

## UR20-1SM-50W-6DI2DO-P

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

[www.weidmueller.com](http://www.weidmueller.com)

### Product image



Pulse width modulation and stepper motor modules As part of the u-remote system, Weidmüller offers a specialised solution for controlling small motors with a current requirement of 0.5 A to 2 A, which can also be used to control valve flaps. The pulse width modulation modules can be adjusted within the switching frequencies up to 40 kHz and the modules can also be switched in the motor control with the aid of push/pull output stages, e.g. to change the direction of rotation. Weidmüller's stepper motor module is efficient and flexible for use in the automation of robots, handling systems or placement machines with stepper motors. Variably adjustable operating parameters as well as a wide range supply from 12 V DC to 50 V DC make the module flexibly applicable for various target applications. Six integrated, parameterizable encoder or digital inputs and two digital outputs with 0.5 A make the control module a complete solution in the smallest of spaces. As with all modules of the u-remote system, the features are convincing - from the modular design and exchangeable electronics to the removable and pluggable terminal strip. The module electronics supplies the connected actuators from the output current path (UOUT)

### General ordering data

Version	Remote I/O module, IP20, Digital signals, Special module
Order No.	<a href="#">2489830000</a>
Type	UR20-1SM-50W-6DI2DO-P
GTIN (EAN)	4050118499810
Qty.	1 items

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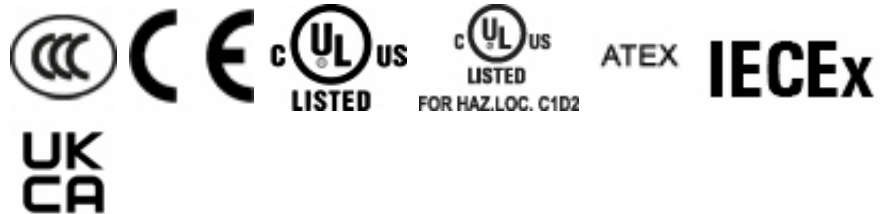
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Technical data

Approvals

Approvals



ROHS	Conform
UL File Number Search	<a href="#">UL Website</a>
Certificate no. (cULus)	E141197
Certificate no. (cULusEX)	E223527

Dimensions and weights

Depth	76 mm	Depth (inches)	2.9921 inch
Height	120 mm	Height (inches)	4.7244 inch
Width	23 mm	Width (inches)	0.9055 inch
Mounting dimension - height	128 mm	Net weight	173 g

Temperatures

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

digital outputs

Short-circuit-proof	Yes																
Number	1																
Number of digital outputs	2																
Feedback-free	Yes																
Max. response time, low	100 µs																
Resistive load (min. 47 Ω)	1 kHz																
Digital outputs	<table border="1"> <tr> <td>Connection designation</td> <td>DO 0, DO 1</td> </tr> <tr> <td>Number of channels</td> <td>2</td> </tr> <tr> <td>Response time high-low, max.</td> <td>250 µs</td> </tr> <tr> <td>Response time low-high, max.</td> <td>100 µs</td> </tr> <tr> <td>Output current per channel, max.</td> <td>0.5 A</td> </tr> <tr> <td>Number of wires</td> <td>2</td> </tr> <tr> <td>Short-circuit-proof</td> <td>Yes</td> </tr> <tr> <td>Reactionless</td> <td>Yes</td> </tr> </table>	Connection designation	DO 0, DO 1	Number of channels	2	Response time high-low, max.	250 µs	Response time low-high, max.	100 µs	Output current per channel, max.	0.5 A	Number of wires	2	Short-circuit-proof	Yes	Reactionless	Yes
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Number of channels	2																
Response time high-low, max.	250 µs																
Response time low-high, max.	100 µs																
Output current per channel, max.	0.5 A																
Number of wires	2																
Short-circuit-proof	Yes																
Reactionless	Yes																
Outputs (as per IEC 61131-2)	2 digital outputs, 0.5 A, P-switching																
Protective circuit	Constant current with thermal switch-off and automatic restart																
Module diagnosis	Yes																
Individual channel diagnosis	No																
Max. response time, high	250 µs																
Switch-off energy (inductive)	<150 mJ / channel																
Actuator connection	2-wire																
Lamp load (12 W)	1 kHz																

