


U.I. Lapp GmbH	<b>DATA SHEET/ Datenblatt</b>	
	<b>UNITRONIC® BUS CC FD P FRNC</b> <b>3x1xAWG20</b>	<b>DB 2170370</b> valid from/ gültig ab: 03.05.2010

## Application

UNITRONIC® BUS CC FD P FRNC is a highly flexible data cable for CC- Link® networks. It can be used as a trailing cable. The materials of the cable are halogen free and flame retardant

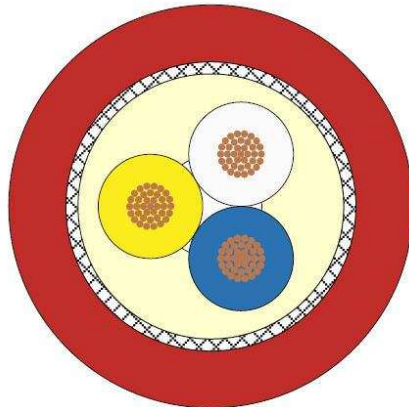
The cable is UL recognized  with AWM Style 20233.

CC-Link® =Control & Communication Link

Fieldbus network for control and information data, especially for efficient, integrated manufacturing and process automation.

FRNC = Flame Retardant Non Corrosive

## Aufbau



Conductor	Stranded bare copper wire 71x0.1 (20AWG)	Ø 1.0 mm
Insulation	Foam Skin Polyethylene with Skin Core colours: WH-BU-YE	Ø 2.2 mm
Stranding	3 cores twisted	
Inner Jacket	Thermoplastic copolymer (FRNC)	
Screening	Shield Braiding of tinned copper wire (Ø 0,13mm), coverage approx. 90%	
Outer sheath	PUR, Wall thickness about 1,3mm	Ø 8.5 mm
Outer sheath colour	Red, similar RAL 3000	

## Electrical data at 20°C

Conductor resistance		max. Ω/km	37.8
Insulation resistance		min. GΩxkm	10
Capacitance (1kHz)		max. nF/m	60 nF/km
Inductance		max. mH/km	0.75
Characteristic impedance (1 MHz)		Ω	110 ± 15
Transfer impedance 10MHz		max. mΩ/m	50
Attenuation at	1 Mhz	max. dB/km	18
	5 Mhz	max. dB/km	60
Operation peak Voltage (not for power use)		V	300
Test Voltage		kV	2

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## Mechanical and thermal characteristics

Conductor material acc. to DIN EN 13602 Cu-ETP-A...  
Screen material acc. to DIN EN 13602 Cu-ETP-A...-B  
UL-Style 20233 (80°C/300V)

Max. pulling force		max. N	150
Bending cycles as trailing cable		min.	1.500.000
Permissible temperature range	Transport, Inst., Operating	°C	- 40 bis + 80
Min. bending radius	repeated	mm	8 x Ø
	fixed	mm	4 x Ø
Flame retardant			acc. IEC 60332-1-2 acc. UL 1581, Sec. 1080 (VW-1) acc. UL 1581, Sec. 1060 (CSA FT-1)
Oil resistant			acc. EN/IEC 60811-2-1 (7x24 hours at 90°)

## General requirements

**RoHS** directive: This cable is conform to **RoHS** directive (2002/95/EG)

The PUR outer sheath has an increased tight fit and should be cut with a longitudinal cut.

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