

# SY-JZ / SY-OZ

galvanised steel wire braid, with inner sheath



## TECHNICAL DATA

PVC control and connection cable in alignment with DIN VDE 0285-525-2-51 / DIN EN 50525-2-51

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Temperature range      | flexible -15°C to +80°C<br>fixed -40°C to +80°C |
| Nominal voltage        | AC U <sub>0</sub> /U 300/500 V                  |
| Test voltage core/core | 4000 V                                          |
| Breakdown voltage      | 8000 V                                          |
| Minimum bending radius | flexible 20x Outer-Ø<br>fixed 6x Outer-Ø        |

## CABLE STRUCTURE

- Copper wire bare, finely stranded acc. to DIN VDE 0295 class 5 / IEC 60228 class 5
- Core insulation: PVC, compound type Z 7225
- Core identification acc. to DIN VDE 0293-334, black cores with consecutive labeling in white digits
- Protective conductor: starting with 3 cores,  
G = with protective conductor GN-YE, in the outer layer,  
x = without protective conductor (OZ)
- Cores stranded in layers with optimal lay lengths
- Inner sheath: PVC
- steel wire braid, galvanised
- Outer sheath: PVC
- Sheath colour: transparent
- Length marking: in metres

## PROPERTIES

| Part no. | No. cores x cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu-weight kg/km | Weight kg/km, approx. |
|----------|----------------------------|--------------|---------------------|-----------------|-----------------------|
| 12001    | 2 x 0.5                    | 20           | 7.4                 | 9.6             | 80.0                  |
| 12002    | 3 G 0.5                    | 20           | 7.7                 | 14.4            | 92.0                  |
| 12003    | 4 G 0.5                    | 20           | 8.1                 | 19.2            | 102.0                 |
| 12004    | 5 G 0.5                    | 20           | 9.0                 | 24.0            | 119.0                 |
| 12005    | 7 G 0.5                    | 20           | 9.5                 | 33.6            | 157.0                 |
| 12006    | 10 G 0.5                   | 20           | 11.4                | 48.0            | 205.0                 |
| 12007    | 12 G 0.5                   | 20           | 11.9                | 58.0            | 218.0                 |
| 12008    | 14 G 0.5                   | 20           | 12.5                | 67.0            | 242.0                 |
| 12009    | 18 G 0.5                   | 20           | 13.7                | 86.0            | 340.0                 |
| 12010    | 21 G 0.5                   | 20           | 14.3                | 101.0           | 370.0                 |
| 12114    | 25 G 0.5                   | 20           | 15.8                | 120.0           | 406.0                 |
| 12012    | 30 G 0.5                   | 20           | 16.7                | 144.0           | 439.0                 |
| 12013    | 35 G 0.5                   | 20           | 17.9                | 168.0           | 500.0                 |
| 12014    | 40 G 0.5                   | 20           | 18.5                | 192.0           | 565.0                 |
| 12015    | 42 G 0.5                   | 20           | 19.4                | 202.0           | 593.0                 |
| 12016    | 50 G 0.5                   | 20           | 20.9                | 240.0           | 690.0                 |
| 12017    | 61 G 0.5                   | 20           | 22.1                | 293.0           | 843.0                 |
| 12018    | 80 G 0.5                   | 20           | 25.4                | 384.0           | 1050.0                |
| 12011    | 100 G 0.5                  | 20           | 28.1                | 480.0           | 1240.0                |
| 12019    | 2 x 0.75                   | 19           | 7.9                 | 14.4            | 98.0                  |
| 12020    | 3 G 0.75                   | 19           | 8.2                 | 21.6            | 103.0                 |
| 12021    | 4 G 0.75                   | 19           | 9.1                 | 28.8            | 122.0                 |
| 12022    | 5 G 0.75                   | 19           | 9.7                 | 36.0            | 142.0                 |

- largely resistant to: oil,  
for details, see "Technical Information"
- the materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers

## TESTS

- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2

## APPLICATION

Used as a connection and control cable for flexible applications involving medium mechanical stress with free movement, without tensile stress and without forced motion control in dry, damp and wet rooms, however, not suitable for outdoor use in machine tools, plant construction and data technology. Due to the dense braiding, the cable is well protected against mechanical damage. The galvanisation of the braid prevents corrosion and guarantees improved solderability of the braid.

