 | 392 | 335 | 410 | 353 | 271 | 223 |
| 150 | 0.124 | 0.158 | 451 | 386 | 472 | 406 | 306 | 251 |
| 185 | 0.0991 | 0.126 | 515 | 441 | 539 | 463 | 343 | 281 |
| 240 | 0.0754 | 0.0961 | 607 | 520 | 636 | 546 | 395 | 324 |
| 300 | 0.0601 | 0.0766 | 698 | 599 | 732 | 628 | 446 | 365 |
| 400 | 0.0470 | 0.0599 | 787 | 673 | 847 | 728 | - | - |

The above table is in accordance with Table 4E4A of BS 7671-2018

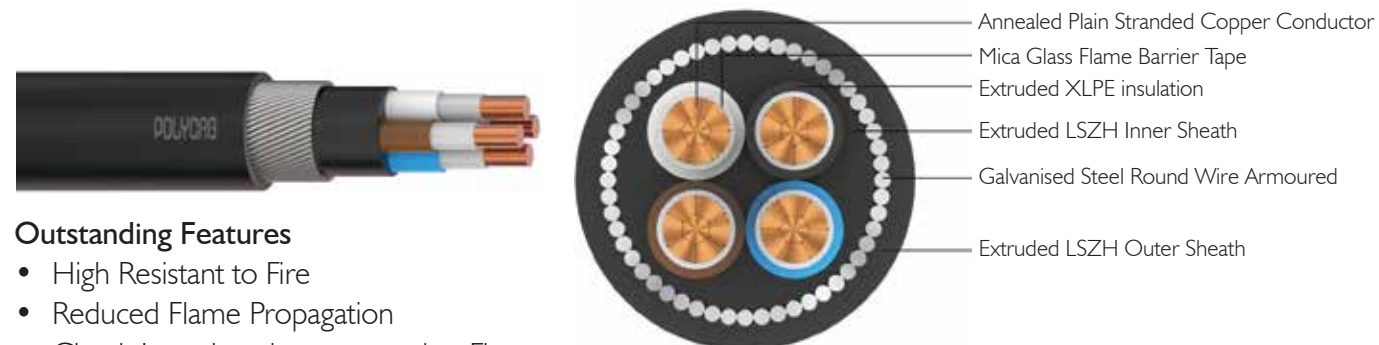
Current rating de-rating factors for other than 30°C ambient air temperature.

| Air Temperature | 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 |

Current rating de-rating factors for other than 20°C ground temperature.

| Air Temperature | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| De-rating factor | 1.07 | 1.04 | 1.00 | 0.96 | 0.93 | 0.89 | 0.85 | 0.80 | 0.76 | 0.71 | 0.65 | 0.60 | 0.53 | 0.46 | 0.38 |

POLYCAB IGNIS 210
Fire Survival Cable, 600/1000V AC



Outstanding Features

- High Resistant to Fire
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS Multicore core Armoured cable is suitable to use in various indoor & outdoor applications where continuity of power supply during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people or the precision instruments in high rise building, schools, hospitals, hotels, Malls, Subways etc.

Voltage Rating

0.6/1KV

Operation Temperature

-40°C to +90°C
Short Circuit Temperature 250°C

Construction

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded XLPE insulation.
- Insulated Cores assembled together.
- Extruded LSZH Inner Sheath
- Galvanised Steel Round Wire Armoured (also available with Galvanised Steel Flat Strip Armour, dimensions and weights changes accordingly)
- Extruded LSZH Outer Sheath, Colour: Black. (other colour as per request).

Bending Radius

Min. 12 x Overall Diameter

Standard Follows:

EN 60228:2005
BS 7846:2015

Test Voltage

3500V AC at (20±5)°C

Compliance

Fire Resistant BS 6387 CWZ
Flame Propagation EN 60332-1-2
Fire Retardant EN 60332-3-24:2009 (Cat C)
Halogen free material EN 60754-1:2014
Smoke Density EN 61034-2

Core Identification

- 2 core: brown, blue;
- 3 core: brown, black, grey;
- 4 core: blue, brown, black, grey;
- 5 core: green-and-yellow, blue, brown, black, grey;
- Above 5 core can be supplied with number printing
- (All cores: optional number printing)



POLYCAB IGNIS 210
Fire Survival Cable, 600/1000V AC

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Insulation Thickness (mm) | Nom. Dia over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|--------------------------------|---------------------------|------------------------------|--------------------------------|
| FSBS07CXSWLS002C1.5SA001P | 2 | 1.5 A) | 0.60 | 10.9 | 13.5 | 340 |
| FSBS07CXSWLS002C2.5SA001P | 2 | 2.5 A) | 0.70 | 12.1 | 14.9 | 410 |
| FSBS07CXSWLS002C004SA001P | 2 | 4 A) | 0.70 | 13.2 | 16.0 | 470 |
| FSBS07CXSWLS002C006SA001P | 2 | 6 A) | 0.70 | 14.3 | 17.2 | 540 |
| FSBS07CXSWLS002C010SA001P | 2 | 10 A) | 0.70 | 16.2 | 19.2 | 690 |
| FSBS07CXSWLS002C016SA001P | 2 | 16 A) | 0.70 | 19.0 | 22.0 | 1010 |
| FSBS07CXSWLS002C025SA001P | 2 | 25 A) | 0.90 | 22.4 | 25.7 | 1330 |
| FSBS07CXSWLS002C025SA001P | 2 | 25 B) | 0.90 | 18.7 | 22.0 | 1170 |
| FSBS07CXSWLS002C035SA001P | 2 | 35 A) | 0.90 | 25.8 | 29.2 | 1830 |
| FSBS07CXSWLS002C035SA001P | 2 | 35 B) | 0.90 | 21.4 | 25.0 | 1590 |
| FSBS07CXSWLS002C050SA001P | 2 | 50 B) | 1.00 | 24.0 | 27.8 | 2030 |
| FSBS07CXSWLS002C070SA001P | 2 | 70 B) | 1.10 | 26.8 | 30.8 | 2550 |
| FSBS07CXSWLS002C095SA001P | 2 | 95 B) | 1.10 | 30.4 | 34.6 | 3420 |
| FSBS07CXSWLS002C120SA001P | 2 | 120 B) | 1.20 | 32.1 | 36.5 | 4020 |
| FSBS07CXSWLS002C150SA001P | 2 | 150 B) | 1.40 | 35.1 | 39.7 | 4780 |
| FSBS07CXSWLS002C185SA001P | 2 | 185 B) | 1.60 | 39.7 | 44.7 | 6100 |
| FSBS07CXSWLS002C240SA001P | 2 | 240 B) | 1.70 | 43.3 | 48.6 | 7410 |
| FSBS07CXSWLS002C300SA001P | 2 | 300 B) | 1.80 | 47.4 | 52.8 | 8890 |
| FSBS07CXSWLS002C400SA001P | 2 | 400 B) | 2.00 | 51.7 | 57.6 | 10660 |
| FSBS07CXSWLS003C1.5SA001P | 3 | 1.5 A) | 0.60 | 11.5 | 14.1 | 385 |
| FSBS07CXSWLS003C2.5SA001P | 3 | 2.5 A) | 0.70 | 12.8 | 15.6 | 470 |
| FSBS07CXSWLS003C004SA001P | 3 | 4 A) | 0.70 | 14.0 | 16.8 | 550 |
| FSBS07CXSWLS003C006SA001P | 3 | 6 A) | 0.70 | 15.2 | 18.0 | 650 |
| FSBS07CXSWLS003C010SA001P | 3 | 10 A) | 0.70 | 17.9 | 20.9 | 970 |
| FSBS07CXSWLS003C016SA001P | 3 | 16 A) | 0.70 | 20.2 | 23.4 | 1250 |
| FSBS07CXSWLS003C025SA001P | 3 | 25 A) | 0.90 | 25.0 | 28.4 | 1890 |
| FSBS07CXSWLS003C025SA001P | 3 | 25 B) | 0.90 | 21.5 | 24.9 | 1700 |
| FSBS07CXSWLS003C035SA001P | 3 | 35 A) | 0.90 | 27.5 | 31.0 | 2300 |
| FSBS07CXSWLS003C035SA001P | 3 | 35 B) | 0.90 | 23.3 | 26.9 | 2070 |
| FSBS07CXSWLS003C050SA001P | 3 | 50 B) | 1.00 | 26.2 | 30.0 | 2660 |
| FSBS07CXSWLS003C070SA001P | 3 | 70 B) | 1.10 | 29.3 | 33.1 | 3400 |
| FSBS07CXSWLS003C095SA001P | 3 | 95 B) | 1.10 | 33.3 | 37.6 | 4580 |
| FSBS07CXSWLS003C120SA001P | 3 | 120 B) | 1.20 | 36.0 | 40.5 | 5470 |
| FSBS07CXSWLS003C150SA001P | 3 | 150 B) | 1.40 | 40.5 | 45.1 | 6950 |
| FSBS07CXSWLS003C185SA001P | 3 | 185 B) | 1.60 | 44.6 | 49.4 | 8300 |
| FSBS07CXSWLS003C240SA001P | 3 | 240 B) | 1.70 | 48.9 | 54.1 | 10210 |
| FSBS07CXSWLS003C300SA001P | 3 | 300 B) | 1.80 | 53.5 | 58.9 | 12350 |
| FSBS07CXSWLS003C400SA001P | 3 | 400 B) | 2.00 | 58.6 | 64.4 | 14890 |

Note:

- A) Circular or compacted circular stranded conductor (Class 2).
- B) Shaped stranded conductor (Class 2).

POLYCAB IGNIS 210
Fire Survival Cable, 600/1000V AC

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Insulation Thickness (mm) | Nom. Dia over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|--------------------------------|---------------------------|------------------------------|--------------------------------|
| FSBS07CXSWLS004C1.5SA001P | 4 | 1.5 A) | 0.60 | 12.5 | 15.1 | 435 |
| FSBS07CXSWLS004C2.5SA001P | 4 | 2.5 A) | 0.70 | 14.0 | 16.7 | 530 |
| FSBS07CXSWLS004C004SA001P | 4 | 4 A) | 0.70 | 15.3 | 18.1 | 640 |
| FSBS07CXSWLS004C006SA001P | 4 | 6 A) | 0.70 | 17.3 | 20.3 | 890 |
| FSBS07CXSWLS004C010SA001P | 4 | 10 A) | 0.70 | 19.6 | 22.6 | 1140 |
| FSBS07CXSWLS004C016SA001P | 4 | 16 A) | 0.70 | 22.1 | 25.3 | 1470 |
| FSBS07CXSWLS004C025SA001P | 4 | 25 A) | 0.90 | 27.4 | 30.8 | 2250 |
| FSBS07CXSWLS004C025SA001P | 4 | 25 B) | 0.90 | 24.7 | 28.1 | 2100 |
| FSBS07CXSWLS004C035SA001P | 4 | 35 A) | 0.90 | 30.2 | 33.7 | 2780 |
| FSBS07CXSWLS004C035SA001P | 4 | 35 B) | 0.90 | 27.0 | 30.6 | 2580 |
| FSBS07CXSWLS004C050SA001P | 4 | 50 B) | 1.00 | 30.6 | 34.4 | 3360 |
| FSBS07CXSWLS004C070SA001P | 4 | 70 B) | 1.10 | 35.7 | 40.0 | 4680 |
| FSBS07CXSWLS004C095SA001P | 4 | 95 B) | 1.10 | 39.3 | 43.7 | 5840 |
| FSBS07CXSWLS004C120SA001P | 4 | 120 B) | 1.20 | 43.1 | 47.7 | 7420 |
| FSBS07CXSWLS004C150SA001P | 4 | 150 B) | 1.40 | 47.2 | 52.0 | 8910 |
| FSBS07CXSWLS004C185SA001P | 4 | 185 B) | 1.60 | 51.6 | 56.8 | 10620 |
| FSBS07CXSWLS004C240SA001P | 4 | 240 B) | 1.70 | 57.1 | 62.5 | 13130 |
| FSBS07CXSWLS004C300SA001P | 4 | 300 B) | 1.80 | 62.3 | 68.0 | 15890 |
| FSBS07CXSWLS004C400SA001P | 4 | 400 B) | 2.00 | 70.0 | 76.4 | 20250 |
| FSBS07CXSWLS005C1.5SA001P | 5 | 1.5 | 0.60 | 13.5 | 16.3 | 495 |
| FSBS07CXSWLS005C2.5SA001P | 5 | 2.5 | 0.70 | 15.2 | 18.0 | 605 |
| FSBS07CXSWLS005C004SA001P | 5 | 4 | 0.70 | 16.6 | 19.7 | 740 |
| FSBS07CXSWLS005C006SA001P | 5 | 6 | 0.70 | 18.9 | 21.9 | 1020 |
| FSBS07CXSWLS005C010SA001P | 5 | 10 | 0.70 | 21.4 | 24.6 | 1330 |
| FSBS07CXSWLS005C016SA001P | 5 | 16 | 0.70 | 25.3 | 28.7 | 1950 |
| FSBS07CXSWLS005C025SA001P | 5 | 25 | 0.90 | 30.0 | 33.6 | 2650 |
| FSBS07CXSWLS005C035SA001P | 5 | 35 | 0.90 | 33.0 | 36.9 | 3280 |
| FSBS07CXSWLS005C050SA001P | 5 | 50 | 1.00 | 39.1 | 43.0 | 4640 |
| FSBS07CXSWLS005C070SA001P | 5 | 70 | 1.10 | 43.8 | 48.2 | 5840 |
| FSBS07CXSWLS007C1.5SA001P | 7 | 1.5 | 0.60 | 14.6 | 17.5 | 580 |
| FSBS07CXSWLS012C1.5SA001P | 12 | 1.5 | 0.60 | 19.7 | 22.7 | 990 |
| FSBS07CXSWLS019C1.5SA001P | 19 | 1.5 | 0.60 | 22.8 | 26.1 | 1300 |
| FSBS07CXSWLS027C1.5SA001P | 27 | 1.5 | 0.60 | 28.2 | 31.7 | 1920 |
| FSBS07CXSWLS037C1.5SA001P | 37 | 1.5 | 0.60 | 31.4 | 34.9 | 2315 |
| FSBS07CXSWLS007C2.5SA001P | 7 | 2.5 | 0.70 | 16.5 | 19.3 | 720 |
| FSBS07CXSWLS012C2.5SA001P | 12 | 2.5 | 0.70 | 22.2 | 25.5 | 1230 |
| FSBS07CXSWLS019C2.5SA001P | 19 | 2.5 | 0.70 | 27.0 | 30.5 | 1860 |
| FSBS07CXSWLS027C2.5SA001P | 27 | 2.5 | 0.70 | 32.0 | 36.7 | 2410 |
| FSBS07CXSWLS037C2.5SA001P | 37 | 2.5 | 0.70 | 35.7 | 39.4 | 2970 |
| FSBS07CXSWLS007C004SA001P | 7 | 4.0 | 0.70 | 18.8 | 21.8 | 1020 |
| FSBS07CXSWLS012C004SA001P | 12 | 4.0 | 0.70 | 25.6 | 28.8 | 1725 |
| FSBS07CXSWLS019C004SA001P | 19 | 4.0 | 0.70 | 29.7 | 33.2 | 2300 |
| FSBS07CXSWLS027C004SA001P | 27 | 4.0 | 0.70 | 35.3 | 39.2 | 3025 |
| FSBS07CXSWLS037C004SA001P | 37 | 4.0 | 0.70 | 40.7 | 44.8 | 4140 |

