

F-CY-JZ flexible, Cu-screened, EMC-preferred type, meter marking**Technical data**

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -10°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage**
core/core 4000 V
core/screen 2000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MΩ x km
- **Mutual capacitance**
acc. to different cross-sections
0,5 up to 2,5 mm²:
core/core approx. 150 nF/km
core/screen approx. 270 nF/km
- **Coupling resistance**
max. 250 Ω/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x 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
- Foil separator
- Tinned copper braided screening, approx. 85% coverage
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- 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)
- Please note the cleanroom qualification when ordering. For more information, see introduction.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
JZ-500, confer page 30

Application

For use as a data cable in control circuits, in tool-making and machine industries as well as a signal cable in computer systems and electronics. The more usual PVC inner sheath has been replaced in these cables by a stabilising foil separator, thus reducing the total diameter of the cables considerably and thereby reducing the bending radius, total weight etc. The high covering percentage of the copper screening offers interference-free signal transfer etc. The dense screening assures disturbance-free transmission of all signals and impulses. An ideal disturbance-free control cable for the above application.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

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. |
|----------|--|--------------------|---------------------|------------------------|---------|
| 16320 | 2 x 0,5 | 5,7 | 35,0 | 45,0 | 20 |
| 16321 | 3 G 0,5 | 5,9 | 42,0 | 55,0 | 20 |
| 16322 | 4 G 0,5 | 6,4 | 47,0 | 61,0 | 20 |
| 16323 | 5 G 0,5 | 6,9 | 56,0 | 74,0 | 20 |
| 16324 | 6 G 0,5 | 7,6 | 67,0 | 89,0 | 20 |
| 16325 | 7 G 0,5 | 7,6 | 69,0 | 98,0 | 20 |
| 16326 | 8 G 0,5 | 8,1 | 80,0 | 117,0 | 20 |
| 16327 | 10 G 0,5 | 9,6 | 94,0 | 135,0 | 20 |
| 16328 | 12 G 0,5 | 9,7 | 108,0 | 157,0 | 20 |
| 16329 | 14 G 0,5 | 10,2 | 116,0 | 190,0 | 20 |
| 16330 | 16 G 0,5 | 11,0 | 129,0 | 210,0 | 20 |
| 16331 | 18 G 0,5 | 11,5 | 145,0 | 217,0 | 20 |
| 16332 | 20 G 0,5 | 12,3 | 172,0 | 240,0 | 20 |

| Part no. | No. cores x cross-sec. mm ² | Outer Ø approx. mm | Cop. weight kg / km | Weight approx. kg / km | AWG-No. |
|----------|--|--------------------|---------------------|------------------------|---------|
| 16333 | 21 G 0,5 | 12,3 | 188,0 | 250,0 | 20 |
| 16334 | 24 G 0,5 | 13,6 | 235,0 | 300,0 | 20 |
| 16335 | 25 G 0,5 | 13,7 | 240,0 | 314,0 | 20 |
| 16336 | 30 G 0,5 | 14,4 | 295,0 | 360,0 | 20 |
| 16337 | 32 G 0,5 | 14,9 | 301,0 | 425,0 | 20 |
| 16165 | 34 G 0,5 | 15,6 | 312,0 | 433,0 | 20 |
| 16338 | 36 G 0,5 | 15,6 | 318,0 | 446,0 | 20 |
| 16339 | 40 G 0,5 | 16,4 | 343,0 | 475,0 | 20 |
| 16490 | 41 G 0,5 | 16,5 | 348,0 | 486,0 | 20 |
| 16340 | 50 G 0,5 | 18,5 | 406,0 | 573,0 | 20 |
| 16341 | 61 G 0,5 | 19,7 | 508,0 | 653,0 | 20 |
| 16342 | 80 G 0,5 | 22,6 | 680,0 | 784,0 | 20 |
| 16343 | 100 G 0,5 | 24,9 | 804,0 | 995,0 | 20 |

