

UR20-1CNT-100-1DO

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 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 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, Single channel
Order No.	1315570000
Type	UR20-1CNT-100-1DO
GTIN (EAN)	4050118118193
Qty.	1 pc(s).

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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
Mounting dimension - height	128 mm	Net weight	85 g
Width	11.5 mm	Width (inches)	0.453 inch

Temperatures

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

REACH SVHC	Lead 7439-92-1
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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	
Latch, gate, reset input	Yes	
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	1	
Reverse polarity protection	Yes	
Sensor connection	2-wire, 3-wire	
Sensor supply	Yes	
Sensor supply	max.	750 mA
	min.	0 mA
	nominal	750 mA
max. count rate	400 kHz	

Connection data

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

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Restricted area	Positive expansion	X coordinate	43 mm
		Z coordinate	85 mm
		Y coordinate	160 mm
	Type of restricted area	thermal	
	Negative expansion	Z coordinate	0 mm
		Y coordinate	-40 mm
		X coordinate	-28 mm
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} (power segment of the field bus coupler), typ.	8 mA	
Current consumption from I _{IN} (power segment of the fieldbus coupler), typ.	min.	8 mA
	nominal	8 mA
	max.	8 mA
Current consumption from I _{IN} (the respective power segment)	35 mA (plus output current)	
Current consumption from I _{IN} (the respective power segment)	max.	35 mA
	nominal	35 mA
	min.	35 mA
Reverse polarity protection	Yes	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus	

RS interface

Individual channel diagnosis	Yes	Module diagnosis	Yes
Number	1		

Serial inputs

Individual channel diagnosis	Yes	Module diagnosis	Yes
Number	1		

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	
Interface	u-remote system bus	Module type	Functional module
Transmission speed of system bus, max.	48 Mbit		500 V DC between the current paths

Classifications

ETIM 6.0	EC001601	ETIM 7.0	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

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Technical data

Approvals

Approvals



ROHS	Conform
UL File Number Search	E141197

Downloads

Approval/Certificate/Document of Conformity	Declaration of Conformity Compass safe distance certificate Lloyds Register certificate DNV/GL certificate ABS certificate RINA certificate Bureau Veritas - Type Approval Certificate PRS (Polish Register of Shipping) NIPPON KAIJI KYOKAI Certificate
Engineering Data	STEP CoDeSys - Version 3
Engineering Data	WSCAD, Zuken E3.S, EPLAN
User Documentation	MAN_U-REMOTE_DE MAN_U-REMOTE_EN

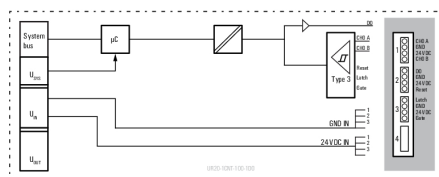
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Drawings

Block diagram



Connection diagram

