

## **Project Documentation** | CABLE-0C0200 – UMRR-0C/0F Ethernet RS485 CAN 10m

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**Project Number:**

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**SMS Project Number:**

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**Project Title:**

Sensor Connection Cable UMRR-0C + UMRR-0F\_10m\_CAN\_ETH\_RS485FD

**Keyword(s):**

Cable-Datasheet, UV resistant

**Date:**

August 28, 2019

**Document:**

CABLE-0C0200 (Sensor Connection Cable UV UMRR-0C + UMRR-0F\_10m\_CAN\_ETH\_RS485FD)

**Document state:**

In progress

Ready for review

X Released

Outdated

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## 2 Reference Documents

No.	Document	SVN-ID	Notes
[1]			
[2]			
[3]			
[4]			
[5]			

**Table 1: Reference documents**

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### 3 Cable-0C0200

#### 3.1 Label

Active Plattform	Active Hardware	Active Modification	Active Revision
CABLE	0C	02	00

#### 3.2 Designated use

This **service cable** connects UMRR-0F / UMRR-0C sensors to Power, RS485 (half- or full-duplex), Ethernet and CAN.

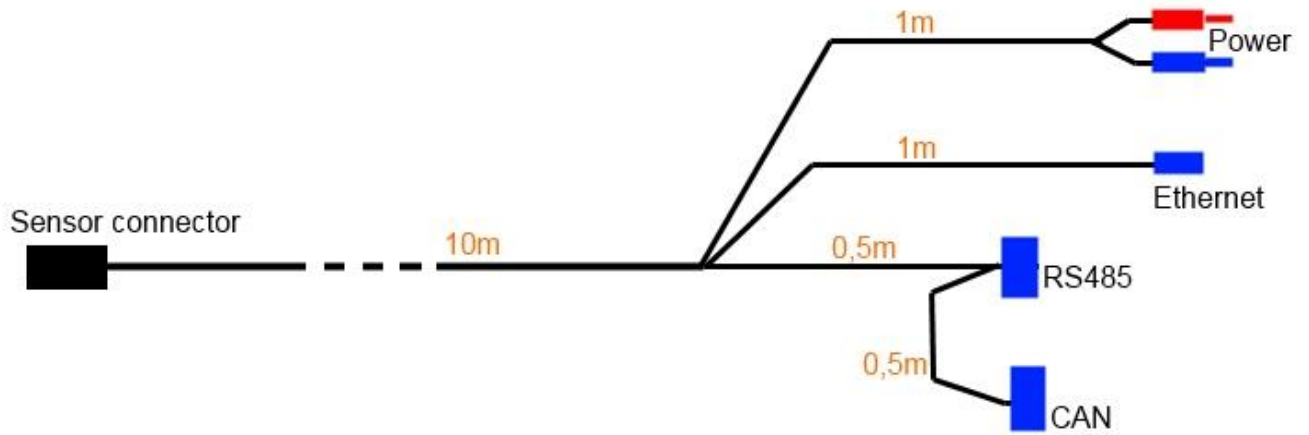
#### 3.3 Cable Photograph



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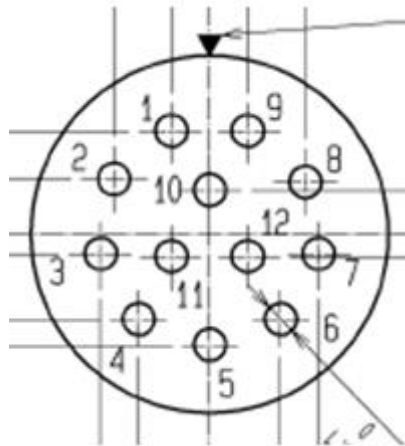
### 3.4 Sensor connector + RS 485 + CAN + Ethernet + Power



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### 3.5 Layout



Sensor connector HRS LF10WBP-12S (rear view)

