

SY-JZ flexible, number coded, with steel wire braiding, meter marking

A

Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 20x cable Ø
fixed installation 6x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of special PVC
- Galvanized steel wire braid
- Outer sheath of special PVC
- Sheath colour transparent
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- Further dimensions available on request.
- These cables can be also delivered with coloured conductors (SY-JB).
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
SY-JB, confer page 64

Application

SY-JZ cables are used as measuring and control cables in tool machinery, plant installation, power stations and in data equipment. The braided screen offers best possible protection against mechanical damage. The galvanized coating on the steel wire braiding not only helps protect against corrosion, but also notably improves the soldering performance.

The clear transparent outer sheath gives the cable in addition an optical reevaluation.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

| Part no. | No.cores x cross-sec. mm ² | Outer Ø approx. mm | Cop. weight kg / km | Weight approx. kg / km | AWG-No. | Part no. | No.cores x cross-sec. mm ² | Outer Ø approx. mm | Cop. weight kg / km | Weight approx. kg / km | AWG-No. |
|----------|---------------------------------------|--------------------|---------------------|------------------------|---------|----------|---------------------------------------|--------------------|---------------------|------------------------|---------|
| 12001 | 2 x 0,5 | 7,2 | 9,6 | 80,0 | 20 | 12027 | 18 G 0,75 | 15,0 | 130,0 | 388,0 | 19 |
| 12002 | 3 G 0,5 | 7,5 | 14,4 | 92,0 | 20 | 12028 | 21 G 0,75 | 15,5 | 151,0 | 474,0 | 19 |
| 12003 | 4 G 0,5 | 8,1 | 19,2 | 102,0 | 20 | 12029 | 25 G 0,75 | 17,5 | 180,0 | 503,0 | 19 |
| 12004 | 5 G 0,5 | 8,6 | 24,0 | 119,0 | 20 | 12030 | 32 G 0,75 | 18,9 | 230,0 | 644,0 | 19 |
| 12005 | 7 G 0,5 | 9,3 | 33,6 | 157,0 | 20 | 12031 | 34 G 0,75 | 19,9 | 245,0 | 663,0 | 19 |
| 12006 | 10 G 0,5 | 10,7 | 48,0 | 205,0 | 20 | 12032 | 41 G 0,75 | 21,2 | 296,0 | 741,0 | 19 |
| 12007 | 12 G 0,5 | 11,7 | 58,0 | 218,0 | 20 | 12033 | 50 G 0,75 | 23,2 | 360,0 | 925,0 | 19 |
| 12008 | 14 G 0,5 | 12,3 | 67,0 | 242,0 | 20 | 12034 | 61 G 0,75 | 25,2 | 439,0 | 1082,0 | 19 |
| 12009 | 18 G 0,5 | 13,4 | 86,0 | 340,0 | 20 | 12035 | 2 x 1 | 8,2 | 19,2 | 112,0 | 18 |
| 12010 | 21 G 0,5 | 14,2 | 101,0 | 370,0 | 20 | 12036 | 3 G 1 | 8,5 | 28,8 | 132,0 | 18 |
| 12114 | 25 G 0,5 | 15,7 | 120,0 | 406,0 | 20 | 12037 | 4 G 1 | 9,2 | 38,4 | 143,0 | 18 |
| 12012 | 30 G 0,5 | 16,2 | 144,0 | 439,0 | 20 | 12038 | 5 G 1 | 9,9 | 48,0 | 166,0 | 18 |
| 12013 | 35 G 0,5 | 17,5 | 168,0 | 500,0 | 20 | 12039 | 6 G 1 | 10,5 | 58,0 | 22,0 | 18 |
| 12014 | 40 G 0,5 | 18,2 | 192,0 | 565,0 | 20 | 12040 | 7 G 1 | 10,5 | 67,0 | 227,0 | 18 |
| 12015 | 42 G 0,5 | 19,0 | 202,0 | 593,0 | 20 | 12041 | 8 G 1 | 11,4 | 77,0 | 277,0 | 18 |
| 12016 | 50 G 0,5 | 20,7 | 240,0 | 690,0 | 20 | 12042 | 9 G 1 | 12,8 | 86,0 | 295,0 | 18 |
| 12017 | 61 G 0,5 | 22,0 | 293,0 | 843,0 | 20 | 12043 | 12 G 1 | 13,4 | 115,0 | 340,0 | 18 |
| 12018 | 80 G 0,5 | 25,0 | 384,0 | 1050,0 | 20 | 12044 | 14 G 1 | 14,2 | 134,0 | 420,0 | 18 |
| 12011 | 100 G 0,5 | 27,4 | 480,0 | 1240,0 | 20 | 12045 | 18 G 1 | 15,7 | 173,0 | 500,0 | 18 |
| 12019 | 2 x 0,75 | 7,9 | 14,4 | 98,0 | 19 | 12046 | 20 G 1 | 16,4 | 192,0 | 532,0 | 18 |
| 12020 | 3 G 0,75 | 8,2 | 21,6 | 103,0 | 19 | 12047 | 25 G 1 | 18,4 | 240,0 | 664,0 | 18 |
| 12021 | 4 G 0,75 | 8,7 | 28,8 | 122,0 | 19 | 12048 | 34 G 1 | 20,8 | 326,0 | 845,0 | 18 |
| 12022 | 5 G 0,75 | 9,5 | 36,0 | 142,0 | 19 | 12049 | 36 G 1 | 20,9 | 346,0 | 857,0 | 18 |
| 12112 | 6 G 0,75 | 10,1 | 43,2 | 180,0 | 19 | 12050 | 41 G 1 | 22,2 | 394,0 | 993,0 | 18 |
| 12023 | 7 G 0,75 | 10,1 | 50,0 | 185,0 | 19 | 12051 | 50 G 1 | 24,4 | 480,0 | 1112,0 | 18 |
| 12188 | 8 G 0,75 | 10,8 | 57,6 | 201,0 | 19 | 12052 | 56 G 1 | 25,5 | 538,0 | 1225,0 | 18 |
| 12024 | 9 G 0,75 | 11,8 | 65,0 | 249,0 | 19 | 12053 | 61 G 1 | 26,1 | 586,0 | 1306,0 | 18 |
| 12113 | 10 G 0,75 | 12,0 | 72,0 | 252,0 | 19 | 12054 | 65 G 1 | 26,9 | 624,0 | 1504,0 | 18 |
| 12025 | 12 G 0,75 | 12,8 | 86,0 | 292,0 | 19 | 12055 | 80 G 1 | 30,0 | 768,0 | 1750,0 | 18 |
| 12026 | 15 G 0,75 | 14,2 | 108,0 | 335,0 | 19 | 12056 | 100 G 1 | 33,1 | 960,0 | 1950,0 | 18 |