Note for dimensions and weights: A) Circular or compacted circular stranded conductor (Class 2). B) Shaped stranded conductor (Class 2).

POLYCAB IGNIS 210
Fire Survival Cable, 600/1000V AC

ELECTRICAL CHARACTERISTICS:

| Conductor cross-sectional area | Max. Conductor Resistance | | Current Carrying Capacity (Amperes) | | | | | | |
|--------------------------------|---------------------------|------------|---|---|--|---|---|---|---|
| | | | Air Ambient Temperature - 30°C Ground Ambient Temperature - 20°C Conductor operating Temperature - 90°C | | | | | | |
| | | | Reference Method C (clipped direct) | | Reference Method E (in free air or on a perforated cable tray etc, horizontal or vertical) | | Reference Method D (direct in ground or in ducting in ground, in or around buildings) | | |
| mm ² | Ohm/km | at 20°C DC | at 90°C AC | I two-core cable, single-phase AC or DC | I three- or I four-core cable, three-phase AC | I two-core cable, single-phase AC or DC | I three- or I four-core cable, three-phase AC | I two-core cable, single-phase AC or DC | I three- or I four-core cable, three-phase AC |
| 1.5 | 12.1 | 15.4 | 27 | 23 | 29 | 25 | 25 | 21 | |
| 2.5 | 7.41 | 9.45 | 36 | 31 | 39 | 33 | 33 | 28 | |
| 4 | 4.61 | 5.88 | 49 | 42 | 52 | 44 | 43 | 36 | |
| 6 | 3.08 | 3.93 | 62 | 53 | 66 | 56 | 53 | 44 | |
| 10 | 1.83 | 2.33 | 85 | 73 | 90 | 78 | 71 | 58 | |
| 16 | 1.15 | 1.47 | 110 | 94 | 115 | 99 | 91 | 75 | |
| 25 | 0.727 | 0.927 | 146 | 124 | 152 | 131 | 116 | 96 | |
| 35 | 0.524 | 0.668 | 180 | 154 | 188 | 162 | 139 | 115 | |
| 50 | 0.387 | 0.493 | 219 | 187 | 228 | 197 | 164 | 135 | |
| 70 | 0.268 | 0.342 | 279 | 238 | 291 | 251 | 203 | 167 | |
| 95 | 0.193 | 0.246 | 338 | 289 | 354 | 304 | 239 | 197 | |
| 120 | 0.153 | 0.195 | 392 | 335 | 410 | 353 | 271 | 223 | |
| 150 | 0.124 | 0.158 | 451 | 386 | 472 | 406 | 306 | 251 | |
| 185 | 0.0991 | 0.126 | 515 | 441 | 539 | 463 | 343 | 281 | |
| 240 | 0.0754 | 0.0961 | 607 | 520 | 636 | 546 | 395 | 324 | |
| 300 | 0.0601 | 0.0766 | 698 | 599 | 732 | 628 | 446 | 365 | |
| 400 | 0.0470 | 0.0599 | 787 | 673 | 847 | 728 | - | - | |

The above table is in accordance with Table 4E4A of BS 7671-2018

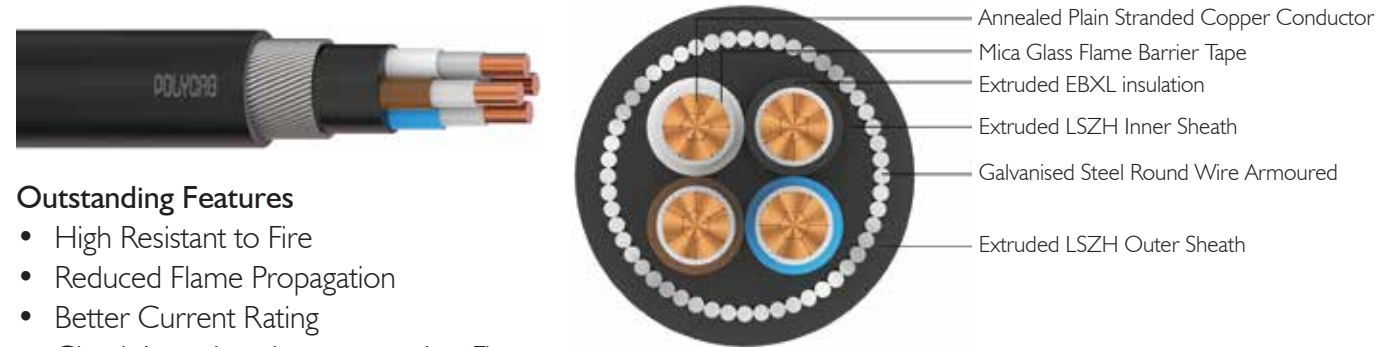
Current rating de-rating factors for other than 30°C ambient air temperature.

| Air Temperature | 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 |

Current rating de-rating factors for other than 20°C ground temperature.

| Air Temperature | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| De-rating factor | 1.07 | 1.04 | 1.00 | 0.96 | 0.93 | 0.89 | 0.85 | 0.80 | 0.76 | 0.71 | 0.65 | 0.60 | 0.53 | 0.46 | 0.38 |

POLYCAB IGNIS 220
Fire Survival Cable - Plus, 600/1000V AC



Outstanding Features

- High Resistant to Fire
- Reduced Flame Propagation
- Better Current Rating
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS P Multicore core Armoured cable is suitable to use in various indoor & outdoor applications where continuity of power supply during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people or the precision instruments in high rise building, schools, hospitals, hotels, Malls, Subways etc.

Voltage Rating

0.6/1KV

Operation Temperature

-40°C to +105°C

Short Circuit Temperature 280°C

Construction

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded EBXL insulation.
- Insulated Cores assembled together.
- Extruded LSZH Inner Sheath
- Galvanised Steel Round Wire Armoured (also available with Galvanised Steel Flat Strip Armour, dimensions and weights changes accordingly)
- Extruded LSZH Outer Sheath, Colour: Black. (other colour as per request).

Core Identification

- 2 core: brown, blue;
- 3 core: brown, black, grey;
- 4 core: blue, brown, black, grey;
- 5 core: green-and-yellow, blue, brown, black, grey;
- Above 5 core can be supplied with number printing
- (All cores: optional number printing)

Bending Radius

Min. 12 x Overall Diameter

Standard Follows:

EN 60228:2005

BS 7846:2016

Test Voltage

3500V AC at (20±5)°C

Compliance

Fire Resistant

Flame Propagation

Fire Retardant

Halogen free material

Smoke Density

Toxicity

BS 7846-F2 / BS 6387 CWZ /
BS EN 50200 (PH 60) /
BS 8434 / BS 8491

EN 60332-1-2

EN 60332-3-24 (Cat.C)

EN 60754-1

EN 61034-2

NES 02-713



POLYCAB IGNIS 220
Fire Survival Cable - Plus, 600/1000V AC

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Insulation Thickness (mm) | Nom. Dia over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|--------------------------------|---------------------------|------------------------------|--------------------------------|
| FSBS07CLSWLS002C1.5SA001P | 2 | 1.5 A) | 0.60 | 10.9 | 13.5 | 350 |
| FSBS07CLSWLS002C2.5SA001P | 2 | 2.5 A) | 0.70 | 12.1 | 14.9 | 420 |
| FSBS07CLSWLS002C004SA001P | 2 | 4 A) | 0.70 | 13.2 | 16.0 | 480 |
| FSBS07CLSWLS002C006SA001P | 2 | 6 A) | 0.70 | 14.3 | 17.2 | 555 |
| FSBS07CLSWLS002C010SA001P | 2 | 10 A) | 0.70 | 16.2 | 19.2 | 705 |
| FSBS07CLSWLS002C016SA001P | 2 | 16 A) | 0.70 | 19.0 | 22.0 | 1030 |
| FSBS07CLSWLS002C025SA001P | 2 | 25 A) | 0.90 | 22.4 | 25.7 | 1360 |
| FSBS07CLSWLS002C025SA001P | 2 | 25 B) | 0.90 | 18.7 | 22.0 | 1190 |
| FSBS07CLSWLS002C035SA001P | 2 | 35 A) | 0.90 | 25.8 | 29.2 | 1860 |
| FSBS07CLSWLS002C035SA001P | 2 | 35 B) | 0.90 | 21.4 | 25.0 | 1615 |
| FSBS07CLSWLS002C050SA001P | 2 | 50 B) | 1.00 | 24.0 | 27.8 | 2060 |
| FSBS07CLSWLS002C070SA001P | 2 | 70 B) | 1.10 | 26.8 | 30.8 | 2590 |
| FSBS07CLSWLS002C095SA001P | 2 | 95 B) | 1.10 | 30.4 | 34.6 | 3465 |
| FSBS07CLSWLS002C120SA001P | 2 | 120 B) | 1.20 | 32.1 | 36.5 | 4075 |
| FSBS07CLSWLS002C150SA001P | 2 | 150 B) | 1.40 | 35.1 | 39.7 | 4850 |
| FSBS07CLSWLS002C185SA001P | 2 | 185 B) | 1.60 | 39.7 | 44.7 | 6190 |
| FSBS07CLSWLS002C240SA001P | 2 | 240 B) | 1.70 | 43.3 | 48.6 | 7515 |
| FSBS07CLSWLS002C300SA001P | 2 | 300 B) | 1.80 | 47.4 | 52.8 | 9010 |
| FSBS07CLSWLS002C400SA001P | 2 | 400 B) | 2.00 | 51.7 | 57.6 | 10810 |
| FSBS07CLSWLS003C1.5SA001P | 3 | 1.5 A) | 0.60 | 11.5 | 14.1 | 400 |
| FSBS07CLSWLS003C2.5SA001P | 3 | 2.5 A) | 0.70 | 12.8 | 15.6 | 485 |
| FSBS07CLSWLS003C004SA001P | 3 | 4 A) | 0.70 | 14.0 | 16.8 | 570 |
| FSBS07CLSWLS003C006SA001P | 3 | 6 A) | 0.70 | 15.2 | 18.0 | 670 |
| FSBS07CLSWLS003C010SA001P | 3 | 10 A) | 0.70 | 17.9 | 20.9 | 990 |
| FSBS07CLSWLS003C016SA001P | 3 | 16 A) | 0.70 | 20.2 | 23.4 | 1270 |
| FSBS07CLSWLS003C025SA001P | 3 | 25 A) | 0.90 | 25.0 | 28.4 | 1930 |
| FSBS07CLSWLS003C025SA001P | 3 | 25 B) | 0.90 | 21.5 | 24.9 | 1730 |
| FSBS07CLSWLS003C035SA001P | 3 | 35 A) | 0.90 | 27.5 | 31.0 | 2350 |
| FSBS07CLSWLS003C035SA001P | 3 | 35 B) | 0.90 | 23.3 | 26.9 | 2110 |
| FSBS07CLSWLS003C050SA001P | 3 | 50 B) | 1.00 | 26.2 | 30.0 | 2710 |
| FSBS07CLSWLS003C070SA001P | 3 | 70 B) | 1.10 | 29.3 | 33.1 | 3455 |
| FSBS07CLSWLS003C095SA001P | 3 | 95 B) | 1.10 | 33.3 | 37.6 | 4650 |
| FSBS07CLSWLS003C120SA001P | 3 | 120 B) | 1.20 | 36.0 | 40.5 | 5560 |
| FSBS07CLSWLS003C150SA001P | 3 | 150 B) | 1.40 | 40.5 | 45.1 | 7060 |
| FSBS07CLSWLS003C185SA001P | 3 | 185 B) | 1.60 | 44.6 | 49.4 | 8450 |
| FSBS07CLSWLS003C240SA001P | 3 | 240 B) | 1.70 | 48.9 | 54.1 | 10385 |
| FSBS07CLSWLS003C300SA001P | 3 | 300 B) | 1.80 | 53.5 | 58.9 | 12545 |
| FSBS07CLSWLS003C400SA001P | 3 | 400 B) | 2.00 | 58.6 | 64.4 | 15145 |

Note:

A) Circular or compacted circular stranded conductor (Class 2).