	Pin layout LF10	Color	Label	DSUB-9-female CAN	DSUB-9-female RS485	LAN	Banana Power
Pair1	1	grey/red	Copro_Tx1_P				
	2	red/blue	Copro_Tx1_N				
Pair2	3	pink	Sensor RS485 RX L			8	
	4	gray	Sensor RS485 RX H			7	
Pair3	5	brown	Sensor RS485 TX L			1	
	6	white	Sensor RS485 TX H			2	
Pair4	7	blue	GND	3		(5)	black (blue)
	8	red	V-Supply			(4)	red (brown)
Pair5	9	black	Copro_Tx2_N				
	10	violett	Copro_Tx2_P				
Pair6	11	green	CAN_H	7	120 Ω	3	
	12	yellow	CAN_L	2		6	

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### 3.6 Technical data

#### 3.6.1 Cable Type

Cable type (power)	H03VVH2-F; 2 strands; oval; grey; 1,0m (Power)
Cable type (network)	Network cable (LAN, RS485, CAN)
Cable type (MAIN)	KU110C12J002, SCRN, 6PAIR; 10m

#### 3.6.2 Cable Connectors

type	D-Sub 9 female (CAN)
type	D-Sub 9 female (RS 485)
type	HIROSE LF10WBP-12S (Sensor connector)

#### 3.6.3 Cable length

Total length	approx. 10m
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## 4 Material Data Sheet



### DATENBLATT - DATASHEET

**Leitungstyp/Type:**  
UL/cUL-LIH 5x(2xAWG26 ST)+1x2xAWG24 C11Y sw

**MEDI-Artikelnummer:** KU110C12J002  
**MEDI-article number:**



**a) Aderpaare AWG 26/7/- core pairs AWG 26/7**

**Aufbaubeschreibung./construction**

Leiter, <i>conductor:</i>	Kupfer verzinkt nach EN 13602, <i>TPC - tin plated copper acc. EN13602</i>
Leiteraufbau, <i>construction:</i>	26 AWG 7x0,160mm
Aderisolation, <i>core insulation:</i>	UL-mPPE 105°C, <i>UL-mPPE 105°C</i>
Shorehärte, <i>shore hardness:</i>	A 91 ±3
Wandstärke, <i>wall thickness:</i>	min. 0,16mm
Aderdurchmesser, <i>outer diameter:</i>	0,80 ±0,05mm
Aderanzahl, <i>core numbers:</i>	10
Aderseilschlaglänge, <i>wire-ropelength of lay:</i>	26mm Z
Verseilung, <i>twisting:</i>	PiMF (Paare in Metallfolie) Alu-PE-Folie <i>PiMF (pairs in metalfoil) ALU-PE foil</i>
Verseilung, <i>twisting:</i>	5 Paare, über jedes Paar Alu-PE-Folie <i>5 pairs, over each pair alu PE foil</i>






**Elektrische und mechanische Werte./electrical and mechanical dimensions**

Leiterwiderstand, <i>conductor resistance:</i>	max. 135,00 Ohm/km bei/at 20°C
Wellenwiderstand, <i>impedance:</i>	nom. 114Ohm
Kapazität, <i>capacity:</i>	nom. 81pF/m

**b) Aderpaar AWG 24/19/- core pair AWG 24/19**

**Aufbaubeschreibung./construction**

Leiter, <i>conductor:</i>	Kupfer verzinkt nach EN 13602, <i>TPC - tin plated copper acc. EN13602</i>
Leiteraufbau, <i>construction:</i>	24 AWG 19x0,127mm
Aderisolation, <i>core insulation:</i>	UL-mPPE 105°C, <i>UL-mPPE 105°C</i>
Shorehärte, <i>shore hardness:</i>	A91 ±3
Wandstärke, <i>wall thickness:</i>	min. 0,13mm
Aderdurchmesser, <i>outer diameter:</i>	0,92 ±0,05mm
Aderanzahl, <i>core numbers:</i>	2
Aderseilschlaglänge, <i>wire-ropelength of lay:</i>	31mm Z
Verseilung, <i>twisting:</i>	je 2 Adern zum Paar verseilt <i>2 cores twisted together as pair</i>

				
Artikel: KU110C12J002			Stand: 2015-04-22 10:24:01	
Seite/Page: 1 von/ of 3			Christian Hartl	