Continuation ►

F-CY-JZ flexible, Cu-screened, EMC-preferred type, meter marking

A

| 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. |
|----------|---------------------------------------|--------------------|---------------------|------------------------|---------|----------|---------------------------------------|--------------------|---------------------|------------------------|---------|
| 16344 | 2 x 0,75 | 6,1 | 40,0 | 59,0 | 19 | 16393 | 2 x 1,5 | 7,0 | 63,0 | 88,0 | 16 |
| 16345 | 3 G 0,75 | 6,3 | 52,0 | 66,0 | 19 | 16394 | 3 G 1,5 | 7,4 | 80,0 | 100,0 | 16 |
| 16346 | 4 G 0,75 | 6,8 | 60,0 | 77,0 | 19 | 16395 | 4 G 1,5 | 8,1 | 97,0 | 126,0 | 16 |
| 16347 | 5 G 0,75 | 7,4 | 71,0 | 93,0 | 19 | 16396 | 5 G 1,5 | 9,0 | 119,0 | 160,0 | 16 |
| 16348 | 6 G 0,75 | 8,2 | 80,0 | 113,0 | 19 | 16397 | 7 G 1,5 | 9,8 | 147,0 | 208,0 | 16 |
| 16349 | 7 G 0,75 | 8,2 | 91,0 | 130,0 | 19 | 16398 | 8 G 1,5 | 10,8 | 170,0 | 244,0 | 16 |
| 16350 | 8 G 0,75 | 9,0 | 110,0 | 145,0 | 19 | 16399 | 10 G 1,5 | 12,6 | 193,0 | 315,0 | 16 |
| 16351 | 10 G 0,75 | 10,3 | 137,0 | 180,0 | 19 | 16400 | 12 G 1,5 | 12,8 | 267,0 | 338,0 | 16 |
| 16353 | 12 G 0,75 | 10,5 | 142,0 | 202,0 | 19 | 16401 | 14 G 1,5 | 13,5 | 283,0 | 383,0 | 16 |
| 16354 | 14 G 0,75 | 11,3 | 180,0 | 225,0 | 19 | 16402 | 16 G 1,5 | 14,6 | 315,0 | 424,0 | 16 |
| 16355 | 16 G 0,75 | 11,9 | 200,0 | 275,0 | 19 | 16403 | 18 G 1,5 | 15,6 | 374,0 | 479,0 | 16 |
| 16356 | 18 G 0,75 | 12,7 | 212,0 | 292,0 | 19 | 16449 | 19 G 1,5 | 15,6 | 386,0 | 508,0 | 16 |
| 16447 | 19 G 0,75 | 12,7 | 230,0 | 308,0 | 19 | 16404 | 20 G 1,5 | 16,6 | 396,0 | 545,0 | 16 |
| 16357 | 20 G 0,75 | 13,6 | 238,0 | 320,0 | 19 | 16405 | 21 G 1,5 | 16,6 | 425,0 | 560,0 | 16 |
| 16358 | 21 G 0,75 | 13,6 | 246,0 | 378,0 | 19 | 16406 | 24 G 1,5 | 18,1 | 458,0 | 690,0 | 16 |
| 16359 | 24 G 0,75 | 14,9 | 270,0 | 435,0 | 19 | 16407 | 25 G 1,5 | 18,4 | 526,0 | 705,0 | 16 |
| 16360 | 25 G 0,75 | 15,0 | 281,0 | 415,0 | 19 | 16450 | 27 G 1,5 | 18,5 | 531,0 | 774,0 | 16 |
| 16361 | 27 G 0,75 | 15,0 | 304,0 | 435,0 | 19 | 16408 | 28 G 1,5 | 19,6 | 541,0 | 810,0 | 16 |
| 16362 | 30 G 0,75 | 16,0 | 320,0 | 450,0 | 19 | 16409 | 30 G 1,5 | 19,6 | 555,0 | 830,0 | 16 |
| 16363 | 32 G 0,75 | 16,7 | 342,0 | 484,0 | 19 | 16410 | 35 G 1,5 | 21,4 | 645,0 | 890,0 | 16 |
| 16166 | 34 G 0,75 | 17,2 | 345,0 | 502,0 | 19 | 16451 | 37 G 1,5 | 21,4 | 674,0 | 945,0 | 16 |
| 16364 | 36 G 0,75 | 17,4 | 350,0 | 535,0 | 19 | 16411 | 40 G 1,5 | 22,0 | 725,0 | 1060,0 | 16 |
| 16448 | 37 G 0,75 | 17,4 | 361,0 | 592,0 | 19 | 16493 | 41 G 1,5 | 22,2 | 801,0 | 1071,0 | 16 |
| 16365 | 40 G 0,75 | 18,1 | 369,0 | 610,0 | 19 | 16412 | 50 G 1,5 | 25,0 | 885,0 | 1290,0 | 16 |
| 16491 | 41 G 0,75 | 18,2 | 400,0 | 622,0 | 19 | 16413 | 61 G 1,5 | 26,8 | 1100,0 | 1705,0 | 16 |
| 16366 | 50 G 0,75 | 20,3 | 461,0 | 777,0 | 19 | 16414 | 80 G 1,5 | 30,8 | 1324,0 | 2010,0 | 16 |