B) Shaped stranded conductor (Class 2).

POLYCAB IGNIS 220
Fire Survival Cable - Plus, 600/1000V AC

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Insulation Thickness (mm) | Nom. Dia over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|--------------------------------|---------------------------|------------------------------|--------------------------------|
| FSBS07CLSWLS004C1.5SA001P | 4 | 1.5 A) | 0.60 | 12.5 | 15.1 | 455 |
| FSBS07CLSWLS004C2.5SA001P | 4 | 2.5 A) | 0.70 | 14.0 | 16.7 | 555 |
| FSBS07CLSWLS004C004SA001P | 4 | 4 A) | 0.70 | 15.3 | 18.1 | 660 |
| FSBS07CLSWLS004C006SA001P | 4 | 6 A) | 0.70 | 17.3 | 20.3 | 915 |
| FSBS07CLSWLS004C010SA001P | 4 | 10 A) | 0.70 | 19.6 | 22.6 | 1170 |
| FSBS07CLSWLS004C016SA001P | 4 | 16 A) | 0.70 | 22.1 | 25.3 | 1510 |
| FSBS07CLSWLS004C025SA001P | 4 | 25 A) | 0.90 | 27.4 | 30.8 | 2305 |
| FSBS07CLSWLS004C025SA001P | 4 | 25 B) | 0.90 | 24.7 | 28.1 | 2160 |
| FSBS07CLSWLS004C035SA001P | 4 | 35 A) | 0.90 | 30.2 | 33.7 | 2840 |
| FSBS07CLSWLS004C035SA001P | 4 | 35 B) | 0.90 | 27.0 | 30.6 | 2640 |
| FSBS07CLSWLS004C050SA001P | 4 | 50 B) | 1.00 | 30.6 | 34.4 | 3440 |
| FSBS07CLSWLS004C070SA001P | 4 | 70 B) | 1.10 | 35.7 | 40.0 | 4780 |
| FSBS07CLSWLS004C095SA001P | 4 | 95 B) | 1.10 | 39.3 | 43.7 | 5950 |
| FSBS07CLSWLS004C120SA001P | 4 | 120 B) | 1.20 | 43.1 | 47.7 | 7550 |
| FSBS07CLSWLS004C150SA001P | 4 | 150 B) | 1.40 | 47.2 | 52.0 | 9080 |
| FSBS07CLSWLS004C185SA001P | 4 | 185 B) | 1.60 | 51.6 | 56.8 | 10830 |
| FSBS07CLSWLS004C240SA001P | 4 | 240 B) | 1.70 | 57.1 | 62.5 | 13380 |
| FSBS07CLSWLS004C300SA001P | 4 | 300 B) | 1.80 | 62.3 | 68.0 | 16180 |
| FSBS07CLSWLS004C400SA001P | 4 | 400 B) | 2.00 | 70.0 | 76.4 | 20610 |
| FSBS07CLSWLS005C1.5SA001P | 5 | 1.5 | 0.60 | 13.5 | 16.3 | 515 |
| FSBS07CLSWLS005C2.5SA001P | 5 | 2.5 | 0.70 | 15.2 | 18.0 | 630 |
| FSBS07CLSWLS005C004SA001P | 5 | 4 | 0.70 | 16.6 | 19.7 | 765 |
| FSBS07CLSWLS005C006SA001P | 5 | 6 | 0.70 | 18.9 | 21.9 | 1050 |
| FSBS07CLSWLS005C010SA001P | 5 | 10 | 0.70 | 21.4 | 24.6 | 1365 |
| FSBS07CLSWLS005C016SA001P | 5 | 16 | 0.70 | 25.3 | 28.7 | 1990 |
| FSBS07CLSWLS005C025SA001P | 5 | 25 | 0.90 | 30.0 | 33.6 | 2720 |
| FSBS07CLSWLS005C035SA001P | 5 | 35 | 0.90 | 33.0 | 36.9 | 3360 |
| FSBS07CLSWLS005C050SA001P | 5 | 50 | 1.00 | 39.1 | 43.0 | 4745 |
| FSBS07CLSWLS005C070SA001P | 5 | 70 | 1.10 | 43.8 | 48.2 | 5970 |
| FSBS07CLSWLS007C1.5SA001P | 7 | 1.5 | 0.60 | 14.6 | 17.5 | 610 |
| FSBS07CLSWLS012C1.5SA001P | 12 | 1.5 | 0.60 | 19.7 | 22.7 | 1030 |
| FSBS07CLSWLS019C1.5SA001P | 19 | 1.5 | 0.60 | 22.8 | 26.1 | 1370 |
| FSBS07CLSWLS027C1.5SA001P | 27 | 1.5 | 0.60 | 28.2 | 31.7 | 2010 |
| FSBS07CLSWLS037C1.5SA001P | 37 | 1.5 | 0.60 | 31.4 | 34.9 | 2450 |
| FSBS07CLSWLS007C2.5SA001P | 7 | 2.5 | 0.70 | 16.5 | 19.3 | 755 |
| FSBS07CLSWLS012C2.5SA001P | 12 | 2.5 | 0.70 | 22.2 | 25.5 | 1290 |
| FSBS07CLSWLS019C2.5SA001P | 19 | 2.5 | 0.70 | 27.0 | 30.5 | 1950 |
| FSBS07CLSWLS027C2.5SA001P | 27 | 2.5 | 0.70 | 32.0 | 36.7 | 2540 |
| FSBS07CLSWLS037C2.5SA001P | 37 | 2.5 | 0.70 | 35.7 | 39.4 | 3150 |
| FSBS07CLSWLS007C004SA001P | 7 | 4.0 | 0.70 | 18.8 | 21.8 | 1060 |
| FSBS07CLSWLS012C004SA001P | 12 | 4.0 | 0.70 | 25.6 | 28.8 | 1790 |
| FSBS07CLSWLS019C004SA001P | 19 | 4.0 | 0.70 | 29.7 | 33.2 | 2410 |
| FSBS07CLSWLS027C004SA001P | 27 | 4.0 | 0.70 | 35.3 | 39.2 | 3180 |
| FSBS07CLSWLS037C004SA001P | 37 | 4.0 | 0.70 | 40.7 | 44.8 | 4350 |

Note: A) Circular or compacted circular stranded conductor (Class 2). B) Shaped stranded conductor (Class 2).

POLYCAB IGNIS 220
Fire Survival Cable - Plus, 600/1000V AC

ELECTRICAL CHARACTERISTICS:

| Conductor cross-sectional area | Max. Conductor Resistance | | Current Carrying Capacity (Amperes) | | | | | | | | |
|--------------------------------|---------------------------|------------|--|---|--|---|---|---|---|------|------|
| | | | Air Ambient Temperature - 30°C Ground Ambient Temperature - 20°C Conductor operating Temperature - 105°C | | | | | | | | |
| | | | Reference Method C (clipped direct) | | Reference Method E (in free air or on a perforated cable tray etc, horizontal or vertical) | | Reference Method D (direct in ground or in ducting in ground, in or around buildings) | | | | |
| mm ² | Ohm/km | at 20°C DC | at 90°C AC | I two-core cable, single-phase AC or DC | I three- or I four-core cable, three-phase AC | I two-core cable, single-phase AC or DC | I three- or I four-core cable, three-phase AC | I two-core cable, single-phase AC or DC | I three- or I four-core cable, three-phase AC | Amp. | Amp. |
| 1.5 | 12.1 | 15.4 | 30 | 25 | 32 | 27 | 27 | 23 | | | |
| 2.5 | 7.41 | 9.45 | 39 | 34 | 43 | 36 | 36 | 31 | | | |
| 4 | 4.61 | 5.88 | 54 | 46 | 57 | 48 | 47 | 39 | | | |
| 6 | 3.08 | 3.93 | 68 | 58 | 72 | 61 | 58 | 48 | | | |
| 10 | 1.83 | 2.33 | 93 | 80 | 98 | 85 | 78 | 63 | | | |
| 16 | 1.15 | 1.47 | 120 | 103 | 126 | 108 | 100 | 82 | | | |
| 25 | 0.727 | 0.927 | 160 | 136 | 166 | 143 | 127 | 105 | | | |
| 35 | 0.524 | 0.668 | 197 | 169 | 206 | 177 | 152 | 126 | | | |
| 50 | 0.387 | 0.493 | 240 | 205 | 249 | 216 | 179 | 148 | | | |
| 70 | 0.268 | 0.342 | 305 | 260 | 318 | 275 | 222 | 183 | | | |
| 95 | 0.193 | 0.246 | 370 | 316 | 387 | 333 | 262 | 216 | | | |
| 120 | 0.153 | 0.195 | 429 | 367 | 449 | 386 | 297 | 244 | | | |
| 150 | 0.124 | 0.158 | 493 | 422 | 516 | 444 | 335 | 275 | | | |
| 185 | 0.0991 | 0.126 | 563 | 483 | 590 | 507 | 375 | 307 | | | |
| 240 | 0.0754 | 0.0961 | 664 | 569 | 696 | 597 | 432 | 355 | | | |
| 300 | 0.0601 | 0.0766 | 764 | 655 | 801 | 687 | 488 | 399 | | | |
| 400 | 0.0470 | 0.0599 | 861 | 736 | 927 | 797 | - | - | | | |

The above table is in accordance with BS 7671-2018

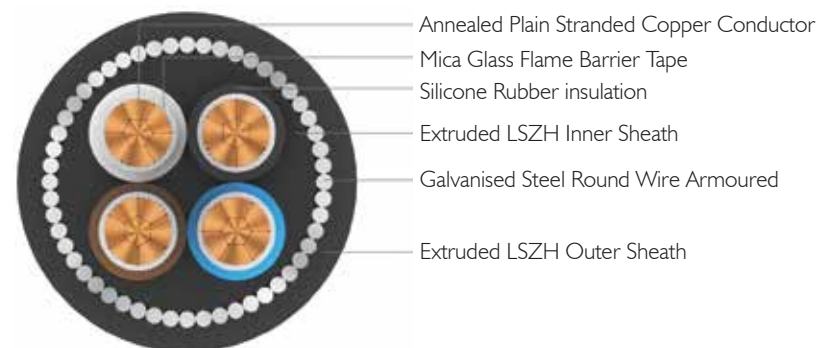
Current rating de-rating factors for other than 30°C ambient air temperature.

| Air Temperature | 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 |

Current rating de-rating factors for other than 20°C ground temperature.

| Air Temperature | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| De-rating factor | 1.07 | 1.04 | 1.00 | 0.96 | 0.93 | 0.89 | 0.85 | 0.80 | 0.76 | 0.71 | 0.65 | 0.60 | 0.53 | 0.46 | 0.38 |

POLYCAB IGNIS 230
Fire Survival Cable - Enhanced, 600/1000V AC



Outstanding Features

- High Resistant to Fire
- Reduced Flame Propagation
- Higher Current Rating
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS E Multicore core Armoured cable is suitable to use in various indoor & outdoor applications where continuity of power supply during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people or the precision instruments in high rise building, schools, hospitals, hotels, Malls, Subways etc.