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Angabe Maße und Werte beziehen sich auf MEDI-Fertigungsmengen. *All values and measurements are based on MEDI-Productionunits*  
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## DATENBLATT - DATASHEET

### Elektrische und mechanische Werte/.electrical and mechanical dimensions

Leiterwiderstand, <i>conductor resistance:</i>	max. 76,00 Ohm/km bei/at 20 °C
Wellenwiderstand, <i>impedance:</i>	nom. 101 Ohm
Kapazität, <i>capacity:</i>	nom. 102 pF/m

### c) Kabel komplett/- cable complete

#### Aufbaubeschreibung/.construction






Verseilung, <i>twisting:</i>	5 Paare + 1 Paar + Baumwollfüller, <i>5 pairs + 1 pair + cotton filler</i>
Aderseilschlaglänge, <i>wire-rope length of lay:</i>	62mm S
Schirmung, <i>screen:</i>	CU Geflecht verzinkt, <i>copper braid tinned,</i>
Bewicklung, <i>wrapping:</i>	Polyesterfolie, <i>polyester foil</i>
Mantelisolierung, <i>jacket insulation:</i>	PUR - (11Y) / UL-AWM758, PUR - (11Y) / UL-AWM756
Shorehärte, <i>shore hardness</i>	A 96 ±3
Mantelfarbe, <i>jacket colour:</i>	RAL 9005 schwarz, <i>RAL 9005 black</i>
Wandstärke, <i>wall thickness:</i>	min. 0,90mm
Außendurchmesser, <i>outer diameter:</i>	6,50 ±0,25mm

### Elektrische und mechanische Werte/.electrical and mechanical dimensions

Prüfspannung Ader/Ader, <i>testing voltage core/core:</i>	900V AC
Prüfspannung Spark Test, <i>spark test voltage:</i>	1500V AC
Betriebsspannung UL, <i>nominal voltage UL:</i>	30V AC
Isolationswiderstand, <i>insulation resistance:</i>	min. 20 MOhm x km bei/at 20 °C
Temperaturbereich statisch, <i>temperature range-static:</i>	-40 bis/to 80 °C
Temperaturbereich dynamisch, <i>temperature range-dynamic:</i>	-25 bis/to 80 °C
Biegeradius statisch, <i>bending radius static:</i>	8,0 x Außendurchmesser <i>8,0 x outer diameter</i>
Biegeradius dynamisch, <i>bending radius dynamic:</i>	15,0 x Außendurchmesser, <i>15,0 x outer diameter</i>
Eigenschaften, <i>properties:</i>	flammwidrig nach CSA 22.2, FT1, <i>flame retardant acc. to CSA 22.2, FT1</i> flammwidrig nach UL1581 VW-1, <i>flame retardant acc. to UL1581 VW-1</i>

### Kennzeichnung/.marking

Bedruckung, <i>printing:</i>	Bedruckung und Label <i>printing and label</i>
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700592	Artikel:	Stand:		MEDI Kabel GmbH Geretsrieder Str. 18 DE 84478 Waldkraiburg www.medikabel.de
Seite/Page: 2 von/of 3	KU110C12J002 UL/cUL-LIH 5x(2xAWG26 ST)+1x2xAWG24 C11Y sw	2015-04-22 10:23:51 Christian Hartl		

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## DATENBLATT - DATASHEET

### Zulassungen./approbations






Norm, standard:	UL 758 - AWM, UL 758 - AWM
Verwendung, use:	Internal wiring and external interconnection in Class 2 circuits of electronic equipment.

### Erweiterte Daten

<p>Aderfarben: AWG 26 = ws/bn, gn/ge, gr/rs, sw/vio, gr-rs/rt-bl AWG 24 = rt,bl</p> <p>AWG 24 Paar zwischen ws/bn und gr-rs/rt-bl</p> <p>Mit Meterbedruckung</p>
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### Expand data

<p>core colours: AWG 26 = wh/bn, gn/ye, gy/pk, bk/vt, gy-pk/rd-bu AWG 24 = rd/bu</p> <p>AWG 24 pair between wh/bn and gy-pk/rd-bu</p> <p>With meter printing</p>
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700592	Artikel:			Stand:
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