

**UR20-1CNT-500****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image****Digital counter and communication modules  
100/500 kHz; 32-bit counter resolution; individual  
channel diagnosis**

Incremental and absolute value encoders have become indispensable in today's automated systems.

Developed especially for these applications, Weidmüller offers you various counter modules that can accept an input frequency up to 500 kHz. The synchronous-serial interface (SSI) module allows high precision positioning tasks to be realised with absolute value encoders.

The module can be parameterised for listening or master mode operation in order to cope with all fields of application. A module with pulse input is available to you for frequency measurement up to 100 kHz and the UR20-1CNT-500 offers an input that can accept frequencies up to 500 kHz. The UR20-2CNT-100 module has two independent counter inputs; it is supplemented with the UR20-1CNT-100-1DO module with one counter, which however offers additional options thanks to a latch, gate and reset input. This allows external control of the counter. In addition, this module can trigger an immediate event via a digital output using a set reference value. The UR20-1COM-232-485-422 module offers you extended communication options; for example devices can be integrated consistently in u-remote systems via an RS232, RS485 or RS422 interface. The UR20-1COM-SAI-PRO module presents a solution for connecting the con-

trol cabinet to the field. This gateway allows the integration of up to 15 decentral IP67 SAI-PRO Subbus modules per u-remote module.

The module electronics supply the connected sensors with power from the input current path (UIN).

**General ordering data**

Version	Remote I/O module, IP20, Digital signals, Input, PUSH IN connection, Counter, Single channel
Order No.	<a href="#">1315580000</a>
Type	UR20-1CNT-500
GTIN (EAN)	4050118118483
Qty.	1 pc(s).
Replacement parts	<a href="#">1350930000</a> <a href="#">1347170000</a> <a href="#">1346530000</a>

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## Technical data

## Dimensions and weights

Depth	76 mm	Depth (inches)	2.992 inch
Height	120 mm	Height (inches)	4.724 inch
Width	11.5 mm	Width (inches)	0.453 inch
Mounting dimension - height	128 mm	Net weight	87.6 g

## Temperatures

Storage temperature	-40 °C ... +85 °C	Operating temperature	-20 °C ... +60 °C
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## digital inputs

Counter width	32 Bit	Individual channel diagnosis	No
Input filter	configurable	Input type	for Type 1 and Type 3 sensors as per IEC 61131-2
Max. input frequency	500 kHz	Mode of operation	Pulse, Direction, 1-, 2-, 4-times
Module diagnosis	Yes	Number	1
Sensor supply	Yes	Short-circuit-proof	Yes

## Connection data

Number	1	Type of connection	PUSH IN
Wire connection cross section, finely stranded, max.	1.5 mm <sup>2</sup>	Wire connection cross section, finely stranded, min.	0.14 mm <sup>2</sup>
Wire cross-section, finely stranded, max. (AWG)	AWG 16	Wire cross-section, finely stranded, min. (AWG)	AWG 26
Wire cross-section, solid, max.	1.5 mm <sup>2</sup>	Wire cross-section, solid, max. (AWG)	AWG 16
Wire cross-section, solid, min.	0.14 mm <sup>2</sup>	Wire cross-section, solid, min. (AWG)	AWG 26

## General data

Air humidity (operation)	10% to 95%, non-condensing as per DIN EN 61131-2	Air humidity (storage)	10% to 95%, non-condensing as per DIN EN 61131-2
Air humidity (transport)	10% to 95%, non-condensing as per DIN EN 61131-2	Air pressure (operation)	≥ 795 hPa (height ≤ 2000 m) as per DIN EN 61131-2
Air pressure (storage)	1013 hPa (height 0 m) to 700 hPa (height 3000 m) as per DIN EN 61131-2	Air pressure (transport)	1013 hPa (height 0 m) to 700 hPa (height 3000 m) as per DIN EN 61131-2
Pollution severity	2	Rail	TS 35
Shock	15 g over 11 ms, half sinus wave, acc. to IEC 60068-2-27	Surge voltage category	II
Test voltage	500 V	UL 94 flammability rating	V-0
Vibration resistance	5 Hz ≤ f ≤ 8.4 Hz: 3.5-mm amplitude as per IEC 60068-2-6, 8.4 Hz ≤ f ≤ 150 Hz: 1 g acceleration as per IEC 60068-2-6		

## Power supply

Current consumption from I <sub>IN</sub> (the respective power segment)	< 20 mA	Current consumption from I <sub>sys</sub> , typ.	8 mA
Voltage supply	24 V DC +20 %/-15 %, via the system bus		

