

**UNITRONIC® BUS ASI FD P FRNC****DB2170357**

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**Application**

UNITRONIC® BUS ASI FD P FRNC is a two-core and flat actuator/sensor bus cable for the AS-INTERFACE (actuator-sensor-interface) networking system for the lower field area. The cable is particularly suitable for applications with high mechanical stress and which require a high oil resistance. It is suitable for power chains, halogen free and flame retardant. It is acc. to the UL-AWM-Styles 10586 and 20549. Data transmission for AS-INTERFACE telegrams and power supply for AS-I slaves, master, repeater, extender and sensors is done via this unscreened, geometrically-coded two-core flat cable. The contacting of the conductors by the insulation displacement-system of the AS-I modules is possible without stripping the insulation.

Approvals: AWM Style 10586 and 20549

**Design**

Conductor	tinned copper, ca. 1,5 mm <sup>2</sup> , super-fine-wire stranded, acc. to IEC 60228 (class 6)
Insulation	halogen free compound, core Ø ca. 2.5 mm
Core identification	colors of the cores: brown (+), blue (-)
Core assembly	2 cores parallel deviation, brown core assembled in line with leading edge
Outer sheath	halogen free, flame retardant PUR compound dimensions and tolerances acc. to ASI specification sheath colors: art.no. 2170357: yellow (RAL 1012) art.no. 2170358: black (RAL 9005)

**Electrical properties at 20° C**

Resistance acc. to EN 60228	max. 13.7 Ω/km
Mutual capacitance	max. 80 nF/km
Inductance	0.5 mH up to 0.75 mH/km
Characteristic impedance	167 kHz: 70 Ω up to 140 Ω
Volume resistivity	min. 1 MΩxkm
Current-carrying-capacity	acc. to 0298-4, table 6, column 4
Operating voltage	ca. 30 V
Operating peak voltage	300 V (not for power purposes)
Test voltage AC	2000 V

**Mechanical and thermal properties**

Bending cycles	min. 5.000.000 (length of power chain: 4.5 m, speed: 3 m/s, acceleration: 3 m/s <sup>2</sup> ) bending load only allowed to the wide side of the cable
Minimum bending radius	fixed installation: 12 mm moved without forcible control: 24 mm moved with forcible control: 60 mm
Permissible temperature range	fixed installation: -40 °C up to +80 °C moved without forcible control: -30 °C up to +80 °C moved with forcible control: -30 °C up to +70 °C
Flame resistance	flame retardant acc. to IEC 60332-1-2 and FT2 acc. to UL
Oil resistance	oil resistant acc. to EN 50363-10-2
Halogen free	halogen free acc. to IEC 60754-1
General requirements	Dangerous and forbidden substances acc. to RoHS directive 2002/95/EG regarding Restriction of the use of certain hazardous substances (RoHS) are not allowed to the manufacturing.