

F-CY-OZ (LiY-CY) flexible, Cu-screened, EMC-preferred type



Technical data

- Special PVC data cables, adapted to DIN VDE 0245, 0281 part 13
- **Temperature range**
flexing -5°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U_0/U 300/500 V for 1 core (LiYDY) 1200 V
- **Test voltage** core/core 4000 V
core/screen 2000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MΩm x km
- **Mutual capacitance** according to different cross-sections
core/core approx. 150 nF/km
core/screen approx. 270 nF/km
- **Coupling resistance**
max. 250 Ωm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80×10^6 cJ/kg (up to 80 Mrad)

Cable construction

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Core insulation of special PVC Z7225
- Black cores with continuous numbering in white according to DIN VDE 0293
- Cores stranded in layers with optimal lay-length
- Core wrapping with foil
- Tinned copper braided screen, approx. 85% coverage
- For 1 core cable copper screen of helically wound (type LiYDY), approx. 85% coverage
- Special PVC outer sheath TM2, to DIN VDE 0281 part 1 and HD 21.1
- Sheath colour grey (RAL 7001)

Properties

- Extensively oil resistant.
Chemical Resistance - see table Technical Informations
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- x = without green-yellow earth core (OZ).
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- For 1 core cable screen of helically wound.
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air, as data cables in control technologies, in the tool making and machine industries, in computers and as a signal cable for the electronics branch. A stabilizing separator between core bundle and braid reduces essentially the external diameter and allows smaller bending radius, lower weight etc.

The dense screening assures disturbance-free transmission of all signals and impulses. An ideal disturbance-free control cable for the above applications.

EMC = Electromagnetic compatibility

To optimise 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 73/23/EEC and 93/68/EEC.

| Part No. | No. cores x cross-sec. mm ² | Outer ø ca. mm | Cop. weight kg / km | Weight ca. kg / km | AWG-No. | Part No. | No. cores x cross-sec. mm ² | Outer ø ca. mm | Cop. weight kg / km | Weight ca. kg / km | AWG-No. |
|----------|--|----------------|---------------------|--------------------|---------|----------|--|----------------|---------------------|--------------------|---------|
| 16531 | 1 x 0,5 | 3,7 | 15,0 | 41,0 | 20 | 16544 | 20 x 0,5 | 11,9 | 173,0 | 240,0 | 20 |
| 16532 | 2 x 0,5 | 5,7 | 29,0 | 45,0 | 20 | 16545 | 21 x 0,5 | 12,5 | 189,0 | 250,0 | 20 |
| 16533 | 3 x 0,5 | 6,0 | 39,0 | 55,0 | 20 | 16546 | 24 x 0,5 | 12,9 | 236,0 | 300,0 | 20 |
| 16534 | 4 x 0,5 | 6,5 | 46,0 | 61,0 | 20 | 16547 | 25 x 0,5 | 13,5 | 250,0 | 314,0 | 20 |
| 16535 | 5 x 0,5 | 7,0 | 52,0 | 74,0 | 20 | 16548 | 30 x 0,5 | 14,0 | 297,0 | 360,0 | 20 |
| 16536 | 6 x 0,5 | 7,4 | 66,0 | 89,0 | 20 | 16549 | 32 x 0,5 | 14,6 | 301,0 | 425,0 | 20 |
| 16537 | 7 x 0,5 | 7,9 | 68,0 | 98,0 | 20 | 16550 | 34 x 0,5 | 15,3 | 312,0 | 433,0 | 20 |
| 16538 | 8 x 0,5 | 8,5 | 80,0 | 117,0 | 20 | 16551 | 36 x 0,5 | 15,3 | 320,0 | 446,0 | 20 |
| 16539 | 10 x 0,5 | 9,3 | 93,0 | 135,0 | 20 | 16552 | 40 x 0,5 | 16,4 | 345,0 | 475,0 | 20 |
| 16540 | 12 x 0,5 | 9,6 | 117,0 | 157,0 | 20 | 16553 | 50 x 0,5 | 18,1 | 407,0 | 573,0 | 20 |
| 16541 | 14 x 0,5 | 10,0 | 122,0 | 190,0 | 20 | 16554 | 61 x 0,5 | 19,8 | 580,0 | 653,0 | 20 |
| 16542 | 16 x 0,5 | 10,7 | 129,0 | 210,0 | 20 | 16555 | 80 x 0,5 | 21,9 | 690,0 | 784,0 | 20 |
| 16543 | 18 x 0,5 | 11,2 | 152,0 | 217,0 | 20 | 16556 | 100 x 0,5 | 24,3 | 814,0 | 995,0 | 20 |

Dimensions and specifications may be changed without prior notice.

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