



## CABLE STRUCTURE

|                   |                                                                                                                                                                             |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conductor         | Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)                                                    |
| Insulation        | PE-Polyethylene compound to EN50290-2-23<br>Black / White twisted pairs with numbered cores                                                                                 |
| Binder Tape       | Polyester foil on overall cable core formed by stranded pairs.                                                                                                              |
| Collective Screen | Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil                                                                |
| Outer Sheath      | Flame retardant PVC compound to EN50290-2-22<br>Blue for intrinsically safe cable<br>Black for UV resistant and/or non-intrinsically safe cable<br>Other colours on request |

## STANDARDS & MAIN CHARACTERISTICS

|                               |                                                                            |
|-------------------------------|----------------------------------------------------------------------------|
| Rated Voltage                 | 500 V a.c.                                                                 |
| AC Test Voltage               | 2000 V x 1 min. (core:core / core: screen)                                 |
| Working Temperature           | -30°C / + 70°C (during operation)<br>- 5 °C / + 50°C (during installation) |
| Min Bending Radius (Fixed)    | 7,5 x D                                                                    |
| Construction                  | EN 50288-7                                                                 |
| Material Types & Tests        | EN 50290-2 series                                                          |
| Electrical & Mechanical Tests | EN 50289 series                                                            |
| Flame Retardant               | IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C                                    |

### Available Features on Request

- 300 V version
- Multi core / Multi triple / Multi quad
- Hydrocarbon resistant
- Oil resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version
- UV resistant

### Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications. These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS<sup>(\*)</sup>

|                          |      |                 |      |      |      |      |      |     |
|--------------------------|------|-----------------|------|------|------|------|------|-----|
| Conductor size (Class 2) | nom. | mm <sup>2</sup> | 0,5  | 0,75 | 1    | 1,3  | 1,5  | 2,5 |
| Conductor resistance     | max. | Ω/km            | 36,7 | 25,0 | 18,5 | 14,2 | 12,3 | 7,6 |
| Insulation resistance    | min. | MΩxkm           | 5000 |      |      |      |      |     |
| Mutual Capacitance       | max. | nF/km           | 150  |      |      |      |      |     |
| Inductance               | max. | mH/km           | 1    |      |      |      |      |     |
| L/R ratio                | max. | μH/Ω            | 25   | 25   | 25   | 40   | 40   | 60  |

(\*) At 20 °C

## PHYSICAL CHARACTERISTICS

| Cross Sections (mm <sup>2</sup> ) | Nominal Overall Diameter (mm) | Approximate Weight (kg/km) |
|-----------------------------------|-------------------------------|----------------------------|
| 1x2x0,5                           | 6,0                           | 44                         |
| 2x2x0,5                           | 8,8                           | 76                         |
| 4x2x0,5                           | 10,3                          | 115                        |
| 5x2x0,5                           | 11,2                          | 134                        |
| 6x2x0,5                           | 12,1                          | 153                        |
| 8x2x0,5                           | 13,7                          | 196                        |
| 10x2x0,5                          | 15,6                          | 241                        |
| 12x2x0,5                          | 16,1                          | 272                        |
| 16x2x0,5                          | 17,8                          | 338                        |
| 20x2x0,5                          | 20,0                          | 416                        |
| 24x2x0,5                          | 22,2                          | 495                        |
| 1x2x0,75                          | 6,7                           | 54                         |
| 2x2x0,75                          | 10,0                          | 98                         |
| 4x2x0,75                          | 11,5                          | 146                        |
| 5x2x0,75                          | 12,7                          | 177                        |
| 6x2x0,75                          | 13,8                          | 204                        |
| 8x2x0,75                          | 15,6                          | 261                        |
| 10x2x0,75                         | 17,6                          | 313                        |
| 12x2x0,75                         | 18,4                          | 365                        |
| 16x2x0,75                         | 20,3                          | 456                        |
| 20x2x0,75                         | 22,8                          | 562                        |
| 24x2x0,75                         | 25,4                          | 671                        |
| 1x2x1                             | 6,9                           | 59                         |
| 2x2x1                             | 10,3                          | 108                        |
| 4x2x1                             | 11,9                          | 165                        |
| 5x2x1                             | 13,1                          | 201                        |
| 6x2x1                             | 14,3                          | 233                        |
| 8x2x1                             | 16,2                          | 300                        |
| 10x2x1                            | 18,4                          | 370                        |
| 12x2x1                            | 19,0                          | 420                        |
| 16x2x1                            | 21,3                          | 540                        |
| 20x2x1                            | 23,9                          | 665                        |
| 24x2x1                            | 26,6                          | 793                        |

| Cross Sections (mm <sup>2</sup> ) | Nominal Overall Diameter (mm) | Approximate Weight (kg/km) |
|-----------------------------------|-------------------------------|----------------------------|
| 1x2x1,3                           | 7,5                           | 72                         |
| 2x2x1,3                           | 10,9                          | 126                        |
| 4x2x1,3                           | 12,9                          | 204                        |
| 5x2x1,3                           | 14,0                          | 242                        |
| 6x2x1,3                           | 15,4                          | 288                        |
| 8x2x1,3                           | 17,3                          | 362                        |
| 10x2x1,3                          | 19,7                          | 448                        |
| 12x2x1,3                          | 20,4                          | 514                        |
| 16x2x1,3                          | 22,8                          | 664                        |
| 20x2x1,3                          | 25,6                          | 820                        |
| 24x2x1,3                          | 28,5                          | 977                        |
| 1x2x1,5                           | 7,7                           | 76                         |
| 2x2x1,5                           | 11,3                          | 135                        |
| 4x2x1,5                           | 13,3                          | 220                        |
| 5x2x1,5                           | 14,5                          | 262                        |
| 6x2x1,5                           | 15,9                          | 312                        |
| 8x2x1,5                           | 18,1                          | 403                        |
| 10x2x1,5                          | 20,4                          | 488                        |
| 12x2x1,5                          | 21,3                          | 571                        |
| 16x2x1,5                          | 23,8                          | 736                        |
| 20x2x1,5                          | 26,7                          | 908                        |
| 24x2x1,5                          | 29,7                          | 1083                       |
| 1x2x2,5                           | 8,9                           | 103                        |
| 2x2x2,5                           | 13,4                          | 193                        |
| 4x2x2,5                           | 15,9                          | 324                        |
| 5x2x2,5                           | 17,3                          | 387                        |
| 6x2x2,5                           | 19,1                          | 461                        |
| 8x2x2,5                           | 21,7                          | 597                        |
| 10x2x2,5                          | 24,7                          | 738                        |
| 12x2x2,5                          | 25,6                          | 853                        |
| 16x2x2,5                          | 28,6                          | 1105                       |
| 20x2x2,5                          | 32,3                          | 1380                       |
| 24x2x2,5                          | 36,0                          | 1646                       |