

HALOGEN FREE INSULATED ARMOURED CABLES TO BS 7835 STRANDED COPPER CONDUCTORS



10 9 8 7 6 5 4 3 2 1

1. Round stranded compacted conductor
2. Extruded semi-conductive conductor screen
3. XLPE insulation
4. Extruded semi-conductive insulation screen
5. Copper tape overlapped over each core
6. Fillers
7. Plastic tape
8. LSF inner sheath
9. Galvanised steel wires
10. LSF outersheath

CABLE TYPE: XLPE/CTS/LSF/SWA/LSF
NOMINAL VOLTAGE: 8,7/15 kV
SPECIFICATION: BS 7835

The cable can be also produced with CWS or CTS according to IEC 60502-2.

| CABLES WITH COPPER CONDUCTOR | | | | | | | | | | |
|---------------------------------|-----------------------|----------------|---------|----------------------------|---|-------|--|------|--|------|
| NOMINAL AREA OF CONDUCTOR | DIAMETER (APPROX.) | | | NET WEIGHT (APPROX.) | CONTINUOUS CURRENT RATING IN GROUND | | CONTINUOUS CURRENT RATING IN DUCTS | | CONTINUOUS CURRENT RATING IN AIR | |
| | UNDER ARMOUR | OVER ARMOUR | OVERALL | | TREFOIL | FLAT | TREFOIL | FLAT | TREFOIL | FLAT |
| | mm ² | mm | mm | | mm | kg/km | A | A | A | A |
| 1X50 | 23,9 | 27,1 | 30,9 | 1400 | 220 | 230 | 220 | 220 | 250 | 300 |
| 1X70 | 25,6 | 28,8 | 32,6 | 1600 | 270 | 280 | 260 | 270 | 310 | 370 |
| 1X95 | 27,0 | 31,0 | 35,0 | 2000 | 320 | 335 | 305 | 325 | 375 | 460 |
| 1X120 | 28,3 | 32,3 | 36,5 | 2400 | 360 | 380 | 340 | 370 | 430 | 530 |
| 1X150 | 29,8 | 33,8 | 38,0 | 2700 | 410 | 430 | 375 | 410 | 490 | 600 |
| 1X185 | 31,6 | 35,6 | 40,0 | 3100 | 455 | 485 | 410 | 460 | 550 | 690 |
| 1X240 | 33,9 | 37,9 | 42,5 | 3800 | 520 | 560 | 470 | 540 | 650 | 820 |
| 1X300 | 36,2 | 40,2 | 44,8 | 4400 | 580 | 640 | 500 | 610 | 740 | 940 |
| 1X400 | 39,4 | 44,4 | 49,4 | 5600 | 650 | 730 | 530 | 690 | 840 | 1100 |
| 1X500 | 42,8 | 47,8 | 53,0 | 6700 | 710 | 830 | 570 | 780 | 930 | 1280 |
| 1X630 | 46,7 | 51,7 | 57,1 | 8300 | 760 | 940 | 620 | 890 | 1040 | 1480 |
| 1X800 | 51,2 | 56,2 | 61,8 | 10200 | 810 | 1060 | 660 | 990 | 1140 | 1690 |
| 1X1000 | 55,8 | 60,8 | 66,8 | 12400 | 860 | 1170 | 690 | 1090 | 1230 | 1900 |
| 3X25 | 44,3 | 49,3 | 54,5 | 5090 | 140 | | 125 | | 145 | |
| 3X35 | 46,3 | 51,3 | 56,7 | 5730 | 170 | | 150 | | 175 | |
| 3X50 | 48,6 | 53,6 | 59,2 | 6520 | 210 | | 180 | | 220 | |
| 3X70 | 52,2 | 57,2 | 63,0 | 7560 | 250 | | 215 | | 270 | |
| 3X95 | 56,2 | 61,2 | 67,2 | 8900 | 300 | | 255 | | 330 | |
| 3X120 | 59,6 | 64,6 | 70,8 | 10130 | 340 | | 290 | | 380 | |
| 3X150 | 62,6 | 67,6 | 74,0 | 11380 | 380 | | 330 | | 430 | |
| 3X185 | 66,9 | 73,2 | 80,0 | 13840 | 430 | | 370 | | 490 | |
| 3X240 | 72,3 | 78,6 | 85,8 | 15620 | 500 | | 430 | | 570 | |
| 3X300 | 77,3 | 83,6 | 91,0 | 19270 | 540 | | 470 | | 650 | |

Single core cables are aluminium wire armoured

Note:

The above ratings are given for 25°C ambient temperature, depth of laying 0.8 m, ground temperature 15°C, thermal resistivity of soil 1.2 Km/W and maximum conductor temperature 90°C. Single core cables are laid either in trefoil formation touching or in flat formation spaced by one cable diameter. For other conditions the correction factors are given below:

| | | | | | | | |
|--------------------------------|-----|------|------|------|------|------|------|
| Ambient Temperature °C: | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
| Correction factor | 1,0 | 0,96 | 0,92 | 0,88 | 0,83 | 0,78 | 0,73 |

| | | | | | | | |
|-------------------------------|-----|------|------|------|------|------|------|
| Ground Temperature °C: | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
| Correction factor | 1,0 | 0,96 | 0,92 | 0,88 | 0,83 | 0,78 | 0,73 |

| | | | | | | | |
|------------------------------------|------|------|-----|------|------|------|------|
| Ground thermal resistivity: | 0,9 | 1,0 | 1,2 | 1,5 | 2,0 | 2,5 | 3,0 |
| Correction factor | 1,06 | 1,04 | 1,0 | 0,92 | 0,82 | 0,74 | 0,68 |

| | | | | | | | |
|---------------------------|-----|------|------|------|------|------|------|
| Depth of laying m: | 0,8 | 1,0 | 1,25 | 1,5 | 1,75 | 2,0 | 2,5 |
| Correction factor | 1,0 | 0,97 | 0,95 | 0,94 | 0,93 | 0,91 | 0,90 |

| | | |
|---|-------------------------|-----------------------|
| MIN. bending radius during installation | Single core cables 20 D | Multicore cables 15 D |
|---|-------------------------|-----------------------|

D: overall diameter of cable

CORE IDENTIFICATION:

In three core cables each phase is identified by a coloured strip laid longitudinally under the metallic screen.