| 16367 | 61 G 0,75 | 22,0 | 540,0 | 900,0 | 19 | 16415 | 100 G 1,5 | 34,1 | 1641,0 | 2505,0 | 16 |
| 16368 | 80 G 0,75 | 25,3 | 711,0 | 1210,0 | 19 | 16416 | 2 x 2,5 | 8,4 | 96,0 | 130,0 | 14 |
| 16369 | 100 G 0,75 | 28,0 | 900,0 | 1445,0 | 19 | 16417 | 3 G 2,5 | 8,8 | 144,0 | 167,0 | 14 |
| 16370 | 2 x 1 | 6,4 | 50,0 | 65,0 | 18 | 16418 | 4 G 2,5 | 9,8 | 148,0 | 195,0 | 14 |
| 16371 | 3 G 1 | 6,7 | 60,0 | 80,0 | 18 | 16419 | 5 G 2,5 | 10,8 | 181,0 | 223,0 | 14 |
| 16372 | 4 G 1 | 7,2 | 71,0 | 98,0 | 18 | 16420 | 7 G 2,5 | 11,9 | 255,0 | 344,0 | 14 |
| 16373 | 5 G 1 | 8,0 | 88,0 | 127,0 | 18 | 16421 | 10 G 2,5 | 15,5 | 340,0 | 460,0 | 14 |
| 16374 | 6 G 1 | 8,7 | 97,0 | 144,0 | 18 | 16438 | 12 G 2,5 | 15,8 | 441,0 | 570,0 | 14 |
| 16375 | 7 G 1 | 8,7 | 111,0 | 158,0 | 18 | 16452 | 18 G 2,5 | 19,0 | 570,0 | 681,0 | 14 |
| 16376 | 8 G 1 | 9,6 | 127,0 | 197,0 | 18 | 16422 | 2 x 4 | 10,0 | 120,0 | 185,0 | 12 |
| 16377 | 10 G 1 | 11,2 | 150,0 | 232,0 | 18 | 16423 | 3 G 4 | 10,6 | 174,0 | 240,0 | 12 |
| 16378 | 12 G 1 | 11,4 | 184,0 | 260,0 | 18 | 16424 | 4 G 4 | 11,6 | 230,0 | 310,0 | 12 |
| 16379 | 14 G 1 | 12,0 | 196,0 | 302,0 | 18 | 16425 | 5 G 4 | 12,8 | 273,0 | 385,0 | 12 |
| 16380 | 16 G 1 | 12,8 | 209,0 | 346,0 | 18 | 16426 | 7 G 4 | 14,2 | 316,0 | 500,0 | 12 |
| 16381 | 18 G 1 | 13,6 | 260,0 | 380,0 | 18 | 16427 | 2 x 6 | 11,7 | 173,0 | 268,0 | 10 |
| 16352 | 19 G 1 | 13,6 | 280,0 | 412,0 | 18 | 16428 | 3 G 6 | 12,5 | 240,0 | 330,0 | 10 |
| 16382 | 20 G 1 | 14,3 | 317,0 | 440,0 | 18 | 16429 | 4 G 6 | 13,8 | 305,0 | 415,0 | 10 |
| 16383 | 24 G 1 | 16,0 | 320,0 | 493,0 | 18 | 16430 | 5 G 6 | 15,4 | 439,0 | 509,0 | 10 |
| 16384 | 25 G 1 | 16,2 | 349,0 | 534,0 | 18 | 16431 | 7 G 6 | 17,0 | 505,0 | 672,0 | 10 |
| 16439 | 27 G 1 | 16,4 | 400,0 | 562,0 | 18 | 16432 | 2 x 10 | 14,5 | 255,0 | 425,0 | 8 |
| 16385 | 28 G 1 | 17,0 | 408,0 | 595,0 | 18 | 16433 | 3 G 10 | 15,6 | 350,0 | 500,0 | 8 |
| 16386 | 30 G 1 | 17,2 | 441,0 | 616,0 | 18 | 16434 | 4 G 10 | 17,2 | 535,0 | 783,0 | 8 |
| 16387 | 34 G 1 | 18,5 | 486,0 | 741,0 | 18 | 16435 | 5 G 10 | 19,1 | 592,0 | 856,0 | 8 |
| 16446 | 37 G 1 | 18,6 | 519,0 | 790,0 | 18 | 16436 | 7 G 10 | 21,2 | 810,0 | 1305,0 | 8 |
| 16388 | 40 G 1 | 19,4 | 510,0 | 835,0 | 18 | 16440 | 4 G 16 | 20,3 | 740,0 | 880,0 | 6 |
| 16492 | 41 G 1 | 19,5 | 531,0 | 843,0 | 18 | 16437 | 5 G 16 | 22,2 | 895,0 | 1295,0 | 6 |
| 16389 | 50 G 1 | 22,0 | 625,0 | 1025,0 | 18 | 16441 | 4 G 25 | 24,7 | 1140,0 | 1570,0 | 4 |
| 16390 | 61 G 1 | 23,5 | 702,0 | 1205,0 | 18 | 16442 | 5 G 25 | 27,4 | 1380,0 | 1965,0 | 4 |
| 16391 | 80 G 1 | 26,9 | 920,0 | 1445,0 | 18 | 16443 | 4 G 35 | 28,4 | 1576,0 | 2070,0 | 2 |
| 16392 | 100 G 1 | 30,2 | 1120,0 | 1613,0 | 18 | 16444 | 5 G 35 | 31,6 | 1930,0 | 2690,0 | 2 |
| | | | | | | 16445 | 4 G 50 | 34,2 | 2155,0 | 3015,0 | 1 |

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



Suitable accessories can be found in Chapter X.

- Cable Gland - HELUTOP® HT-MS-EP4