

**TECHNOKONTROL IB-YSL(St)Y****INTRINSICALLY SAFE CABLES****APPLICATIONS**

**TECHNOKONTROL IB-YSL(St)Y** are overall shielded cables, intended for intrinsically safe circuits and explosive conditions zones, designed for the operating voltage 300/500 V.

The cables are protected by an overall electrostatic shield against external electric interferences.

The cables are designed to offer high flexibility combined with tensile strength.

Sheathing PVC of high oxygen index is UV radiation and weather resistant, is self-extinguishing and flame retardant. The cables pass combustibility test according to PN-EN 60332-3 standard.

The cables are oil-resistant and designed for frequent contact with petroleum products, as in petrol stations and stores, where engine fuels and lubricants are pumped or handled.

The cables are suitable for fixed indoor installations.

**CONSTRUCTION**

- flexible, multiwire conductors, stranded of bare annealed copper wires (tin-plated on request), meeting requirements of class 2 per PN-EN 60228,
- black PVC insulation and white conductor numbers printed on it for identification,
- insulated conductors laid-up in layers,
- cable core wrapped in polyester tape,
- overall electrostatic shield incorporating aluminium-polyester tape and stranded annealed tinned copper drain wire (class 2),
- oil, petrol and UV radiation resistant and self-extinguishing (oxygen index bigger than 29%) PVC cable sheath, blue RAL 5015 according to VDE 0165 6.1.3.2.3.

**AVAILABLE UPON REQUEST**

**TECHNOKONTROL IB-YSL(St)Yv** - intrinsically safe cables with enhanced PVC sheath, suitable for outdoor installation and direct earth burial.

## TECHNOKONTROL IB-YSL(St)Y

### CHARACTERISTICS

|                                                |                 |            |             |            |            |            |
|------------------------------------------------|-----------------|------------|-------------|------------|------------|------------|
| Conductor cross-section                        | mm <sup>2</sup> | <b>0.5</b> | <b>0.75</b> | <b>1.0</b> | <b>1.5</b> | <b>2.5</b> |
| DC conductor resistance at 20°C, maximum       | Ω/km            | 36.0       | 24.5        | 18.1       | 12.1       | 7.41       |
| Capacitance between conductors at 1 kHz, appr. | nF/km           | 160        | 170         | 180        | 180        | 200        |

Operating voltage U<sub>0</sub>/U 300/500 V  
Voltage test 3.0 kV rms  
Insulation resistance, minimum 20 MΩ·km  
Inductance, approximate 0.7 mH/km

Operating temperature range  
for fixed installation from - 30 to + 80°C  
for movable installation from - 5 to + 70°C  
Minimum bending radius 7.5 x cable diameter  
Cable combustibility flame retardant  
Combustibility tests PN-EN 60332-1-2, IEC 60332-1-2  
Oil resistance PN-EN 60811-404