## NOTES

- the conductor is metrically (mm²) constructed, AWG numbers are approximated, and are for reference only
- cleanroom qualification tested on analog types; please note "cleanroom qualification" in your order
- VDE-Reg.-No. 7032

| Part no. | No. cores x cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu-weight kg/km | Weight kg/km, approx. |
|----------|----------------------------|--------------|---------------------|-----------------|-----------------------|
| 12112    | 6 G 0.75                   | 19           | 10.5                | 43.2            | 180.0                 |
| 12023    | 7 G 0.75                   | 19           | 10.5                | 50.0            | 185.0                 |
| 12188    | 8 G 0.75                   | 19           | 11.1                | 57.6            | 201.0                 |
| 12024    | 9 G 0.75                   | 19           | 12.1                | 65.0            | 249.0                 |
| 12113    | 10 G 0.75                  | 19           | 12.8                | 72.0            | 252.0                 |
| 12025    | 12 G 0.75                  | 19           | 13.4                | 86.0            | 292.0                 |
| 12026    | 15 G 0.75                  | 19           | 14.4                | 108.0           | 335.0                 |
| 12027    | 18 G 0.75                  | 19           | 15.2                | 130.0           | 388.0                 |
| 12028    | 21 G 0.75                  | 19           | 16.2                | 151.0           | 474.0                 |
| 12029    | 25 G 0.75                  | 19           | 17.7                | 180.0           | 503.0                 |
| 12030    | 32 G 0.75                  | 19           | 19.5                | 230.0           | 644.0                 |
| 12031    | 34 G 0.75                  | 19           | 20.1                | 245.0           | 663.0                 |
| 12032    | 41 G 0.75                  | 19           | 21.5                | 296.0           | 741.0                 |
| 12033    | 50 G 0.75                  | 19           | 23.6                | 360.0           | 925.0                 |
| 12034    | 61 G 0.75                  | 19           | 25.0                | 439.0           | 1082.0                |
| 12035    | 2 x 1                      | 18           | 8.2                 | 19.2            | 112.0                 |
| 12036    | 3 G 1                      | 18           | 9.0                 | 28.8            | 132.0                 |
| 12037    | 4 G 1                      | 18           | 9.5                 | 38.4            | 143.0                 |
| 12038    | 5 G 1                      | 18           | 10.1                | 48.0            | 166.0                 |
| 12039    | 6 G 1                      | 18           | 10.9                | 58.0            | 22.0                  |
| 12040    | 7 G 1                      | 18           | 10.9                | 67.0            | 227.0                 |
| 12041    | 8 G 1                      | 18           | 12.0                | 77.0            | 277.0                 |
| 12042    | 9 G 1                      | 18           | 12.8                | 86.0            | 295.0                 |

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| Part no. | No. cores x cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu-weight kg/km | Weight kg/km, approx. |
|----------|----------------------------|--------------|---------------------|-----------------|-----------------------|
| 12043    | 12 G 1                     | 18           | 14.0                | 115.0           | 340.0                 |
| 12044    | 14 G 1                     | 18           | 14.7                | 134.0           | 420.0                 |
| 12045    | 18 G 1                     | 18           | 16.3                | 173.0           | 500.0                 |
| 12046    | 20 G 1                     | 18           | 17.0                | 192.0           | 532.0                 |
| 12047    | 25 G 1                     | 18           | 18.6                | 240.0           | 664.0                 |
| 12048    | 34 G 1                     | 18           | 21.3                | 326.0           | 845.0                 |
| 12049    | 36 G 1                     | 18           | 21.3                | 346.0           | 857.0                 |
| 12050    | 41 G 1                     | 18           | 23.0                | 394.0           | 993.0                 |
| 12051    | 50 G 1                     | 18           | 25.3                | 480.0           | 1112.0                |
| 12052    | 56 G 1                     | 18           | 25.9                | 538.0           | 1225.0                |
| 12053    | 61 G 1                     | 18           | 26.9                | 586.0           | 1306.0                |
| 12054    | 65 G 1                     | 18           | 27.8                | 624.0           | 1504.0                |
| 12055    | 80 G 1                     | 18           | 30.7                | 768.0           | 1750.0                |
| 12056    | 100 G 1                    | 18           | 33.9                | 960.0           | 1950.0                |
| 12057    | 2 x 1.5                    | 16           | 9.2                 | 29.0            | 129.0                 |
| 12058    | 3 G 1.5                    | 16           | 9.6                 | 43.0            | 149.0                 |
| 12059    | 4 G 1.5                    | 16           | 10.4                | 58.0            | 185.0                 |
| 12060    | 5 G 1.5                    | 16           | 11.1                | 72.0            | 205.0                 |
| 12109    | 6 G 1.5                    | 16           | 12.2                | 87.0            | 255.0                 |
| 12061    | 7 G 1.5                    | 16           | 12.2                | 101.0           | 285.0                 |
| 12062    | 8 G 1.5                    | 16           | 13.2                | 115.0           | 340.0                 |
| 12063    | 9 G 1.5                    | 16           | 14.1                | 130.0           | 347.0                 |
| 12064    | 10 G 1.5                   | 16           | 15.0                | 144.0           | 418.0                 |
| 12065    | 11 G 1.5                   | 16           | 15.0                | 158.0           | 430.0                 |
| 12066    | 12 G 1.5                   | 16           | 15.4                | 173.0           | 444.0                 |
| 12067    | 14 G 1.5                   | 16           | 16.4                | 202.0           | 533.0                 |
| 12068    | 18 G 1.5                   | 16           | 18.0                | 259.0           | 593.0                 |
| 12069    | 25 G 1.5                   | 16           | 21.0                | 360.0           | 781.0                 |
| 12070    | 32 G 1.5                   | 16           | 23.1                | 461.0           | 1015.0                |
| 12071    | 34 G 1.5                   | 16           | 24.0                | 490.0           | 1124.0                |
| 12072    | 42 G 1.5                   | 16           | 25.9                | 605.0           | 1401.0                |
| 12073    | 50 G 1.5                   | 16           | 28.4                | 720.0           | 1583.0                |
| 12074    | 61 G 1.5                   | 16           | 30.2                | 878.0           | 1810.0                |
| 12075    | 80 G 1.5                   | 16           | 34.4                | 1152.0          | 2316.0                |
| 12076    | 100 G 1.5                  | 16           | 38.4                | 1440.0          | 2900.0                |
| 12077    | 2 x 2.5                    | 14           | 10.6                | 48.0            | 185.0                 |
| 12078    | 3 G 2.5                    | 14           | 11.1                | 72.0            | 248.0                 |
| 12079    | 4 G 2.5                    | 14           | 12.2                | 96.0            | 290.0                 |