Creation date April 27, 2024 2:50:13 AM CEST

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## Technical data

## System data

Field bus protocol	PROFINET IRT, PROFINET RT, PROFIBUS DP-V1, EtherCAT, Modbus/TCP, EtherNet/IP, CANopen, DeviceNet, POWERLINK, CC-Link, CC-Link IE TSN, IEC 61162-450	Galvanic isolation	500 V DC between the current paths
Interface	u-remote system bus	Module type	Functional module
Transmission speed of system bus, max. 48 Mbit			

## Classifications

ETIM 6.0	EC001601	ETIM 7.0	EC001601
ETIM 8.0	EC001601	ETIM 9.0	EC001601
ECLASS 9.0	27-24-26-05	ECLASS 9.1	27-24-26-05
ECLASS 10.0	27-24-26-05	ECLASS 11.0	27-24-26-05
ECLASS 12.0	27-24-26-05	ECLASS 13.0	27-24-26-05

## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	82327f13-cd27-455a-ab5b-a62e1996dcf8

## Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E141197
Certificate no. (cULusEX)	E223527

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Downloads**

Approval/Certificate/Document of Conformity	<a href="#">KC certificate</a>
	<a href="#">Compass safe distance certificate</a>
	<a href="#">Lloyds Register certificate</a>
	<a href="#">DNV/GL certificate</a>
	<a href="#">ABS certificate</a>
	<a href="#">RINA certificate</a>
	<a href="#">Bureau Veritas - Type Approval Certificate</a>
	<a href="#">PRS (Polish Register of Shipping)</a>
	<a href="#">NIPPON KAIJI KYOKAI Certificate</a>
	<a href="#">DEMKO 15ATEX1525X</a>
	<a href="#">UKCA Declaration of Conformity - EN</a>
	<a href="#">CE Declaration of Conformity - DE</a>
Engineering Data	<a href="#">CAD data – STEP</a>
	<a href="#">Compatibility information – Combinability of UR20</a>
Engineering Data	<a href="#">Zuken E3.S</a>
User Documentation	<a href="#">MAN_U-REMOTE_DE</a>
	<a href="#">MAN_U-REMOTE_EN</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

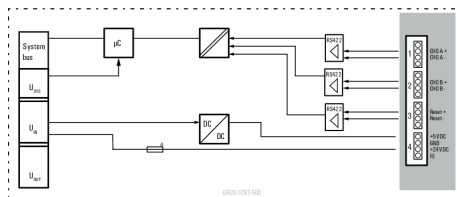
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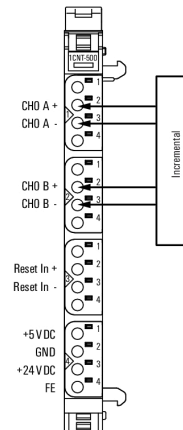
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## Drawings

## Block diagram

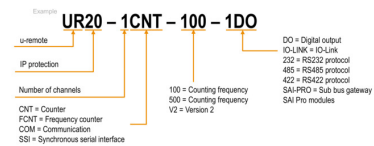


## Connection diagram



## Explanation of abbreviations

## Digital counter- and communication- modules



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## Accessories

## Custom printing



The Dekafix (DEK) marker is the universal marker for all conductor and plug-in connectors as well as for electronic sub-assemblies. The system is ideal for short number sequences and covers a wide range of ready-printed markers.

Strips for fast installation in only one work step. The printing is easy to read, rich in contrast and available in various widths.

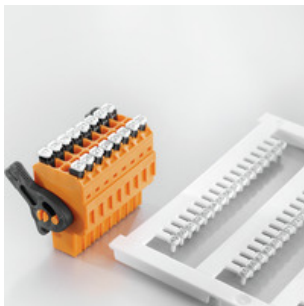
- Large range of ready-to-use markers
- Strips for fast installation
- Terminal markers, suitable for all Weidmüller cable connectors
- Available as blank MultiCard or with standard printing

**For custom printing:** Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

## General ordering data

Type	DEK 5/8-11.5 MC SDR	Version
Order No.	<a href="#">1341610000</a>	Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00
GTIN (EAN)	4050118146059	Weidmueller, To customer specification
Qty.	100 pc(s).	

## Custom printing



## General ordering data

Type	PM 2.7/2.6 MC SDR	Version
Order No.	<a href="#">1323700000</a>	OMNIMATE Signal - series PM, Pusher markers, 2.7 x 2.6 mm, Pitch in
GTIN (EAN)	4050118126761	mm (P): 3.50 Weidmueller, To customer specification
Qty.	192 pc(s).	