Voltage Rating

0.6/1KV

Bending Radius

Min. 12 x Overall Diameter

Operation Temperature

-40°C to +150°C

Short Circuit Temperature 350°C

Standard Follows:

EN 60228:2005
BS 7846:2016

Construction

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded Silicone Rubber insulation.
- Insulated Cores assembled together.
- Extruded LSZH Inner Sheath
- Galvanised Steel Round Wire Armoured (also available with Galvanised Steel Flat Strip Armour, dimensions and weights changes accordingly)
- Extruded LSZH Outer Sheath, Colour: Black. (other colour as per request).

Test Voltage

3500V AC at (20±5)°C

Compliance

Fire Resistant BS 7846-F2 / BS 6387 CWZ /
BS EN 50200 (PH 60) /
BS 8434 / BS 8491
Flame Propagation EN 60332-1-2
Fire Retardant EN 60332-3-24 (Cat.C)
Halogen free material EN 60754-1
Smoke Density EN 61034-2
Toxicity NES 02-713



Core Identification

- 2 core: brown, blue;
- 3 core: brown, black, grey;
- 4 core: blue, brown, black, grey;
- 5 core: green-and-yellow, blue, brown, black, grey;
- Above 5 core can be supplied with number printing
- (All cores: optional number printing)



OUR CERTIFICATION
ISO 9001 | ISO 14001 | ISO 45001



POLYCAB IGNIS 230
Fire Survival Cable - Enhanced, 600/1000V AC

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Insulation Thickness (mm) | Nom. Dia over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|--------------------------------|---------------------------|------------------------------|--------------------------------|
| FSBS07CSSWLS002C1.5SA001P | 2 | 1.5 | 0.60 | 10.9 | 13.5 | 345 |
| FSBS07CSSWLS002C2.5SA001P | 2 | 2.5 | 0.70 | 12.1 | 14.9 | 415 |
| FSBS07CSSWLS002C004SA001P | 2 | 4 | 0.70 | 13.2 | 16.0 | 475 |
| FSBS07CSSWLS002C006SA001P | 2 | 6 | 0.70 | 14.3 | 17.2 | 550 |
| FSBS07CSSWLS002C010SA001P | 2 | 10 | 0.70 | 16.2 | 19.2 | 700 |
| FSBS07CSSWLS002C016SA001P | 2 | 16 | 0.70 | 19.0 | 22.0 | 1010 |
| FSBS07CSSWLS002C025SA001P | 2 | 25 | 0.90 | 22.4 | 25.7 | 1345 |
| FSBS07CSSWLS002C035SA001P | 2 | 35 | 0.90 | 25.8 | 28.5 | 1790 |
| FSBS07CSSWLS002C050SA001P | 2 | 50 | 1.00 | 24.0 | 26.5 | 2245 |
| FSBS07CSSWLS002C070SA001P | 2 | 70 | 1.10 | 26.8 | 30.0 | 2795 |
| FSBS07CSSWLS002C095SA001P | 2 | 95 | 1.10 | 30.4 | 34.0 | 3770 |
| FSBS07CSSWLS002C120SA001P | 2 | 120 | 1.20 | 32.1 | 37.0 | 4455 |
| FSBS07CSSWLS002C150SA001P | 2 | 150 | 1.40 | 35.1 | 40.0 | 5290 |
| FSBS07CSSWLS002C185SA001P | 2 | 185 | 1.60 | 39.7 | 46.0 | 6815 |
| FSBS07CSSWLS002C240SA001P | 2 | 240 | 1.70 | 43.3 | 50.0 | 8225 |
| FSBS07CSSWLS002C300SA001P | 2 | 300 | 1.80 | 47.4 | 55.0 | 9790 |
| FSBS07CSSWLS002C400SA001P | 2 | 400 | 2.00 | 51.7 | 60.0 | 12250 |
| FSBS07CSSWLS003C1.5SA001P | 3 | 1.5 | 0.60 | 11.5 | 14.1 | 390 |
| FSBS07CSSWLS003C2.5SA001P | 3 | 2.5 | 0.70 | 12.8 | 15.6 | 480 |
| FSBS07CSSWLS003C004SA001P | 3 | 4 | 0.70 | 14.0 | 16.8 | 560 |
| FSBS07CSSWLS003C006SA001P | 3 | 6 | 0.70 | 15.2 | 18.0 | 660 |
| FSBS07CSSWLS003C010SA001P | 3 | 10 | 0.70 | 17.9 | 20.9 | 980 |
| FSBS07CSSWLS003C016SA001P | 3 | 16 | 0.70 | 20.2 | 23.4 | 1255 |
| FSBS07CSSWLS003C025SA001P | 3 | 25 | 0.90 | 25.0 | 28.4 | 1910 |
| FSBS07CSSWLS003C035SA001P | 3 | 35 | 0.90 | 27.5 | 31.0 | 2330 |
| FSBS07CSSWLS003C050SA001P | 3 | 50 | 1.00 | 26.2 | 32.5 | 2835 |
| FSBS07CSSWLS003C070SA001P | 3 | 70 | 1.10 | 29.3 | 36.5 | 3600 |
| FSBS07CSSWLS003C095SA001P | 3 | 95 | 1.10 | 33.3 | 41.5 | 4885 |
| FSBS07CSSWLS003C120SA001P | 3 | 120 | 1.20 | 36.0 | 45.0 | 5825 |
| FSBS07CSSWLS003C150SA001P | 3 | 150 | 1.40 | 40.5 | 50.0 | 7450 |
| FSBS07CSSWLS003C185SA001P | 3 | 185 | 1.60 | 44.6 | 55.0 | 8840 |
| FSBS07CSSWLS003C240SA001P | 3 | 240 | 1.70 | 48.9 | 60.5 | 10860 |
| FSBS07CSSWLS003C300SA001P | 3 | 300 | 1.80 | 53.5 | 66.0 | 13020 |
| FSBS07CSSWLS003C400SA001P | 3 | 400 | 2.00 | 58.6 | 73.5 | 16485 |



OUR CERTIFICATION
ISO 9001 | ISO 14001 | ISO 45001



POLYCAB IGNIS 230
Fire Survival Cable - Enhanced, 600/1000V AC

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Insulation Thickness (mm) | Nom. Dia over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|--------------------------------|---------------------------|------------------------------|--------------------------------|
| FSBS07CSSWLS004C1.5SA001P | 4 | 1.5 | 0.60 | 12.5 | 15.1 | 445 |
| FSBS07CSSWLS004C2.5SA001P | 4 | 2.5 | 0.70 | 14.0 | 16.7 | 545 |
| FSBS07CSSWLS004C004SA001P | 4 | 4 | 0.70 | 15.3 | 18.1 | 650 |
| FSBS07CSSWLS004C006SA001P | 4 | 6 | 0.70 | 17.3 | 20.3 | 900 |
| FSBS07CSSWLS004C010SA001P | 4 | 10 | 0.70 | 19.6 | 22.6 | 1155 |
| FSBS07CSSWLS004C016SA001P | 4 | 16 | 0.70 | 22.1 | 25.3 | 1490 |
| FSBS07CSSWLS004C025SA001P | 4 | 25 | 0.90 | 27.4 | 30.8 | 2280 |
| FSBS07CSSWLS004C035SA001P | 4 | 35 | 0.90 | 30.2 | 33.7 | 2810 |
| FSBS07CSSWLS004C050SA001P | 4 | 50 | 1.00 | 30.6 | 35.0 | 3460 |
| FSBS07CSSWLS004C070SA001P | 4 | 70 | 1.10 | 35.7 | 40.5 | 4800 |
| FSBS07CSSWLS004C095SA001P | 4 | 95 | 1.10 | 39.3 | 44.5 | 5995 |
| FSBS07CSSWLS004C120SA001P | 4 | 120 | 1.20 | 43.1 | 50.0 | 7685 |
| FSBS07CSSWLS004C150SA001P | 4 | 150 | 1.40 | 47.2 | 54.5 | 9225 |
| FSBS07CSSWLS004C185SA001P | 4 | 185 | 1.60 | 51.6 | 59.5 | 10985 |
| FSBS07CSSWLS004C240SA001P | 4 | 240 | 1.70 | 57.1 | 66.0 | 13575 |
| FSBS07CSSWLS004C300SA001P | 4 | 300 | 1.80 | 62.3 | 71.5 | 16340 |
| FSBS07CSSWLS004C400SA001P | 4 | 400 | 2.00 | 70.0 | 82.0 | 21895 |
| FSBS07CSSWLS005C1.5SA001P | 5 | 1.5 | 0.60 | 13.5 | 16.3 | 510 |
| FSBS07CSSWLS005C2.5SA001P | 5 | 2.5 | 0.70 | 15.2 | 18.0 | 620 |
| FSBS07CSSWLS005C004SA001P | 5 | 4 | 0.70 | 16.6 | 19.7 | 750 |
| FSBS07CSSWLS005C006SA001P | 5 | 6 | 0.70 | 18.9 | 21.9 | 1040 |
| FSBS07CSSWLS005C010SA001P | 5 | 10 | 0.70 | 21.4 | 24.6 | 1350 |
| FSBS07CSSWLS005C016SA001P | 5 | 16 | 0.70 | 25.3 | 28.7 | 1970 |
| FSBS07CSSWLS005C025SA001P | 5 | 25 | 0.90 | 30.0 | 33.6 | 2690 |
| FSBS07CSSWLS005C035SA001P | 5 | 35 | 0.90 | 33.0 | 36.9 | 3330 |
| FSBS07CSSWLS005C050SA001P | 5 | 50 | 1.00 | 39.1 | 43.0 | 4700 |
| FSBS07CSSWLS005C070SA001P | 5 | 70 | 1.10 | 43.8 | 48.2 | 5910 |
| FSBS07CSSWLS007C1.5SA001P | 7 | 1.5 | 0.60 | 14.6 | 17.5 | 600 |
| FSBS07CSSWLS012C1.5SA001P | 12 | 1.5 | 0.60 | 19.7 | 22.7 | 1010 |
| FSBS07CSSWLS019C1.5SA001P | 19 | 1.5 | 0.60 | 22.8 | 26.1 | 1340 |
| FSBS07CSSWLS027C1.5SA001P | 27 | 1.5 | 0.60 | 28.2 | 31.7 | 1970 |
| FSBS07CSSWLS037C1.5SA001P | 37 | 1.5 | 0.60 | 31.4 | 34.9 | 2390 |
| FSBS07CSSWLS007C2.5SA001P | 7 | 2.5 | 0.70 | 16.5 | 19.3 | 740 |
| FSBS07CSSWLS012C2.5SA001P | 12 | 2.5 | 0.70 | 22.2 | 25.5 | 1260 |
| FSBS07CSSWLS019C2.5SA001P | 19 | 2.5 | 0.70 | 27.0 | 30.5 | 1910 |
| FSBS07CSSWLS027C2.5SA001P | 27 | 2.5 | 0.70 | 32.0 | 36.7 | 2480 |
| FSBS07CSSWLS037C2.5SA001P | 37 | 2.5 | 0.70 | 35.7 | 39.4 | 3060 |
| FSBS07CSSWLS007C004SA001P | 7 | 4.0 | 0.70 | 18.8 | 21.8 | 1040 |
| FSBS07CSSWLS012C004SA001P | 12 | 4.0 | 0.70 | 25.6 | 28.8 | 1760 |
| FSBS07CSSWLS019C004SA001P | 19 | 4.0 | 0.70 | 29.7 | 33.2 | 2360 |
| FSBS07CSSWLS027C004SA001P | 27 | 4.0 | 0.70 | 35.3 | 39.2 | 3110 |
| FSBS07CSSWLS037C004SA001P | 37 | 4.0 | 0.70 | 40.7 | 44.8 | 4255 |