| Part no. | No. cores x cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu-weight kg/km | Weight kg/km, approx. |
|----------|----------------------------|--------------|---------------------|-----------------|-----------------------|
| 12080    | 5 G 2.5                    | 14           | 13.3                | 120.0           | 347.0                 |
| 12081    | 7 G 2.5                    | 14           | 14.2                | 168.0           | 420.0                 |
| 12082    | 12 G 2.5                   | 14           | 18.5                | 288.0           | 660.0                 |
| 12083    | 14 G 2.5                   | 14           | 19.7                | 336.0           | 750.0                 |
| 12084    | 18 G 2.5                   | 14           | 21.6                | 432.0           | 893.0                 |
| 12085    | 20 G 2.5                   | 14           | 23.0                | 480.0           | 1169.0                |
| 12086    | 25 G 2.5                   | 14           | 25.6                | 600.0           | 1458.0                |
| 12087    | 30 G 2.5                   | 14           | 27.3                | 720.0           | 1686.0                |
| 12088    | 34 G 2.5                   | 14           | 29.4                | 816.0           | 1869.0                |
| 12089    | 50 G 2.5                   | 14           | 34.7                | 1200.0          | 2200.0                |
| 12090    | 61 G 2.5                   | 14           | 36.8                | 1464.0          | 3000.0                |
| 12115    | 3 G 4                      | 12           | 12.6                | 117.0           | 350.0                 |
| 12091    | 4 G 4                      | 12           | 13.9                | 154.0           | 428.0                 |
| 12092    | 5 G 4                      | 12           | 15.2                | 192.0           | 504.0                 |
| 12093    | 7 G 4                      | 12           | 16.6                | 269.0           | 640.0                 |
| 12094    | 11 G 4                     | 12           | 21.0                | 422.0           | 1204.0                |
| 12095    | 4 G 6                      | 10           | 16.4                | 230.0           | 571.0                 |
| 12096    | 5 G 6                      | 10           | 17.9                | 288.0           | 671.0                 |
| 12097    | 7 G 6                      | 10           | 19.6                | 403.0           | 845.0                 |
| 12098    | 4 G 10                     | 8            | 19.9                | 384.0           | 943.0                 |
| 12099    | 5 G 10                     | 8            | 22.0                | 480.0           | 1065.0                |
| 12100    | 7 G 10                     | 8            | 24.0                | 672.0           | 1551.0                |
| 12101    | 4 G 16                     | 6            | 24.1                | 614.0           | 1360.0                |
| 12102    | 5 G 16                     | 6            | 26.7                | 768.0           | 1740.0                |
| 12103    | 7 G 16                     | 6            | 29.2                | 1075.0          | 2166.0                |
| 12104    | 4 G 25                     | 4            | 29.1                | 960.0           | 2020.0                |
| 12105    | 5 G 25                     | 4            | 32.2                | 1200.0          | 2465.0                |
| 12106    | 4 G 35                     | 2            | 32.1                | 1344.0          | 2570.0                |
| 12107    | 5 G 35                     | 2            | 35.5                | 1680.0          | 3185.0                |
| 12108    | 4 G 50                     | 1            | 37.9                | 1920.0          | 3513.0                |
| 12116    | 5 G 50                     | 1            | 42.0                | 2400.0          | 4248.0                |
| 12111    | 4 G 70                     | 2/0          | 43.0                | 2688.0          | 4810.0                |
| 12117    | 5 G 70                     | 2/0          | 47.8                | 3360.0          | 5880.0                |
| 12110    | 4 G 95                     | 3/0          | 49.6                | 3648.0          | 6360.0                |
| 12118    | 5 G 95                     | 3/0          | 54.8                | 4560.0          | 8071.0                |
| 12119    | 4 G 120                    | 4/0          | 54.6                | 4608.0          | 8170.0                |
| 12327    | 4 G 150                    | 300 kcmil    | 59.8                | 5760.0          | 9970.0                |