WILBAflex EMC, intrinsically safe circuits

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CH-S05QC4Q-F

Flexible, shielded polyurethane cable for intrinsically safe systems

Application

The blue WILBAflex EMC is specially designed for use in potentially explosive atmospheres. It is used especially in intrinsically safe systems. It does not emit any explosion-causing sparks even in the event of short-circuit or cable damage. Despite its elaborate structure and a tinned copper mesh for electromagnetic shielding (EMC), WILBAflex EMC offers optimum handling. The halogen-free polyurethane (PUR) sheath prevents abrasion and wear and makes the core cable extremely robust against oil and UV radiation. The sheath material does not release any corrosive gases even in the event of fire thanks to the use of FRNC (flame-retardant non-corrosive) materials.

Materials and components

- Cu conductor bare class 5 (IEC 60228), finely stranded
- Core insulation made of polyurethane (PUR)
- Core colours BK, numbered
- Cores stranded in optimal length of lay
- Inner sheath made of polyurethane (PUR-FRNC), BL
- Shielding from Cu braid tinned
- Outer sheath made of flame-resistant polyurethane (PUR-FRNC)

Jacket colour

- Blue similar to RAL 5015

Functions

- Abrasion resistant
- Low adhesion
- Flexible
- Halogen-free
- Oil resistance acc. to DIN 0472, Part 803

Environmental conditions

- Flame retardancy per IEC 60332-1
- UV radiation-resistant
- Weather resistant

Performance

Mechanical properties
- Max. tensile load 20N/mm2 Cu cross-section
- Min. bending radius 10 x D static, 15 x D dynamic (D = cable Ø)

Nominal voltage
- Nominal voltage [AC]: Uo / U 300 V / 500 V

Test voltage
- Test voltage [AC]: 3,000 V

Data cable
- C/C ca. 83 nF/km
- C/S ca. 90 nF/km
- Inductance ca. 0.45 mH/km

Temperature range
- Fixed laying: -40°C ... +90°C
- Occasionally mobile: -5°C ... +90°C
- Storage temperature -50°C ... +85°C

Standards

- Based on SEV TP20B/3C
- IEC 60754-1 Halogen-free
- IEC 60754-2 Corrosivity of fumes

CPR Guideline
- Fire reacton class acc. EN 13501-6: Eca

Remarks

- d1=Ø across core
- D= total Ø
- Other types upon request

Technical data

Cross-section mm²	Part no.	Conductor code	Ø d1 mm	Ø D approx. mm	Copper index kg/km	Weight kg/km
3X0.75	521139	3Lnum	6.9	8.9	52.0	105
7X0.75	521138	7Lnum	9.3	11.3	91.0	171
12X0.75	521137	12Lnum	11.3	13.3	133.0	236
18X0.75	521143	18Lnum	12.8	15.6	181.0	328
34X0.75	521144	34Lnum	16.9	20.3	347.0	585
8X2X0.75	521136	16Lnum	15.0	18.2	255.5	409

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