CE = the cable meets requirements of the low voltage directive 2014/35/EU

| Product No. | Number of conductors x conductor cross-section | Cable outer diameter (appr.) | Copper index | Cable weight (appr.) |
|-------------|------------------------------------------------|------------------------------|--------------|----------------------|
|             | mm <sup>2</sup>                                | mm                           | kg/km        | kg/km                |
| 0630 013    | 2 x 0,5                                        | 4.8                          | 12.0         | 38                   |
| 0630 011    | 3 x 0,5                                        | 5.1                          | 16.8         | 45                   |
| 0630 017    | 4 x 0,5                                        | 5.5                          | 21.6         | 52                   |
| 0630 055    | 5 x 0,5                                        | 6.0                          | 26.4         | 62                   |
| 0630 027    | 6 x 0,5                                        | 6.5                          | 31.2         | 72                   |
| 0630 056    | 7 x 0,5                                        | 6.5                          | 36.0         | 75                   |
| 0630 020    | 8 x 0,5                                        | 7.0                          | 40.8         | 87                   |
| 0630 004    | 10 x 0,5                                       | 8.2                          | 50.4         | 105                  |
| 0630 012    | 12 x 0,5                                       | 8.4                          | 60.0         | 118                  |
| 0630 057    | 14 x 0,5                                       | 8.9                          | 69.6         | 133                  |
| 0630 058    | 16 x 0,5                                       | 9.3                          | 79.2         | 150                  |
| 0630 059    | 18 x 0,5                                       | 10.2                         | 88.8         | 176                  |
| 0630 060    | 19 x 0,5                                       | 10.2                         | 93.6         | 179                  |
| 0630 061    | 21 x 0,5                                       | 10.7                         | 103.2        | 197                  |
| 0630 033    | 24 x 0,5                                       | 12.1                         | 117.6        | 229                  |
| 0630 062    | 27 x 0,5                                       | 12.4                         | 132.0        | 251                  |
| 0630 063    | 30 x 0,5                                       | 12.8                         | 146.4        | 273                  |
| 0630 064    | 36 x 0,5                                       | 13.8                         | 175.2        | 322                  |
| 0630 065    | 37 x 0,5                                       | 13.8                         | 180.0        | 325                  |
| 0630 066    | 44 x 0,5                                       | 15.6                         | 213.6        | 390                  |
| 0630 067    | 48 x 0,5                                       | 15.9                         | 232.8        | 418                  |
| 0630 068    | 52 x 0,5                                       | 16.3                         | 252.0        | 447                  |
| 0630 069    | 56 x 0,5                                       | 16.8                         | 271.2        | 479                  |
| 0630 070    | 60 x 0,5                                       | 17.3                         | 290.4        | 511                  |
| 0630 015    | 2 x 0,75                                       | 5.2                          | 19.2         | 48                   |
| 0630 021    | 3 x 0,75                                       | 5.5                          | 26.4         | 56                   |
| 0630 008    | 4 x 0,75                                       | 6.0                          | 33.6         | 66                   |
| 0630 019    | 5 x 0,75                                       | 6.5                          | 40.8         | 79                   |
| 0630 036    | 6 x 0,75                                       | 7.1                          | 48.0         | 93                   |
| 0630 047    | 7 x 0,75                                       | 7.1                          | 55.2         | 98                   |
| 0630 071    | 8 x 0,75                                       | 7.6                          | 62.4         | 112                  |
| 0630 024    | 10 x 0,75                                      | 8.9                          | 76.8         | 136                  |
| 0630 072    | 12 x 0,75                                      | 9.2                          | 91.2         | 154                  |
| 0630 073    | 14 x 0,75                                      | 10.1                         | 105.6        | 183                  |

| Product No. | Number of conductors x conductor cross-section | Cable outer diameter (appr.) | Copper index | Cable weight (appr.) |
|-------------|------------------------------------------------|------------------------------|--------------|----------------------|
|             | mm <sup>2</sup>                                | mm                           | kg/km        | kg/km                |
| 0630 074    | 16 x 0,75                                      | 10.6                         | 120.0        | 205                  |
| 0630 048    | 18 x 0,75                                      | 11.2                         | 134.4        | 229                  |
| 0630 075    | 19 x 0,75                                      | 11.2                         | 141.6        | 233                  |
| 0630 076    | 21 x 0,75                                      | 11.7                         | 156.0        | 257                  |
| 0630 077    | 24 x 0,75                                      | 13.2                         | 177.6        | 297                  |
| 0630 078    | 27 x 0,75                                      | 13.5                         | 199.2        | 325                  |
| 0630 079    | 30 x 0,75                                      | 14.2                         | 220.8        | 361                  |
| 0630 080    | 36 x 0,75                                      | 15.3                         | 264.0        | 427                  |
| 0630 081    | 37 x 0,75                                      | 15.3                         | 271.2        | 432                  |
| 0630 082    | 44 x 0,75                                      | 17.1                         | 321.6        | 510                  |
| 0630 001    | 2 x 1,0                                        | 5.6                          | 24.0         | 57                   |
| 0630 002    | 3 x 1,0                                        | 5.9                          | 33.6         | 67                   |
| 0630 018    | 4 x 1,0                                        | 6.4                          | 43.2         | 80                   |
| 0630 045    | 5 x 1,0                                        | 7.0                          | 52.8         | 97                   |
| 0630 031    | 6 x 1,0                                        | 7.6                          | 62.4         | 113                  |
| 0630 039    | 7 x 1,0                                        | 7.6                          | 72.0         | 120                  |
| 0630 022    | 8 x 1,0                                        | 8.2                          | 81.6         | 138                  |
| 0630 038    | 10 x 1,0                                       | 10.0                         | 100.8        | 177                  |
| 0630 006    | 12 x 1,0                                       | 10.4                         | 120.0        | 201                  |
| 0630 032    | 14 x 1,0                                       | 10.9                         | 139.2        | 227                  |
| 0630 046    | 16 x 1,0                                       | 11.5                         | 158.4        | 256                  |
| 0630 083    | 18 x 1,0                                       | 12.3                         | 177.6        | 291                  |
| 0630 037    | 19 x 1,0                                       | 12.3                         | 187.2        | 297                  |
| 0630 030    | 21 x 1,0                                       | 12.9                         | 206.4        | 328                  |
| 0630 007    | 24 x 1,0                                       | 14.5                         | 235.2        | 378                  |
| 0630 084    | 27 x 1,0                                       | 14.8                         | 264.0        | 414                  |
| 0630 034    | 30 x 1,0                                       | 15.4                         | 292.8        | 453                  |
| 0630 085    | 37 x 1,0                                       | 16.5                         | 360.0        | 543                  |
| 0630 086    | 40 x 1,0                                       | 17.2                         | 388.8        | 587                  |
| 0630 009    | 2 x 1,5                                        | 6.1                          | 36.0         | 73                   |
| 0630 016    | 3 x 1,5                                        | 6.5                          | 50.4         | 88                   |
| 0630 044    | 4 x 1,5                                        | 7.1                          | 64.8         | 106                  |
| 0630 049    | 5 x 1,5                                        | 7.7                          | 79.2         | 128                  |