Continuation ▶

SY-JZ flexible, number coded, with steel wire braiding, meter marking

| Part no. | No. cores x cross-sec. mm ² | Outer Ø approx. mm | Cop. weight kg / km | Weight approx. kg / km | AWG-No. |
|----------|--|--------------------|---------------------|------------------------|---------|
| 12057 | 2 x 1,5 | 8,8 | 29,0 | 129,0 | 16 |
| 12058 | 3 G 1,5 | 9,4 | 43,0 | 149,0 | 16 |
| 12059 | 4 G 1,5 | 10,0 | 58,0 | 185,0 | 16 |
| 12060 | 5 G 1,5 | 10,9 | 72,0 | 205,0 | 16 |
| 12109 | 6 G 1,5 | 11,8 | 87,0 | 255,0 | 16 |
| 12061 | 7 G 1,5 | 11,8 | 101,0 | 285,0 | 16 |
| 12062 | 8 G 1,5 | 12,7 | 115,0 | 340,0 | 16 |
| 12063 | 9 G 1,5 | 13,9 | 130,0 | 347,0 | 16 |
| 12064 | 10 G 1,5 | 14,3 | 144,0 | 418,0 | 16 |
| 12065 | 11 G 1,5 | 14,8 | 158,0 | 430,0 | 16 |
| 12066 | 12 G 1,5 | 15,0 | 173,0 | 444,0 | 16 |
| 12067 | 14 G 1,5 | 15,8 | 202,0 | 533,0 | 16 |
| 12068 | 18 G 1,5 | 17,4 | 259,0 | 593,0 | 16 |
| 12069 | 25 G 1,5 | 20,8 | 360,0 | 781,0 | 16 |
| 12070 | 32 G 1,5 | 22,3 | 461,0 | 1015,0 | 16 |
| 12071 | 34 G 1,5 | 23,2 | 490,0 | 1124,0 | 16 |
| 12072 | 42 G 1,5 | 25,2 | 605,0 | 1401,0 | 16 |
| 12073 | 50 G 1,5 | 27,6 | 720,0 | 1583,0 | 16 |
| 12074 | 61 G 1,5 | 29,4 | 878,0 | 1810,0 | 16 |
| 12075 | 80 G 1,5 | 33,8 | 1152,0 | 2316,0 | 16 |
| 12076 | 100 G 1,5 | 37,2 | 1440,0 | 2900,0 | 16 |
| 12077 | 2 x 2,5 | 10,2 | 48,0 | 185,0 | 14 |
| 12078 | 3 G 2,5 | 10,9 | 72,0 | 248,0 | 14 |
| 12079 | 4 G 2,5 | 11,6 | 96,0 | 290,0 | 14 |
| 12080 | 5 G 2,5 | 12,9 | 120,0 | 347,0 | 14 |
| 12081 | 7 G 2,5 | 14,2 | 168,0 | 420,0 | 14 |
| 12082 | 12 G 2,5 | 17,7 | 288,0 | 660,0 | 14 |
| 12083 | 14 G 2,5 | 18,8 | 336,0 | 750,0 | 14 |
| 12084 | 18 G 2,5 | 21,0 | 432,0 | 893,0 | 14 |
| 12085 | 20 G 2,5 | 22,3 | 480,0 | 1169,0 | 14 |
| 12086 | 25 G 2,5 | 24,8 | 600,0 | 1458,0 | 14 |
| 12087 | 30 G 2,5 | 26,0 | 720,0 | 1686,0 | 14 |
| 12088 | 34 G 2,5 | 28,4 | 816,0 | 1869,0 | 14 |
| 12089 | 50 G 2,5 | 34,0 | 1200,0 | 2200,0 | 14 |
| 12090 | 61 G 2,5 | 36,2 | 1464,0 | 3000,0 | 14 |