POLYCAB IGNIS 230
Fire Survival Cable - Enhanced, 600/1000V AC

ELECTRICAL CHARACTERISTICS:

| Conductor cross-sectional area | Max. Conductor Resistance | | Current Carrying Capacity (Amperes) | | | | | |
|--------------------------------|---------------------------|--------|--|---|--|---|---|---|
| | | | Air Ambient Temperature - 30°C Ground Ambient Temperature - 20°C Conductor operating Temperature - 150°C | | | | | |
| | mm ² | Ohm/km | Reference Method C (clipped direct) | | Reference Method E (in free air or on a perforated cable tray etc, horizontal or vertical) | | Reference Method D (direct in ground or in ducting in ground, in or around buildings) | |
| at 20°C DC | | | at 90°C AC | 1 two-core cable, single-phase AC or DC | 1 three- or 1 four-core cable, three-phase AC | 1 two-core cable, single-phase AC or DC | 1 three- or 1 four-core cable, three-phase AC | 1 two-core cable, single-phase AC or DC |
| 1.5 | 12.1 | 15.4 | 35 | 30 | 38 | 33 | 33 | 27 |
| 2.5 | 7.41 | 9.45 | 47 | 40 | 51 | 43 | 43 | 37 |
| 4 | 4.61 | 5.88 | 64 | 55 | 68 | 57 | 56 | 47 |
| 6 | 3.08 | 3.93 | 81 | 69 | 86 | 73 | 69 | 57 |
| 10 | 1.83 | 2.33 | 111 | 95 | 117 | 102 | 93 | 76 |
| 16 | 1.15 | 1.47 | 143 | 123 | 150 | 129 | 119 | 98 |
| 25 | 0.727 | 0.927 | 190 | 162 | 198 | 171 | 151 | 125 |
| 35 | 0.524 | 0.668 | 235 | 201 | 245 | 211 | 181 | 150 |
| 50 | 0.387 | 0.493 | 286 | 244 | 297 | 257 | 214 | 176 |
| 70 | 0.268 | 0.342 | 364 | 310 | 379 | 327 | 265 | 218 |
| 95 | 0.193 | 0.246 | 441 | 377 | 462 | 396 | 312 | 257 |
| 120 | 0.153 | 0.195 | 511 | 437 | 535 | 460 | 353 | 291 |
| 150 | 0.124 | 0.158 | 588 | 503 | 615 | 529 | 399 | 327 |
| 185 | 0.0991 | 0.126 | 671 | 575 | 703 | 604 | 447 | 366 |
| 240 | 0.0754 | 0.0961 | 791 | 678 | 829 | 712 | 515 | 422 |
| 300 | 0.0601 | 0.0766 | 910 | 781 | 954 | 819 | 582 | 476 |
| 400 | 0.0470 | 0.0599 | 1026 | 877 | 1104 | 949 | - | - |

The above table is in accordance with BS 7671-2018

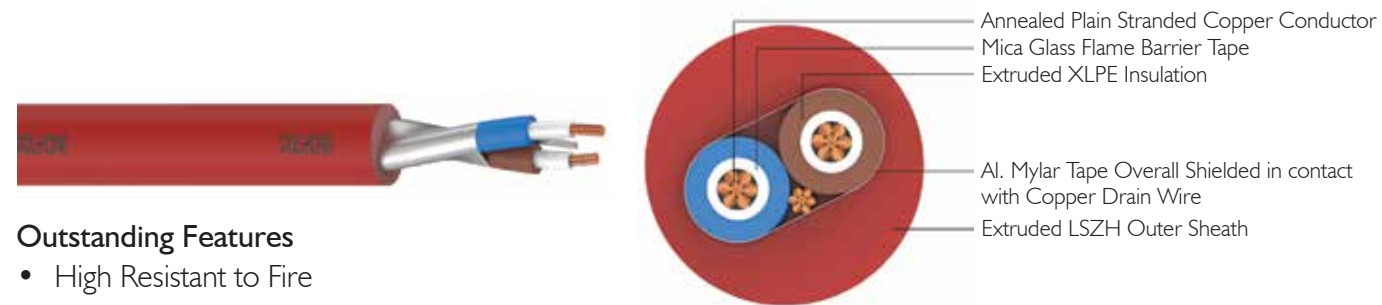
Current rating de-rating factors for other than 30°C ambient air temperature.

| Air Temperature | 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 |

Current rating de-rating factors for other than 20°C ground temperature.

| Air Temperature | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| De-rating factor | 1.07 | 1.04 | 1.00 | 0.96 | 0.93 | 0.89 | 0.85 | 0.80 | 0.76 | 0.71 | 0.65 | 0.60 | 0.53 | 0.46 | 0.38 |

POLYCAB IGNIS 2 I I
Fire Survival Cable, 300/500V AC



Outstanding Features

- High Resistant to Fire
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS Multicore Shielded cable is suitable to use in various indoor & outdoor applications where control supply to the emergency devices during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people in high rise building, schools, hospitals, hotels, Malls, Subways etc.

Voltage Rating

300/500V AC

Operation Temperature

-40°C to +90°C
Short Circuit Temperature 250°C

Construction

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded XLPE insulation.
- Insulated Cores assembled together.
- Al.Mylar Tape Overall Shielded along with Drain wire
- Extruded LSZH Outer Sheath, Colour: Red or White (other colour as per request).

Core Identification

- 2 core: Brown, blue;
- 3 core: Brown, black, grey;
- 4 core: Blue, brown, black, grey;
- 5 core: green-and-yellow, blue, brown, black, grey;
- 7 cores: Centre- Brown, 1st layer: Brown, Black & remaining 4 cores white
- 12 cores: Centre- Brown, Black, White, 1st layer: Brown, Black & remaining 7 cores white
- 19 cores: Centre- Brown, 1st layer: Brown, Black & remaining 4 cores white, 2nd layer: Brown, Black & remaining 10 cores white

Bending Radius

Min. 6 x Overall Diameter

Standard Follows:

EN 60228:2005
BS 7629-1:2015

Test Voltage

2000V AC at (20±5)°C

Compliance

Fire Resistant BS 7629-1 / BS 6387 CWZ /
BS EN 50200 (PH 120) /
BS 8434 / EN 60331-3
Flame Propagation EN 60332-1-2
Fire Retardant EN 60332-3-24 (Cat.C)
Halogen free material EN 60754-1
Smoke Density EN 61034-2
Toxicity NES 02-713



POLYCAB IGNIS 2 I I
Fire Survival Cable, 300/500V AC

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Insulation Thickness (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|--------------------------------|------------------------------|--------------------------------|
| Solid | | | | | |
| FSBS04CLUALS002C1.0SA001P | 2 | 1.0 | 0.60 | 7.9 | 80 |
| FSBS04CLUALS002C1.5SA001P | 2 | 1.5 | 0.70 | 8.8 | 105 |
| FSBS04CLUALS002C2.5SA001P | 2 | 2.5 | 0.80 | 10.1 | 145 |
| FSBS04CLUALS003C1.0SA001P | 3 | 1.0 | 0.60 | 8.4 | 100 |
| FSBS04CLUALS003C1.5SA001P | 3 | 1.5 | 0.70 | 9.3 | 130 |
| FSBS04CLUALS003C2.5SA001P | 3 | 2.5 | 0.80 | 10.8 | 185 |
| FSBS04CLUALS004C1.0SA001P | 4 | 1.0 | 0.60 | 9.3 | 125 |
| FSBS04CLUALS004C1.5SA001P | 4 | 1.5 | 0.70 | 10.4 | 165 |
| FSBS04CLUALS004C2.5SA001P | 4 | 2.5 | 0.80 | 12.0 | 230 |
| FSBS04CLUALS007C1.0SA001P | 7 | 1.0 | 0.60 | 11.1 | 180 |
| FSBS04CLUALS007C1.5SA001P | 7 | 1.5 | 0.70 | 12.6 | 245 |
| FSBS04CLUALS007C2.5SA001P | 7 | 2.5 | 0.80 | 14.5 | 340 |
| FSBS04CLUALS012C1.0SA001P | 12 | 1.0 | 0.60 | 14.9 | 300 |
| FSBS04CLUALS012C1.5SA001P | 12 | 1.5 | 0.70 | 16.8 | 395 |
| FSBS04CLUALS012C2.5SA001P | 12 | 2.5 | 0.80 | 20.0 | 570 |
| FSBS04CLUALS019C1.0SA001P | 19 | 1.0 | 0.60 | 17.4 | 440 |
| FSBS04CLUALS019C1.5SA001P | 19 | 1.5 | 0.70 | 19.8 | 595 |
| Stranded | | | | | |
| FSBS04CLUALS002C1.0SA001P | 2 | 1.0 | 0.60 | 8.2 | 85 |
| FSBS04CLUALS002C1.5SA001P | 2 | 1.5 | 0.70 | 9.2 | 110 |
| FSBS04CLUALS002C2.5SA001P | 2 | 2.5 | 0.80 | 10.7 | 150 |
| FSBS04CLUALS002C4.0SA001P | 2 | 4.0 | 0.80 | 11.9 | 210 |
| FSBS04CLUALS003C1.0SA001P | 3 | 1.0 | 0.60 | 9.7 | 110 |
| FSBS04CLUALS003C1.5SA001P | 3 | 1.5 | 0.70 | 9.8 | 135 |
| FSBS04CLUALS003C2.5SA001P | 3 | 2.5 | 0.80 | 11.3 | 190 |
| FSBS04CLUALS003C4.0SA001P | 3 | 4.0 | 0.80 | 12.7 | 270 |
| FSBS04CLUALS004C1.0SA001P | 4 | 1.0 | 0.60 | 9.7 | 135 |
| FSBS04CLUALS004C1.5SA001P | 4 | 1.5 | 0.70 | 10.9 | 170 |
| FSBS04CLUALS004C2.5SA001P | 4 | 2.5 | 0.80 | 12.6 | 245 |
| FSBS04CLUALS004C4.0SA001P | 4 | 4.0 | 0.80 | 14.1 | 340 |

ELECTRICAL CHARACTERISTICS:

| Conductor cross-sectional area | Max. Conductor Resistance | | Current Carrying Capacity (Amperes) | | | | | | | |
|--------------------------------|---------------------------|------------|--|---|--|--|---|--|--|--|
| | | | Air Ambient Temperature - 30°C | | | | | | | |
| | | | Conductor operating Temperature - 90°C | | | | | | | |
| mm ² | at 20°C DC | at 90°C AC | 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 a.c or d.c | 3 or 4 core cables* three phase a.c | 2 core cable* single phase a.c or d.c | 3 or 4 core cable* three phase a.c | 2 core cable* single phase a.c or d.c | 3 or 4 core cable* three phase a.c | 2 core cable* single phase a.c or d.c | 3 or 4 core cable* three phase a.c |
| 1.0 | 18.1 | 23.1 | 14.5 | 13 | 17 | 15 | 19 | 17 | 21 | 18 |
| 1.5 | 12.1 | 15.4 | 18.5 | 16.5 | 22 | 19.5 | 24 | 22 | 26 | 23 |
| 2.5 | 7.41 | 9.45 | 25 | 22 | 30 | 26 | 33 | 30 | 36 | 32 |
| 4.0 | 4.61 | 5.88 | 33 | 30 | 40 | 35 | 45 | 40 | 49 | 42 |

The above table is in accordance with Table 4E2A of BS 7671-2018

Current rating de-rating factors for other than 30°C ambient air temperature.

| Air Temperature | 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 |

POLYCAB IGNIS 212
Fire Survival Cable, 300/500V AC



Outstanding Features

- High Resistant to Fire
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS Multicore Shielded cable is suitable to use in various indoor & outdoor applications where control supply to the emergency devices during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people in high rise building, schools, hospitals, hotels, Malls, Subways etc.

Voltage Rating

300/500V AC

Operation Temperature

-40°C to +90°C

Construction

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded XLPE insulation.
- Insulated Cores twisted to form pairs and assembled together.
- Al.Mylar Tape Overall Shielded in contact with Drain wire
- Extruded LSZH Outer Sheath, Colour: Red or White (other colour as per request).

Standard Follows:

EN 60228:2005
Generally conforming to BS 7629-1:2015

Test Voltage

2000V AC at (20±5)°C

Compliance

| | |
|-----------------------|-----------------------|
| Fire Resistant | IEC 60331-23 |
| Flame Propagation | EN 60332-1-2 |
| Fire Retardant | EN 60332-3-24 (Cat.C) |
| Halogen free material | EN 60754-1 |
| Smoke Density | EN 61034-2 |
| Toxicity | NES 02-713 |