## TECHNOKONTROL IB-YSL(St)Y

| Product No. | Number of conductors x conductor cross-section | Cable outer diameter (appr.) | Copper index | Cable weight (appr.) |
|-------------|------------------------------------------------|------------------------------|--------------|----------------------|
|             | mm <sup>2</sup>                                | mm                           | kg/km        | kg/km                |
| 0630 023    | 6 x 1,5                                        | 8.4                          | 93.6         | 151                  |
| 0630 003    | 7 x 1,5                                        | 8.4                          | 108.0        | 161                  |
| 0630 087    | 8 x 1,5                                        | 9.1                          | 122.4        | 185                  |
| 0630 035    | 10 x 1,5                                       | 11.1                         | 151.2        | 236                  |
| 0630 050    | 12 x 1,5                                       | 11.5                         | 180.0        | 269                  |
| 0630 088    | 14 x 1,5                                       | 12.3                         | 208.8        | 311                  |
| 0630 043    | 16 x 1,5                                       | 13.0                         | 237.6        | 352                  |
| 0630 051    | 18 x 1,5                                       | 13.7                         | 266.4        | 393                  |
| 0630 089    | 19 x 1,5                                       | 13.7                         | 280.8        | 402                  |
| 0630 028    | 24 x 1,5                                       | 16.2                         | 352.8        | 512                  |
| 0630 090    | 27 x 1,5                                       | 16.5                         | 396.0        | 562                  |
| 0630 091    | 30 x 1,5                                       | 17.1                         | 439.2        | 615                  |
| 0630 092    | 34 x 1,5                                       | 18.7                         | 496.8        | 721                  |

| Product No. | Number of conductors x conductor cross-section | Cable outer diameter (appr.) | Copper index | Cable weight (appr.) |
|-------------|------------------------------------------------|------------------------------|--------------|----------------------|
|             | mm <sup>2</sup>                                | mm                           | kg/km        | kg/km                |
| 0630 014    | 2 x 2,5                                        | 7.4                          | 55.2         | 106                  |
| 0630 026    | 3 x 2,5                                        | 7.8                          | 79.2         | 128                  |
| 0630 052    | 4 x 2,5                                        | 8.6                          | 103.2        | 157                  |
| 0630 093    | 5 x 2,5                                        | 9.8                          | 127.2        | 201                  |
| 0630 094    | 6 x 2,5                                        | 10.7                         | 151.2        | 237                  |
| 0630 095    | 7 x 2,5                                        | 10.7                         | 175.2        | 254                  |
| 0630 096    | 8 x 2,5                                        | 11.6                         | 199.2        | 293                  |
| 0630 053    | 10 x 2,5                                       | 13.8                         | 247.2        | 365                  |
| 0630 097    | 12 x 2,5                                       | 14.5                         | 295.2        | 425                  |
| 0630 098    | 14 x 2,5                                       | 15.2                         | 343.2        | 482                  |
| 0630 099    | 16 x 2,5                                       | 16.1                         | 391.2        | 546                  |
| 0630 100    | 18 x 2,5                                       | 17.0                         | 439.2        | 612                  |
| 0630 101    | 19 x 2,5                                       | 17.0                         | 463.2        | 628                  |
| 0630 054    | 24 x 2,5                                       | 20.1                         | 583.2        | 799                  |

Other cross-sections and conductor counts available on request.

TECHNOKABEL S.A. reserves the right to change specifications without prior notice.