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| 0027411 | DATA SHEET |  |
| valid from: 20.01.2025 | UNITRONIC® FD CY | |

Application

UNITRONIC® FD CY is a high flexible, screened data cable with an outer sheath from PVC. The cable is designed for special use in power chains, automatic manipulators and in permanently moved machine parts.

Design

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| Design | Design based on standard VDE 0812 |
| Conductor | extra fine wire strands of bare copper acc. to IEC 60228 resp. EN IEC 60228, class 6 |
| Insulation | PVC compound TI52 acc. to EN 50290-2-21 |
| Core identification code | acc. to DIN 47100 |
| Cable assembly | cores stranded in layers, optionally with fillers wrapping with fleece on the outer layer |
| Screen | braid of tinned copper, coverage 85 % (nominal value) |
| Outer sheath | PVC compound TM52 acc. to EN 50290-2-22 colour: grey (similar RAL 7001) |

Electrical properties at 20 °C

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| Conductor resistance | 0.14 mm ² : max. 138.0 Ω/km 0.25 mm ² : max. 79.0 Ω/km 0.34 mm ² : max. 57.0 Ω/km 0.5 mm ² : class 5 0.75 mm ² : class 5 1 mm ² : class 5 |
| Specific volume resistivity | > 20 G Ω x cm |
| Mutual capacitance | C/C: approx. 120 nF/km C/S: approx. 160 nF/km (at 800 Hz) |
| Inductance | approx. 0.65 mH/km |
| Maximum operating voltage | 0.14 mm ² : 350 V ≥ 0.25 mm ² : 500 V (not intended to be used in conjunction with low impedance sources, such as power grids) |
| Test voltage | C/C: 1500 V C/S: 1500 V |

Mechanical and thermal properties

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| Minimum bending radius | flexing: 7.5 x outer diameter fixed installation: 4 x outer diameter |
| Temperature range | flexing: -5 °C up to +70 °C fixed installation: -40 °C up to +80 °C |
| Bending cycles and power chain operation parameters | bending radius: ≥ 7.5 x outer diameter travel distance: ≤ 5 m Acceleration: ≤ 3 m/s ² Velocity: ≤ 3 m/s Cycles: ≥ 3.000.000 Please comply with assembly guideline Appendix T3 |
| Flammability | flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2 |

General requirements These cables are conform to EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

Environmental information These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

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