| Part no. | No. cores x cross-sec. mm ² | Outer Ø approx. mm | Cop. weight kg / km | Weight approx. kg / km | AWG-No. |
|----------|--|--------------------|---------------------|------------------------|-----------|
| 12115 | 3 G 4 | 12,6 | 117,0 | 350,0 | 12 |
| 12091 | 4 G 4 | 13,7 | 154,0 | 428,0 | 12 |
| 12092 | 5 G 4 | 14,9 | 192,0 | 504,0 | 12 |
| 12093 | 7 G 4 | 16,2 | 269,0 | 640,0 | 12 |
| 12094 | 11 G 4 | 21,2 | 422,0 | 1204,0 | 12 |
| 12095 | 4 G 6 | 15,8 | 230,0 | 571,0 | 10 |
| 12096 | 5 G 6 | 17,3 | 288,0 | 671,0 | 10 |
| 12097 | 7 G 6 | 19,0 | 403,0 | 845,0 | 10 |
| 12098 | 4 G 10 | 19,4 | 384,0 | 943,0 | 8 |
| 12099 | 5 G 10 | 21,3 | 480,0 | 1065,0 | 8 |
| 12100 | 7 G 10 | 23,4 | 672,0 | 1551,0 | 8 |
| 12101 | 4 G 16 | 23,6 | 614,0 | 1360,0 | 6 |
| 12102 | 5 G 16 | 26,4 | 768,0 | 1740,0 | 6 |
| 12103 | 7 G 16 | 29,0 | 1075,0 | 2166,0 | 6 |
| 12104 | 4 G 25 | 28,5 | 960,0 | 2020,0 | 4 |
| 12105 | 5 G 25 | 31,7 | 1200,0 | 2465,0 | 4 |
| 12106 | 4 G 35 | 32,9 | 1344,0 | 2570,0 | 2 |
| 12107 | 5 G 35 | 36,9 | 1680,0 | 3185,0 | 2 |
| 12108 | 4 G 50 | 38,8 | 1920,0 | 3513,0 | 1 |
| 12116 | 5 G 50 | 43,7 | 2400,0 | 4248,0 | 1 |
| 12111 | 4 G 70 | 46,3 | 2688,0 | 4810,0 | 2/0 |
| 12117 | 5 G 70 | 50,5 | 3360,0 | 5880,0 | 2/0 |
| 12110 | 4 G 95 | 51,2 | 3648,0 | 6360,0 | 3/0 |
| 12118 | 5 G 95 | 56,1 | 4560,0 | 8071,0 | 3/0 |
| 12119 | 4 G 120 | 56,6 | 4608,0 | 8170,0 | 4/0 |
| 12327 | 4 G 150 | 64,7 | 5760,0 | 9970,0 | 300 kcmil |

Dimensions and specifications may be changed without prior notice. (RA01)



Suitable accessories can be found in Chapter X.

- Cable Gland - HELUTOP® HT-MS-EP4