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## Accessories

## Steel



Steel DIN rails are the most widespread on the market. Among metal DIN rails, they have the lowest shortcircuit protection, similar to stainless steel.

## General ordering data

Type	TS 35X7.5/LL 2M/ST/SZ	Version
Order No.	<a href="#">7915060000</a>	Terminal rail, with slot, Accessories, 35 x 7.5 x 2000 mm, Slit width:
GTIN (EAN)	4032248296279	5.20 mm, Slit length: 25.00 mm, Steel, galvanic zinc plated and
Qty.	2 m	passivated
Type	TS 35X7.5/LL 2M/ST/ZN	Version
Order No.	<a href="#">0514500000</a>	Terminal rail, with slot, Accessories, 35 x 7.5 x 2000 mm, Slit width:
GTIN (EAN)	4008190046019	5.20 mm, Slit length: 25.00 mm, Steel, galvanic zinc plated and
Qty.	2 m	passivated
Type	TS 35X7.5 2M/ST/ZN	Version
Order No.	<a href="#">0383400000</a>	Terminal rail, without slot, Accessories, 35 x 7.5 x 2000 mm, Steel,
GTIN (EAN)	4008190088026	galvanic zinc plated and passivated
Qty.	2 m	
Type	TS 35X7.5/LL 1M/ST/ZN	Version
Order No.	<a href="#">0514510000</a>	Terminal rail, with slot, Accessories, 35 x 7.5 x 1000 mm, Slit width:
GTIN (EAN)	4008190116620	5.20 mm, Slit length: 25.00 mm, Steel, galvanic zinc plated and
Qty.	1 m	passivated

## Aluminum



Aluminum has the second best electrical conductivity after copper. One advantage is low weight, anMiscellaneous is outstanding corrosion protection.

## General ordering data

Type	TS 35X7.5 2M/AL/BK	Version
Order No.	<a href="#">0330800000</a>	Terminal rail, without slot, Accessories, 35 x 7.5 x 2000 mm,
GTIN (EAN)	4008190100650	Aluminium, untreated
Qty.	2 m	

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Accessories****System accessory**

Discover a wide range of accessories for your u-remote system - the ideal addition to make your applications even more efficient and flexible.

**General ordering data**

Type	UR20-EBK-ACC	Version
Order No.	<a href="#">1346610000</a>	End bracket, ,
GTIN (EAN)	4050118151596	
Qty.	5 pc(s).	
Type	UR20-SM-ACC	Version
Order No.	<a href="#">1339920000</a>	Cover, ,
GTIN (EAN)	4050118144727	
Qty.	20 pc(s).	

**Blank****General ordering data**

Type	PM 2.7/2.6 MC NE WS	Version
Order No.	<a href="#">1323710000</a>	OMNIMATE Signal - series PM, Pusher markers, 2.7 x 2.6 mm, Pitch in
GTIN (EAN)	4050118126778	mm (P): 3.50 Weidmueller, white
Qty.	960 pc(s).	



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## Accessories

## Blank



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- Large range of ready-to-use markers
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- Terminal markers, suitable for all Weidmüller cable connectors
- Available as blank MultiCard or with standard printing

**For custom printing:** Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

## General ordering data

Type	DEK 5/8-11.5 MC NE WS	Version
Order No.	<a href="#">1341630000</a>	Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00
GTIN (EAN)	4050118145946	Weidmueller, white
Qty.	500 pc(s).	

## Stainless steel



Stainless steel is a collective term for all types of steel (alloys) with a high degree of purity and corrosion resistance.

## General ordering data

Type	TS 35X7.5 2M/CRN	Version
Order No.	<a href="#">1747350000</a>	Terminal rail, without slot, Accessories, 35 x 7.5 x 2000 mm,
GTIN (EAN)	4032248003372	Stainless steel, rust-proof, Stainless steel 1.4301, untreated
Qty.	2 m	

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**Replacement parts****Plugkit****General ordering data**

Type	UR20-PK-1315580000-SP	Version
Order No.	<a href="#">1346530000</a>	Replacement part
GTIN (EAN)	4050118151237	
Qty.	5 pc(s).	

**Electronic modules****General ordering data**

Type	UR20-EM-1315580000-SP	Version
Order No.	<a href="#">1347170000</a>	Replacement part
GTIN (EAN)	4050118248371	
Qty.	1 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**Replacement parts****Basic modules****General ordering data**

Type	UR20-BM-SP	Version		Packaging	
Order No.	<a href="#">1350930000</a>	Replacement part, , Flange-mounted housing		Cardboard	
GTIN (EAN)	4050118402735			box	
Qty.	5 pc(s).				