Core Identification

- Colour Coding or Number Printing
As per BS EN 50288-7

Bending Radius

Min. 12 x Overall Diameter

POLYCAB IGNIS 212
Fire Survival Cable, 300/500V AC

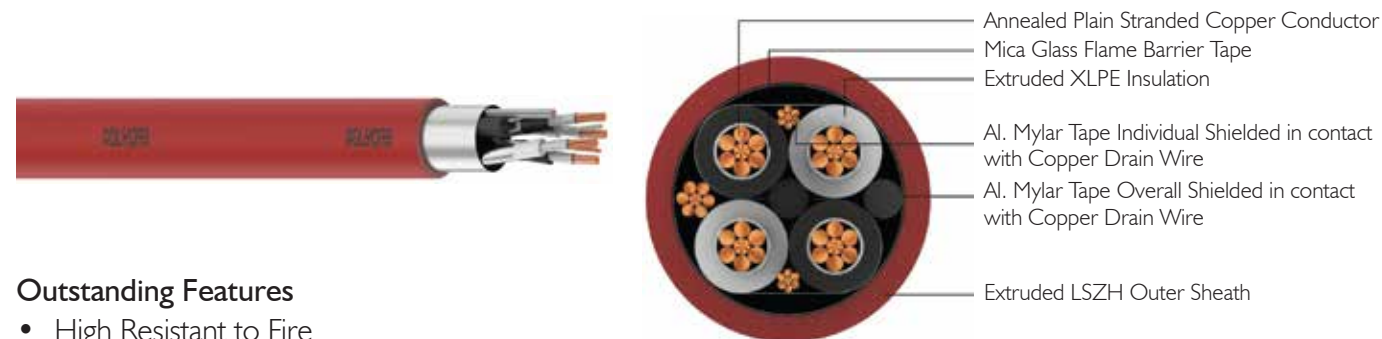
DIMENSIONS AND WEIGHTS:

| Product Code | No. of Pairs | No. of Cores | Cross Sectional Area (mm ²) | Min. Insulation Thickness (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|--------------|---|--------------------------------|------------------------------|--------------------------------|
| FSBS04CXUALS001P.75SA001P | 1 | 2 | 0.75 | 0.44 | 7.60 | 65 |
| FSBS04CXUALS002P.75SA001P | 2 | 4 | 0.75 | 0.44 | 10.9 | 120 |
| FSBS04CXUALS005P.75SA001P | 5 | 10 | 0.75 | 0.44 | 14.6 | 215 |
| FSBS04CXUALS010P.75SA001P | 10 | 20 | 0.75 | 0.44 | 20.3 | 390 |
| FSBS04CXUALS015P.75SA001P | 15 | 30 | 0.75 | 0.44 | 24.3 | 545 |
| FSBS04CXUALS020P.75SA001P | 20 | 40 | 0.75 | 0.44 | 27.4 | 695 |
| FSBS04CXUALS001P1.0SA001P | 1 | 2 | 1.0 | 0.44 | 8.10 | 75 |
| FSBS04CXUALS002P1.0SA001P | 2 | 4 | 1.0 | 0.44 | 11.6 | 135 |
| FSBS04CXUALS005P1.0SA001P | 5 | 10 | 1.0 | 0.44 | 15.5 | 260 |
| FSBS04CXUALS010P1.0SA001P | 10 | 20 | 1.0 | 0.44 | 21.5 | 460 |
| FSBS04CXUALS015P1.0SA001P | 15 | 30 | 1.0 | 0.44 | 25.8 | 655 |
| FSBS04CXUALS020P1.0SA001P | 20 | 40 | 1.0 | 0.44 | 29.3 | 845 |
| FSBS04CXUALS001P1.5SA001P | 1 | 2 | 1.5 | 0.44 | 8.90 | 90 |
| FSBS04CXUALS002P1.5SA001P | 2 | 4 | 1.5 | 0.44 | 12.9 | 170 |
| FSBS04CXUALS005P1.5SA001P | 5 | 10 | 1.5 | 0.44 | 17.4 | 335 |
| FSBS04CXUALS010P1.5SA001P | 10 | 20 | 1.5 | 0.44 | 24.3 | 610 |
| FSBS04CXUALS015P1.5SA001P | 15 | 30 | 1.5 | 0.44 | 29.2 | 865 |
| FSBS04CXUALS020P1.5SA001P | 20 | 40 | 1.5 | 0.44 | 33.0 | 1125 |

ELECTRICAL CHARACTERISTICS:

| Cross Sectional Area (mm ²) | Conductor Resistance (Ohms/Km) | | Insulation Resistance (MOhms-Km) | Approx. Capacitance (nF/km) | Approx. Inductance to Resistance ratio, L/R (μH/Ohm) |
|---|--------------------------------|------------|----------------------------------|-----------------------------|--|
| | Single pair | Multi pair | | | |
| 0.75 | 34.5 | 35.2 | 1000 | 150 | 25 |
| 1.0 | 18.1 | 18.5 | 1000 | 150 | 25 |
| 1.5 | 12.1 | 12.3 | 1000 | 150 | 40 |

POLYCAB IGNIS 2 I 3
Fire Survival Cable, 300/500V AC



Outstanding Features

- High Resistant to Fire
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS Multipair Individual & Overall Shielded cable is suitable to use in various indoor & outdoor applications where signal transmission during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people in high rise building, schools, hospitals, hotels, Malls, Subways etc.

Voltage Rating

300/500V AC

Operation Temperature

-40°C to +90°C

Construction

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded XLPE insulation.
- Insulated Cores twisted to form pairs
- Al.Mylar Tape Individual Shielded in contact with Drain wire
- Shielded Pairs assembled together
- Al.Mylar Tape Overall Shielded in contact with Drain wire
- Extruded LSZH Outer Sheath, Colour: Red or White (other colour as per request).

Bending Radius

Min. 12 x Overall Diameter

Standard Follows:

EN 60228:2005
Generally conforming to BS 7629-1:201

Test Voltage

2000V AC at (20±5)°C

Compliance

Fire Resistant EN 50200 PH 120
Flame Propagation EN 60332-1-2
Fire Retardant EN 60332-3-24 (Cat.C)
Halogen free material EN 60754-1
Smoke Density EN 61034-2
Toxicity NES 02-713



Core Identification

- Colour Coding or Number Printing

POLYCAB IGNIS 2 I 3
Fire Survival Cable, 300/500V AC

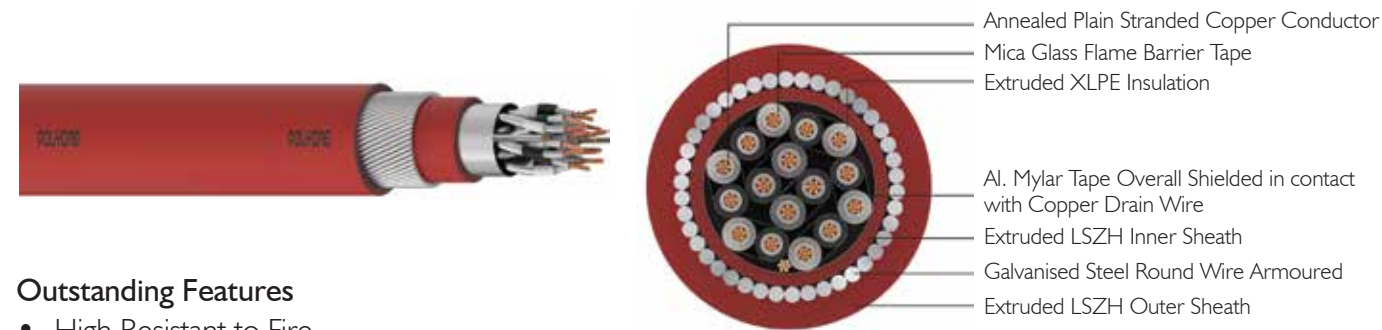
DIMENSIONS AND WEIGHTS:

| Product Code | No. of Pairs | No. of Cores | Cross Sectional Area (mm ²) | Min. Insulation Thickness (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|--------------|---|--------------------------------|------------------------------|--------------------------------|
| FSBS04CXUALS001P0.5SA001P | 1 | 2 | 0.50 | 0.45 | 6.70 | 60 |
| FSBS04CXUALS002P0.5SA001P | 2 | 4 | 0.50 | 0.45 | 10.8 | 120 |
| FSBS04CXUALS001P.75SA001P | 1 | 2 | 0.75 | 0.45 | 7.10 | 70 |
| FSBS04CXUALS002P.75SA001P | 2 | 4 | 0.75 | 0.45 | 11.5 | 135 |
| FSBS04CXUALS001P1.0SA001P | 1 | 2 | 1.0 | 0.45 | 7.50 | 80 |
| FSBS04CXUALS002P1.0SA001P | 2 | 4 | 1.0 | 0.45 | 12.1 | 155 |
| FSBS04CXUALS001P1.5SA001P | 1 | 2 | 1.5 | 0.45 | 8.10 | 95 |
| FSBS04CXUALS002P1.5SA001P | 2 | 4 | 1.5 | 0.45 | 13.4 | 190 |
| FSBS04CXUALS001P2.5SA001P | 1 | 2 | 2.5 | 0.5 | 9.20 | 120 |
| FSBS04CXUALS002P2.5SA001P | 2 | 4 | 2.5 | 0.5 | 14.8 | 265 |

ELECTRICAL CHARACTERISTICS:

| Cross Sectional Area (mm ²) | Conductor Resistance (Ohms/Km) | | Insulation Resistance (MOhms-Km) | Approx. Capacitance (nF/km) | Approx. Inductance to Resistance ratio, L/R (μH/Ohm) |
|---|--------------------------------|------------|----------------------------------|-----------------------------|--|
| | Single pair | Multi pair | | | |
| 0.50 | 36 | 36.7 | 1000 | 150 | 25 |
| 0.75 | 34.5 | 35.2 | 1000 | 150 | 25 |
| 1.0 | 18.1 | 18.5 | 1000 | 150 | 25 |
| 1.5 | 12.1 | 12.3 | 1000 | 150 | 40 |
| 2.5 | 7.41 | 7.56 | 1000 | 150 | 40 |

POLYCAB IGNIS 214
Fire Survival Cable, 300/500V AC



Outstanding Features

- High Resistant to Fire
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS Multipair Shielded Armoured cable is suitable to use in various indoor & outdoor applications where signal transmission during emergency services during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people in high rise building, schools, hospitals, hotels, Malls, Subways etc.

Voltage Rating

300/500V AC

Operation Temperature

-40°C to +90°C

Construction

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded XLPE insulation.
- Insulated Cores twisted to form pairs and assembled together.
- Al.Mylar Tape Overall Shielded in contact with Drain wire
- Extruded LSZH Inner Sheath
- Galvanised Steel Round Wire Armoured (also available with GalvanisedA Steel Flat Strip Armour, dimensions and weights changes accordingly)
- Extruded LSZH Outer Sheath, Colour: Black. (other colour as per request).

Bending Radius

Min. 15 x Overall Diameter

Standard Follows:

EN 60228:2005
Generally conforming to BS 7629-1:2015

Test Voltage

2000V AC at (20±5)°C

Compliance

| | |
|-----------------------|-----------------------|
| Fire Resistant | IEC 60331-23 |
| Flame Propagation | EN 60332-1-2 |
| Fire Retardant | EN 60332-3-24 (Cat.C) |
| Halogen free material | EN 60754-1 |
| Smoke Density | EN 61034-2 |
| Toxicity | NES 02-713 |



Core Identification

- Colour Coding or Number Printing
As per BS EN 50288-7

POLYCAB IGNIS 214
Fire Survival Cable, 300/500V AC

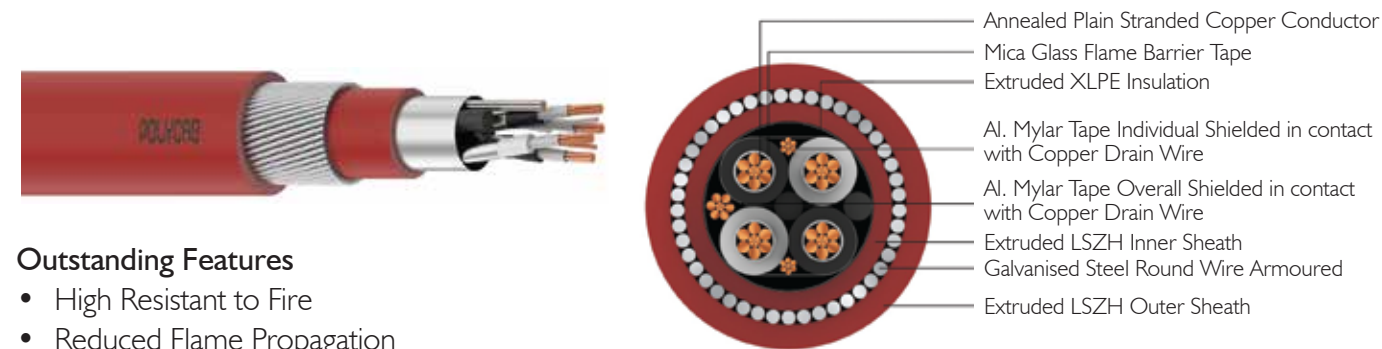
DIMENSIONS AND WEIGHTS:

| Product Code | No. of Pairs | No. of Cores | Cross Sectional Area (mm ²) | Min. Insulation Thickness (mm) | Nom. over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|--------------|---|--------------------------------|-----------------------|------------------------------|--------------------------------|
| FSBS04CXSWLS001P75SA001P | 1 | 2 | 0.75 | 0.44 | 9.3 | 12.2 | 290 |
| FSBS04CXSWLS002P75SA001P | 2 | 4 | 0.75 | 0.44 | 12.9 | 15.7 | 470 |
| FSBS04CXSWLS005P75SA001P | 5 | 10 | 0.75 | 0.44 | 16.1 | 20.8 | 665 |
| FSBS04CXSWLS010P75SA001P | 10 | 20 | 0.75 | 0.44 | 23.1 | 26.2 | 1085 |
| FSBS04CXSWLS015P75SA001P | 15 | 30 | 0.75 | 0.44 | 26.3 | 30.6 | 1440 |
| FSBS04CXSWLS020P75SA001P | 20 | 40 | 0.75 | 0.44 | 30.0 | 34.3 | 1820 |
| FSBS04CXSWLS001PI.0SA001P | 1 | 2 | 1.0 | 0.44 | 9.7 | 12.6 | 315 |
| FSBS04CXSWLS002PI.0SA001P | 2 | 4 | 1.0 | 0.44 | 13.5 | 17.4 | 510 |
| FSBS04CXSWLS005PI.0SA001P | 5 | 10 | 1.0 | 0.44 | 17.8 | 22.4 | 810 |
| FSBS04CXSWLS010PI.0SA001P | 10 | 20 | 1.0 | 0.44 | 24.3 | 28.3 | 1275 |
| FSBS04CXSWLS015PI.0SA001P | 15 | 30 | 1.0 | 0.44 | 28.4 | 32.6 | 1705 |
| FSBS04CXSWLS020PI.0SA001P | 20 | 40 | 1.0 | 0.44 | 31.5 | 36.2 | 2045 |
| FSBS04CXSWLS001PI.5SA001P | 1 | 2 | 1.5 | 0.44 | 10.3 | 13.4 | 345 |
| FSBS04CXSWLS002PI.5SA001P | 2 | 4 | 1.5 | 0.44 | 14.7 | 18.7 | 585 |
| FSBS04CXSWLS005PI.5SA001P | 5 | 10 | 1.5 | 0.44 | 19.2 | 24.0 | 940 |
| FSBS04CXSWLS010PI.5SA001P | 10 | 20 | 1.5 | 0.44 | 26.4 | 30.8 | 1525 |
| FSBS04CXSWLS015PI.5SA001P | 15 | 30 | 1.5 | 0.44 | 30.9 | 35.4 | 2040 |
| FSBS04CXSWLS020PI.5SA001P | 20 | 40 | 1.5 | 0.44 | 34.6 | 39.8 | 2595 |