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## Technical data

Inductive load (DC13)	0.2 Hz
Sensor connection	2-wire, 3-wire

## Connection data

Wire cross-section, finely stranded, max. (AWG)	AWG 16	
Wire cross-section, finely stranded, min. (AWG)	AWG 26	
Wire cross-section, solid, max. (AWG)	AWG 16	
Wire cross-section, solid, min. (AWG)	AWG 26	
Type of connection	PUSH IN	
Number	1	
Wire cross-section, solid, max.	1.5 mm <sup>2</sup>	
Wire cross-section, solid, min.	0.14 mm <sup>2</sup>	
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>	
Stepper motor connections	Connection designation	A+, A-, B+, B-
	Number of channels	1
	Short-circuit-proof	Yes

## General data

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	UL 94 flammability rating	V-0
Test voltage	500 V	Surge voltage category	II
Pollution severity	2	Mounting rail	TS 35
Air pressure (operation)	≥ 795 hPa (height ≤ 2000 m) as per DIN EN 61131-2	Air humidity (transport)	10% to 95%, non-condensing 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	Air pressure (storage)	1013 hPa (height 0 m) to 700 hPa (height 3000 m) as per DIN EN 61131-2
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
Shock	15 g over 11 ms, half sinus wave, acc. to IEC 60068-2-27		

## Power supply

Reverse polarity protection	Yes	Supply voltage	24 V DC +20 %/ -15 %
Current consumption from IIN (the respective power segment)	27 mA + Sensor feed	Current consumption from I <sub>sys</sub> , typ.	8 mA
Current consumption from external power supply	35 mA + load	Current consumption from IO <sub>UT</sub> (the respective power segment)	10 mA + load

## System data

Module type	Functional module	Interface	u-remote system bus
Galvanic isolation	500 V DC between the current paths	Connection type	4-wire
Field bus protocol	PROFINET IRT, PROFINET RT, PROFIBUS DP-V1, EtherCAT, Modbus/TCP,	Transmission speed of system bus, max.	48 Mbit/s

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## Technical data

EtherNet/IP, CANopen,  
DeviceNet, POWERLINK,  
CC-Link, CC-Link IE TSN

### Classifications

ETIM 8.0	EC001601	ETIM 9.0	EC001601
ETIM 10.0	EC001601	ECLASS 14.0	27-24-26-05
ECLASS 15.0	27-24-26-05		

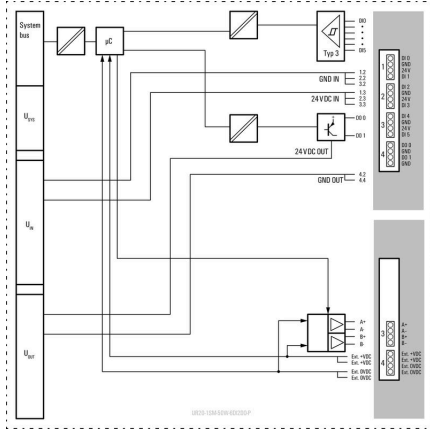
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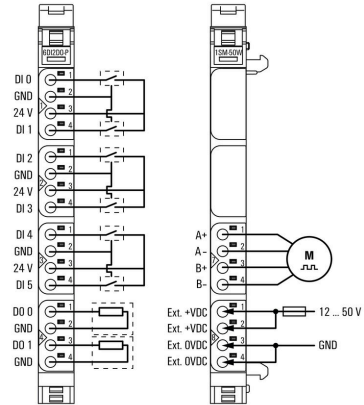
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**Drawings**

**Block diagram**



**Connection diagram**



**Explanation of abbreviations**

**Stepper motor module**

