UR20-2CNT-100

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

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 indispensible 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 control 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, dual channel
Order No.	1315590000
Type	UR20-2CNT-100
GTIN (EAN)	4050118118506
Qty.	1 pc(s).
Replacement parts	1350930000 1347150000 1346540000

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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	85 g

Temperatures

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

digital inputs

Counter width	32 Bit	
Individual channel diagnosis	Yes	
Input filter	configurable	
Input type	for Type 1 and Type 3 sensors as per IEC 61131-2	
Input voltage, high	> 11 V	
Input voltage, low	< 5 V	
Max. input current per channel	3.5 mA	
Max. input frequency	100 kHz	
Mode of operation	Pulse, Direction, 1-, 2-, 4-times	
Module diagnosis	Yes	
Number	2	
Reverse polarity protection	Yes	
Sensor connection	2-wire, 3-wire	
Sensor supply	Yes	
Sensor supply	min.	0 mA
	max.	750 mA
	nominal	750 mA

Connection data

Number	2	Type of connection	PUSH IN
Wire connection cross section, finely stranded, max.	1.5 mm²	Wire connection cross section, finely stranded, min.	0.14 mm²
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 mm²	Wire cross-section, solid, max. (AWG)	AWG 16
Wire cross-section, solid, min.	0.14 mm²	Wire cross-section, solid, min. (AWG)	AWG 26

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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_{IN} (the respective power segment)	35 mA (plus output current)	Current consumption from I_{sys}, typ.	8 mA
Reverse polarity protection	Yes	Voltage supply	24 V DC +20 %/ -15 %, via the system bus

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
ETIM 10.0	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	ECLASS 14.0	27-24-26-05
ECLASS 15.0	27-24-26-05		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	82327f13-cd27-455a-ab5b-a62e1996dcf8

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Approvals

Approvals	
Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319212/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319215/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319217/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319220/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319224/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319228/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_322323/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319213/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319234/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319240/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319245/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319247/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319249/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319253/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319255/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319260/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E141197
Certificate no. (cULusEX)	E223527

Downloads

Approval/Certificate/Document of Conformity	KC certificate Compass safe distance certificate Lloyds Register certificate DNV certificate ABS certificate RINA certificate Bureau Veritas - Type Approval Certificate PRS (Polish Register of Shipping) NIPPON KAIJI KYOKAI Certificate - ClassNK DEMKO15ATEX1525X KR Korean register certificate CCS certificate CCS certificate UKCA Declaration of Conformity - EN CE Declaration of Conformity - DE
Engineering Data	CAD data – STEP Compatibility information – Combinability of UR20
User Documentation	Handbuch u-remote DE Manual u-remote EN
Catalogues	Catalogues in PDF-format

Creation date May 15, 2025 9:41:49 PM CEST

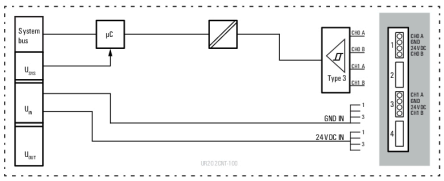
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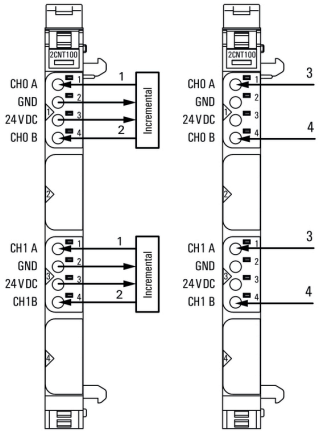
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Drawings

Block diagram



Connection diagram



Explanation of abbreviations