ELECTRICAL CHARACTERISTICS:

| Cross Sectional Area (mm ²) | Conductor Resistance (Ohms/Km) | | Insulation Resistance (MOhms-Km) | Approx. Capacitance (nF/km) | Approx. Inductance to Resistance ratio, L/R (μH/Ohm) |
|---|--------------------------------|------------|----------------------------------|-----------------------------|--|
| | Single pair | Multi pair | | | |
| 0.75 | 34.5 | 35.2 | 1000 | 150 | 25 |
| 1.0 | 18.1 | 18.5 | 1000 | 150 | 25 |
| 1.5 | 12.1 | 12.3 | 1000 | 150 | 40 |

POLYCAB IGNIS 2 I 5
Fire Survival Cable, 300/500V AC



Outstanding Features

- High Resistant to Fire
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS Multipair Individual & Overall Shielded Armoured cable is suitable to use in various indoor & outdoor applications where signal transmission during emergency services during the event of fire, is highly essential and corrosive gas evaluation could be a cause of hazard to the people in high rise building, schools, hospitals, hotels, Malls, Subways etc.

Voltage Rating

300/500V AC

Operation Temperature

-40°C to +90°C

Construction

- Annealed plain stranded copper conductor as per IEC 60228, Class-2.
- Mica Glass flame barrier tape.
- Extruded XLPE insulation.
- Insulated Cores twisted to form pairs
- Al.Mylar Tape Individual Shielded in contact with Drain wire
- Shielded Pairs assembled together
- Al.Mylar Tape Overall Shielded in contact with Drain wire
- Extruded LSZH Inner Sheath
- Galvanised Steel Round Wire Armoured (also available with Galvanised Steel Flat Strip Armour, dimensions and weights changes accordingly)
- Extruded LSZH Outer Sheath, Colour: Red or White (other colour as per request).

Bending Radius

Min. 15 x Overall Diameter

Standard Follows:

EN 60228:2005
Generally conforming to BS 7629-1:2015

Test Voltage

2000V AC at (20±5)°C

Compliance

Fire Resistant EN 50200 PH 120
Flame Propagation EN 60332-1-2
Fire Retardant EN 60332-3-24 (Cat.C)
Halogen free material EN 60754-1
Smoke Density EN 61034-2
Toxicity NES 02-713



Core Identification

- Colour Coding or Number Printing
As per BS EN 50288-7

POLYCAB IGNIS 2 I 5
Fire Survival Cable, 300/500V AC

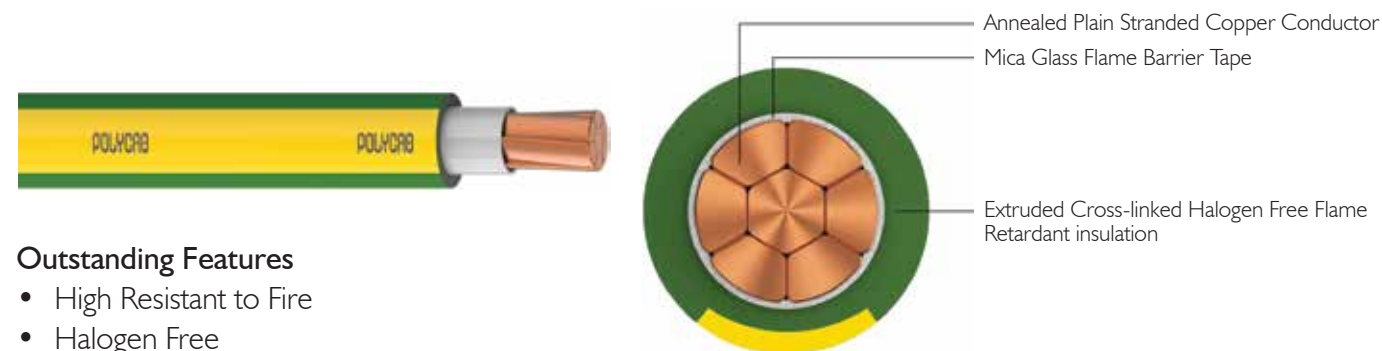
DIMENSIONS AND WEIGHTS:

| Product Code | No. of Pairs | No. of Cores | Cross Sectional Area (mm ²) | Min. Insulation Thickness (mm) | Nom. Dia. over Armour (mm) | Nom. Cable Overall Dia. (mm) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|--------------|---|--------------------------------|----------------------------|------------------------------|--------------------------------|
| FSBS04CXSMLS001P0.5SA001P | 1 | 2 | 0.50 | 0.45 | 8.50 | 11.3 | 265 |
| FSBS04CXSMLS002P0.5SA001P | 2 | 4 | 0.50 | 0.45 | 12.6 | 15.6 | 430 |
| FSBS04CXSMLS001P.75SA001P | 1 | 2 | 0.75 | 0.45 | 9.10 | 11.9 | 290 |
| FSBS04CXSMLS002P.75SA001P | 2 | 4 | 0.75 | 0.45 | 13.3 | 16.3 | 465 |
| FSBS04CXSMLS001P1.0SA001P | 1 | 2 | 1.0 | 0.45 | 9.50 | 12.3 | 305 |
| FSBS04CXSMLS002P1.0SA001P | 2 | 4 | 1.0 | 0.45 | 13.9 | 16.9 | 500 |
| FSBS04CXSMLS001P1.5SA001P | 1 | 2 | 1.5 | 0.45 | 10.1 | 12.9 | 340 |
| FSBS04CXSMLS002P1.5SA001P | 2 | 4 | 1.5 | 0.45 | 15.2 | 18.4 | 575 |
| FSBS04CXSMLS001P2.5SA001P | 1 | 2 | 2.5 | 0.5 | 10.9 | 14.0 | 370 |
| FSBS04CXSMLS002P2.5SA001P | 2 | 4 | 2.5 | 0.5 | 16.7 | 19.9 | 665 |

ELECTRICAL CHARACTERISTICS:

| Cross Sectional Area (mm ²) | Conductor Resistance (Ohms/Km) | Conductor Resistance (Ohms/Km) | Insulation Resistance (MOhms-Km) | Approx. Capacitance (nF/km) | Approx. Inductance to Resistance ratio, L/R (μH/Ohm) |
|---|--------------------------------|--------------------------------|----------------------------------|-----------------------------|--|
| | Single pair | Multi pair | | | |
| 0.50 | 36 | 36.7 | 1000 | 150 | 25 |
| 0.75 | 34.5 | 35.2 | 1000 | 150 | 25 |
| 1.0 | 18.1 | 18.5 | 1000 | 150 | 25 |
| 1.5 | 12.1 | 12.3 | 1000 | 150 | 40 |
| 2.5 | 7.41 | 7.56 | 1000 | 150 | 40 |

POLYCAB IGNIS 240
Fire Survival Cable, 450/750V AC



Outstanding Features

- High Resistant to Fire
- Halogen Free
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS Single Core cable is suitable to use in various indoor & outdoor applications such as tunnels, high rise building, schools, hospitals, hotels, Malls, Subways for emergency lighting during the event of fire.

Voltage Rating

450/750V AC
Can be extended to 1000V

Operation Temperature

-20°C to +90°C
Short Circuit Temperature 250°C

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

Core Colour

- Green-Yellow or any mono colour

Bending Radius

Min. 8 x Overall Diameter

Standard Follows:

EN 60228:2005
BS 8592:2016

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



POLYCAB IGNIS 240
Fire Survival Cable, 450/750V AC

DIMENSIONS & WEIGHTS AND CONDUCTOR RESISTANCE:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Cable Overall Dia. (mm) | Max. Conductor Resistance, DC at 20°C (Ohms/Km) | Max. Conductor Resistance, AC at 90°C (Ohms/Km) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|------------------------------|---|---|--------------------------------|
| FSBS06CLUALS001C1.5SA001P | 1 | 1.5 | 3.5 | 12.1 | 15.4 | 27 |
| FSBS06CLUALS001C2.5SA001P | 1 | 2.5 | 4.1 | 7.41 | 9.45 | 40 |
| FSBS06CLUALS001C004SA001P | 1 | 4 | 4.6 | 4.61 | 5.88 | 55 |
| FSBS06CLUALS001C006SA001P | 1 | 6 | 5.1 | 3.08 | 3.93 | 75 |
| FSBS06CLUALS001C010SA001P | 1 | 10 | 6.5 | 1.83 | 2.33 | 120 |
| FSBS06CLUALS001C016SA001P | 1 | 16 | 7.6 | 1.15 | 1.47 | 180 |
| FSBS06CLUALS001C025SA001P | 1 | 25 | 9.3 | 0.727 | 0.927 | 280 |
| FSBS06CLUALS001C035SA001P | 1 | 35 | 10.4 | 0.524 | 0.668 | 380 |
| FSBS06CLUALS001C050SA001P | 1 | 50 | 12.1 | 0.387 | 0.494 | 510 |
| FSBS06CLUALS001C070SA001P | 1 | 70 | 13.9 | 0.268 | 0.342 | 715 |
| FSBS06CLUALS001C095SA001P | 1 | 95 | 16.0 | 0.193 | 0.247 | 950 |
| FSBS06CLUALS001C120SA001P | 1 | 120 | 17.7 | 0.153 | 0.196 | 1225 |
| FSBS06CLUALS001C150SA001P | 1 | 150 | 19.8 | 0.124 | 0.160 | 1500 |
| FSBS06CLUALS001C185SA001P | 1 | 185 | 21.9 | 0.0991 | 0.129 | 1875 |
| FSBS06CLUALS001C240SA001P | 1 | 240 | 24.7 | 0.0754 | 0.0988 | 2415 |
| FSBS06CLUALS001C300SA001P | 1 | 300 | 27.5 | 0.0601 | 0.0804 | 3000 |

ELECTRICAL CHARACTERISTICS:

