

7038897	DATA SHEET	
valid from: 01.01.2019	UNITRONIC® ROBUST S/A FD	

Application

UNITRONIC® ROBUST S/A FD are halogen free, robust and high flexible data cables for low frequency applications with outstanding weather, ozone and UV resistance. The cables are among others designed for dry, humid and wet conditions. Considering the temperature range, an outdoor use is possible. At room temperature they are increased resistant to acids, caustic solutions and certain oils. They are especially designed for applications in power chains, automatic manipulators and in permanently moved machine parts.

Design

Design	Design based on standard VDE 0812
Conductor	superfine wire strands of bare copper wires
Insulation	special Polyolefin-based compound
Core identification code	according to EN 60947-5-2 3-core: brown, blue, black 4-core: brown, white, blue, black 5-core: brown, white, blue, black, grey
Stranding	cores stranded in layers, wrapping with fleece on the outer layer
Outer sheath	special halogen free TPE-V compound colour: black (similar RAL 9005)

Diameter of the outer sheath

Article number	Dimension	Outer sheath Ø
7038897	4x0.25 mm ²	ca. 4.9 mm
7038895	3x0.34 mm ²	ca. 5.0 mm
7038894	4x0.34 mm ²	ca. 5.4 mm
7038896	5x0.34 mm ²	ca. 5.9 mm

Electrical properties at 20°C

Conductor resistance	0.25 mm ² : max. 79 Ω/km 0.34 mm ² : max. 57 Ω/km
Specific volume resistivity	> 20 G Ω x cm
Mutual capacitance	C/C: approx. 60 nF/km (at 800 Hz)
Inductance	approx. 0.65 mH/km
Peak operating voltage	300 V (not for power applications)
Test voltage	C/C: 1500 V

Mechanical and thermal properties

Minimum bending radius	Flexing: 5 x cable Ø Fixed installation: 3 x cable Ø
Temperature range	Flexing: - 40 °C up to +90 °C Fixed installation: - 50 °C up to +90 °C
Number of cycles	max. 10 mio. cycles
Travel distance	up to 10 m
Torsional stress	max. 3 million cycles at ± 360 °C/meter (not suitable for festoon-applications)
Flammability	not flame retardant
Halogen free	according to IEC 60754-1 and EN 50267-2-1
Corrosivity of gases	according to IEC 60754-2 and EN 50267-2-2
Toxicity	according to EN 50305
UV resistance	acc. to EN 50525-1 (VDE 0285-525-1) are cables with black sheath suitable for a permanent outdoor use acc. to EN ISO 4892-2-2013, method A (change of colour allowed)
Ozone resistance	according to EN 50396 resp. VDE 0473-396, method B
Oil resistance	according to IEC 60811-404
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

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