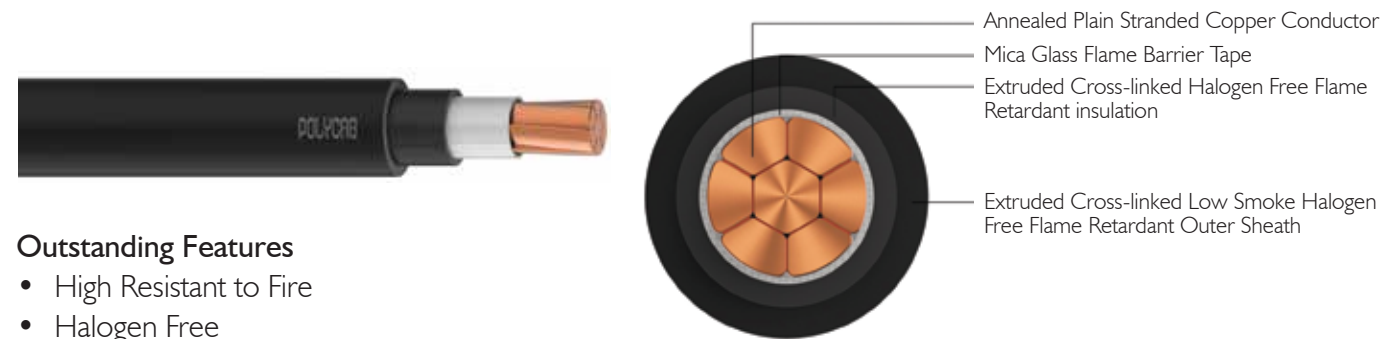
| Conductor cross-sectional area | Current Carrying Capacity (Amperes) | | | | | | | | | | |
|--------------------------------|---|-------------------------------|---|-------------------------------|---|--|--|-------------------------------|---|---|----------|
| | Air Ambient Temperature - 30°C | | | | | | Conductor operating Temperature - 90°C | | | | |
| | 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 F (in free air or on a perforated cable tray etc horizontal or vertical etc) Touching | | Reference Method G (in free air) Spaced by one cable diameter | | |
| mm ² | 2 cables, single-phase AC or DC | 3 or 4 cables, three-phase AC | 2 cables, single-phase AC or DC | 3 or 4 cables, three-phase AC | 2 cables, single-phase AC or DC flat and touching | 3 or 4 cables, three-phase AC flat and touching or trefoil | 2 cables, single-phase AC or DC flat | 3 cables, three-phase AC flat | 3 cables, three-phase AC trefoil | 2 cables, single-phase AC or DC or 3 cables three-phase AC flat | |
| Ohm/km | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Horizontal | Vertical |
| 1.5 | 19 | 17 | 23 | 20 | 25 | 23 | - | - | - | - | - |
| 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 |
| 300 | 486 | 435 | 603 | 514 | 743 | 681 | 783 | 736 | 703 | 902 | 833 |

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

Current rating de-rating factors for other than 30°C ambient air temperature.

| | | | | | | | | | | | | |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Air Temperature | 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 |

POLYCAB IGNIS 241
Fire Survival Cable, 450/750V AC



Outstanding Features

- High Resistant to Fire
- Halogen Free
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS Single Core Sheathed cable is suitable to use in various indoor & outdoor applications such as tunnels, high rise building, schools, hospitals, hotels, Malls, Subways for emergency lighting during the event of fire.

Voltage Rating

450/750V AC
Can be extended to 1000V

Operation Temperature

-40°C to +90°C
Short Circuit Temperature 250°C

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 Outer Sheath

Core Colour

- Black or any mono colour

Bending Radius

Min. 8 x Overall Diameter

Standard Follows:

EN 60228:2005
Generally conforming to BS 7211

Test Voltage:

3500V AC at (20±5)°C

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



POLYCAB IGNIS 241
Fire Survival Cable, 450/750V AC

DIMENSIONS & WEIGHTS AND CONDUCTOR RESISTANCE:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Cable Overall Dia. (mm) | Max. Conductor Resistance, DC at 20°C (Ohms/Km) | Max. Conductor Resistance, AC at 90°C (Ohms/Km) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|------------------------------|---|---|--------------------------------|
| FSBS07CLUALS00IC004SA001P | 1 | 4.0 | 6.90 | 4.61 | 5.88 | 80 |
| FSBS07CLUALS00IC006SA001P | 1 | 6.0 | 7.50 | 3.08 | 3.93 | 100 |
| FSBS07CLUALS00IC010SA001P | 1 | 10 | 7.90 | 1.83 | 2.33 | 140 |
| FSBS07CLUALS00IC016SA001P | 1 | 16 | 8.90 | 1.15 | 1.47 | 200 |
| FSBS07CLUALS00IC025SA001P | 1 | 25 | 11.0 | 0.727 | 0.927 | 310 |
| FSBS07CLUALS00IC035SA001P | 1 | 35 | 11.0 | 0.524 | 0.668 | 400 |
| FSBS07CLUALS00IC050SA001P | 1 | 50 | 13.0 | 0.387 | 0.494 | 525 |
| FSBS07CLUALS00IC070SA001P | 1 | 70 | 15.0 | 0.268 | 0.342 | 735 |
| FSBS07CLUALS00IC095SA001P | 1 | 95 | 17.0 | 0.193 | 0.247 | 980 |
| FSBS07CLUALS00IC120SA001P | 1 | 120 | 19.0 | 0.153 | 0.196 | 1250 |
| FSBS07CLUALS00IC150SA001P | 1 | 150 | 20.0 | 0.124 | 0.160 | 1540 |
| FSBS07CLUALS00IC185SA001P | 1 | 185 | 22.0 | 0.0991 | 0.129 | 1890 |
| FSBS07CLUALS00IC240SA001P | 1 | 240 | 25.0 | 0.0754 | 0.0988 | 2500 |

ELECTRICAL CHARACTERISTICS:

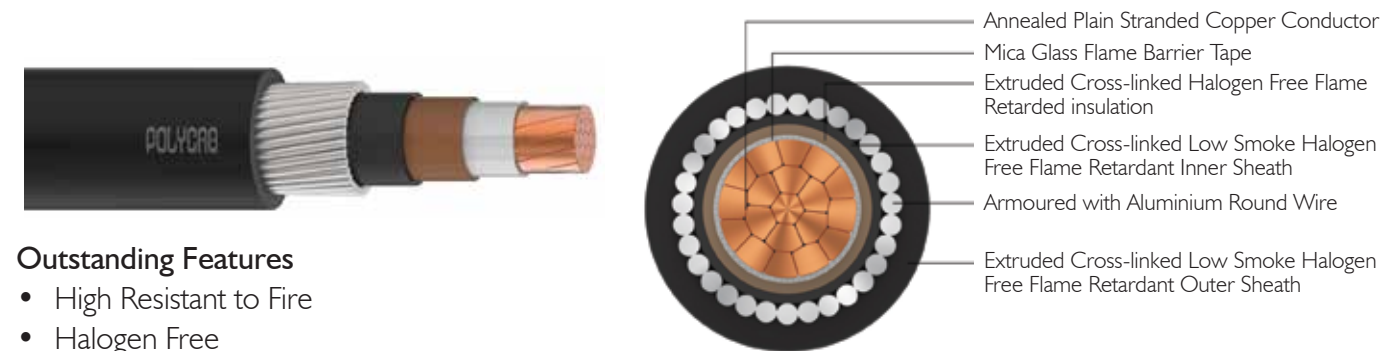
| Conductor cross-sectional area | Current Carrying Capacity (Amperes) | | | | | | | | | | | | | |
|--------------------------------|---|-------------------------------|---------------------------------|-------------------------------|---|--|---|-------------------------------|-------------------------------------|---|--|----------|---|--|
| | 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 F (in free air or on a perforated cable tray etc horizontal or vertical etc) Touching | | Reference Method G (in free air) Spaced by one cable diameter | |
| | 2 cables, single-phase AC or DC | 3 or 4 cables, three-phase AC | 2 cables, single-phase AC or DC | 3 or 4 cables, three-phase AC | 2 cables, single-phase AC or DC flat and touching | 3 or 4 cables, three-phase AC flat and touching or trefoil | 2 cables, single-phase AC or DC flat | 3 cables, three-phase AC flat | 3 cables, three-phase AC trefoil | 2 cables, single-phase AC or DC or 3 cables three-phase AC flat | Horizontal | Vertical | | |
| mm ² | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | | |
| 4.0 | 35 | 31 | 42 | 37 | 46 | 41 | - | - | - | - | - | - | | |
| 6.0 | 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

Current rating de-rating factors for other than 30°C ambient air temperature.

| Air Temperature | 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 |

POLYCAB IGNIS 242
Fire Survival Cable, 600/1000V AC



Outstanding Features

- High Resistant to Fire
- Halogen Free
- Reduced Flame Propagation
- Circuit Integrity when exposed to Fire
- Low Toxicity
- Fire Barrier

Application

POLYCAB FS Single Core Armoured and Sheathed cable is suitable to use in various indoor & outdoor applications such as tunnels, high rise building, schools, hospitals, hotels, Malls, Subways for emergency lighting during the event of fire.

Voltage Rating

600/1000V AC

Operation Temperature

-20°C to +90°C

Short Circuit Temperature 250°C

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 Inner sheath
- Armoured with Aluminium round wire
- Extruded Cross-linked Low Smoke Halogen Free Flame Retardant Outer Sheath

Core Colour

Brown or Blue

Bending Radius

Min. 8 x Overall Diameter

Standard Follows:

EN 60228:2005

Generally conforming to BS 6724

Test Voltage:

3500V AC at (20±5)°C

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 |



POLYCAB IGNIS 242
Fire Survival Cable, 600/1000V AC

DIMENSIONS & WEIGHTS AND CONDUCTOR RESISTANCE:

| Product Code | No. of Cores | Cross Sectional Area (mm ²) | Nom. Cable Overall Dia. (mm) | Max. Conductor Resistance, DC at 20°C (Ohms/Km) | Max. Conductor Resistance, AC at 90°C (Ohms/Km) | Cable Weight Approx. (kg / km) |
|---------------------------|--------------|---|------------------------------|---|---|--------------------------------|
| FSBS07CLAWLS00IC050SA00IP | 1 | 50 | 18.4 | 0.387 | 0.494 | 760 |
| FSBS07CLAWLS00IC070SA00IP | 1 | 70 | 20.8 | 0.268 | 0.342 | 1050 |
| FSBS07CLAWLS00IC095SA00IP | 1 | 95 | 23.0 | 0.193 | 0.247 | 1340 |
| FSBS07CLAWLS00IC120SA00IP | 1 | 120 | 24.6 | 0.153 | 0.196 | 1620 |
| FSBS07CLAWLS00IC150SA00IP | 1 | 150 | 27.5 | 0.124 | 0.160 | 2035 |
| FSBS07CLAWLS00IC185SA00IP | 1 | 185 | 30.0 | 0.0991 | 0.129 | 2470 |
| FSBS07CLAWLS00IC240SA00IP | 1 | 240 | 33.8 | 0.0754 | 0.0988 | 3060 |
| FSBS07CLAWLS00IC300SA00IP | 1 | 300 | 36.4 | 0.0601 | 0.0804 | 3715 |
| FSBS07CLAWLS00IC400SA00IP | 1 | 400 | 41.1 | 0.0470 | 0.0647 | 4830 |
| FSBS07CLAWLS00IC500SA00IP | 1 | 500 | 45.0 | 0.0366 | 0.0527 | 5930 |
| FSBS07CLAWLS00IC630SA00IP | 1 | 630 | 49.7 | 0.0283 | 0.0434 | 7400 |

ELECTRICAL CHARACTERISTICS:

| Conductor cross-sectional area | Current Carrying Capacity (Amperes) | | | | | | | | | | | | | | | |
|--------------------------------|---------------------------------------|------|-------------------------------------|------|---------------------------------------|------|--|------|----------------------------------|------|------------------------------|------|----------------------------|------|--------------------------------|------|
| | Reference method C (clipped direct) | | | | | | Reference Method F (in free air or on a perforated cable tray, horizontal or vertical) | | | | | | | | | |
| | 2 cables single-phase a.c or d.c flat | | 3 or 4 cables, three phase a.c flat | | 2 cables single phase a.c or d.c flat | | 3 cables single phase a.c flat | | 3 cables three phase a.c trefoil | | Spaced by one cable diameter | | | | | |
| | | | | | | | | | | | 2 cables, d.c | | 2 cables, single-phase a.c | | 3 or 4 cables, three phase a.c | |
| mm ² | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. | Amp. |
| 50 | 237 | 220 | 253 | 232 | 222 | 284 | 270 | 282 | 266 | 288 | 266 | | | | | |
| 70 | 303 | 277 | 322 | 293 | 285 | 356 | 349 | 357 | 337 | 358 | 331 | | | | | |
| 95 | 367 | 333 | 389 | 352 | 346 | 446 | 426 | 436 | 412 | 425 | 393 | | | | | |
| 120 | 425 | 383 | 449 | 405 | 402 | 519 | 497 | 504 | 477 | 485 | 449 | | | | | |
| 150 | 488 | 437 | 516 | 462 | 463 | 600 | 575 | 566 | 539 | 549 | 510 | | | | | |
| 185 | 557 | 496 | 587 | 524 | 529 | 688 | 680 | 643 | 614 | 618 | 574 | | | | | |
| 240 | 656 | 579 | 689 | 612 | 625 | 815 | 782 | 749 | 714 | 715 | 666 | | | | | |
| 300 | 755 | 662 | 792 | 700 | 720 | 943 | 906 | 842 | 805 | 810 | 755 | | | | | |
| 400 | 853 | 717 | 899 | 767 | 815 | 1137 | 1094 | 929 | 889 | 848 | 797 | | | | | |
| 500 | 962 | 791 | 1016 | 851 | 918 | 1314 | 1266 | 1032 | 989 | 923 | 871 | | | | | |
| 630 | 1082 | 861 | 1146 | 935 | 1027 | 1528 | 1474 | 1139 | 1092 | 992 | 940 | | | | | |

The above table is in accordance with Table 4E3A of BS 7671-2018

Current rating de-rating factors for other than 30°C ambient air temperature.

| Air Temperature | 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 |

