UR20-2PWM-PN-0.5A-V2

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, PWM, 0.5 A per channel
Order No.	3036960000
Type	UR20-2PWM-PN-0.5A-V2
GTIN (EAN)	4099986998780
Qty.	1 items

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Technical data

Dimensions and weights

Depth	76 mm	Depth (inches)	2.9921 inch
Height	120 mm	Height (inches)	4.7244 inch
Width	11.5 mm	Width (inches)	0.4528 inch
Mounting dimension - height	128 mm	Net weight	85 g

Temperatures

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

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption	
RoHS Exemption (if applicable/known)	7a, 7cI	
REACH SVHC	Lead 7439-92-1	
SCIP	82327f13-cd27-455a-ab5b-a62e1996dcf8	
Product Carbon Footprint	Cradle to gate	8,310 kg CO_2 eq.

digital outputs

Short-circuit-proof	Yes	
Number of digital outputs	2	
Accuracy	1 Bit	
Type	DO PWM push / pull	
Resolution	32 Bit	
Feedback-free	Yes	
Max. response time, low	100 ns	
Output current per channel, max.	500 mA	
Simultaneity factor	min.	0 %
	nominal	100 %
	max.	100 %
Pulse duty factor	0–-100% push/pull or push, parameterisable	
Switching frequency, resistive load	Static, 6 Hz ... 40 kHz	
Switching frequency, inductive load	Static, 6 Hz ... 40 kHz	
Module diagnosis	Yes	
Switching frequency, lamp load	Static, 6 Hz ... 40 kHz	
Individual channel diagnosis	No	
Output current as per application	min.	0 mA
	nominal	1000 mA
	max.	1000 mA
Max. response time, high	100 ns	
Data width	2 Byte Input, 12 Byte Output	
Actuator connection	2-wire, 3-wire, 3-wire + FE	
Output current per module, max.	1000 mA	
Actuator supply	min.	0 A
	nominal	750 mA
	max.	750 mA

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	Wire cross-section, solid, max.	1.5 mm²
Wire cross-section, solid, min.	0.14 mm²	Wire connection cross section, finely stranded, max.	1.5 mm²

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Technical data

Wire connection cross section, finely stranded, min.	0.14 mm²

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

Supply voltage	24 V DC +20 %/ -15 %, via the system bus	Current consumption from Isys, typ.	8 mA
Current consumption from IOUT (the respective power segment)	40 mA		

System data

Module type	Functional module	Interface	u-remote system bus
Galvanic isolation	500 V DC between the current paths	Field bus protocol	PROFINET IRT, PROFINET RT, PROFIBUS DP-V1, EtherCAT, Modbus/TCP, EtherNet/IP, CANopen, DeviceNet, POWERLINK, CC-Link, CC-Link IE TSN
Transmission speed of system bus, max.	192 Mbit	Transmission speed backplane bus, max.	192 Mbit

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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Drawings

Block diagram

image/eps

Connection diagram

Explanation of abbreviations

Pulse width modulation modules

Example

UR20 – 2PWM – I – 2.5A – 2DI – P

u-remote	PNP (positive switching)
IP protection	Pulse width modulation
Number of channels	Digital input
	Number of channels

2A = 2 Ampere
0.5A = 0,5 Ampere
2.5A = 2,5 Ampere

I = current (I)
P = PNP (positive switching)
PN = configurable PNP/ NPN
(positive- / negative switching)

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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.	1346610000	End bracket, ,	
GTIN (EAN)	4050118151596		
Qty.	5 ST		
Type	UR20-SM-ACC	Version	
Order No.	1339920000	Cover, ,	
GTIN (EAN)	4050118144727		
Qty.	20 ST		

Blank

General ordering data

Type	PM 2.7/2.6 MC NE WS	Version	
Order No.	1323710000	OMNIMATE Signal - series PM, Pusher markers, 2.7 x 2.6 mm, Pitch	
GTIN (EAN)	4050118126778	in mm (P): 3.50 Weidmueller, white	
Qty.	960 ST		

Custom printing

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Accessories

General ordering data

Type	PM 2.7/2.6 MC SDR	Version	
Order No.	1323700000	OMNIMATE Signal - series PM, Pusher markers, 2.7 x 2.6 mm, Pitch	
GTIN (EAN)	4050118126761	in mm (P): 3.50 Weidmueller, To customer specification	
Qty.	192 ST		
Type	DEK 5/8-11.5 MC SDR	Version	
Order No.	1341610000	Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00	
GTIN (EAN)	4050118146059	Weidmueller, To customer specification	
Qty.	100 ST		

Blank

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 NE WS	Version	
Order No.	1341630000	Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00	
GTIN (EAN)	4050118145946	Weidmueller, white	
Qty.	500 ST		

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.	0330800000	Terminal rail, Accessories, Aluminium, untreated, Width: 2000 mm,	
GTIN (EAN)	4008190100650	Height: 35 mm, Depth: 7.5 mm	
Qty.	40 M		

Accessories

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.	1747350000	Terminal rail, Accessories, Stainless steel 1.4301, untreated, Width:	
GTIN (EAN)	4032248003372	2000 mm, Height: 35 mm, Depth: 7.5 mm	
Qty.	40 M		

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 2M/ST/ZN	Version	
Order No.	0383400000	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,	
GTIN (EAN)	4008190088026	Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm	
Qty.	40 M		
Type	TS 35X7.5/LL 2M/ST/ZN	Version	
Order No.	0514500000	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,	
GTIN (EAN)	4008190046019	Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm	
Qty.	40 M		
Type	TS 35X7.5/LL 1M/ST/ZN	Version	
Order No.	0514510000	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,	
GTIN (EAN)	4008190116620	Width: 1000 mm, Height: 35 mm, Depth: 7.5 mm	
Qty.	20 M		
Type	TS 35X7.5/LL 2M/ST/SZ	Version	
Order No.	7915060000	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,	
GTIN (EAN)	4032248296279	Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm	
Qty.	40 M		

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Weidmüller

Accessories

Crimping tools

Crimping tools for wire end ferrules, with and without plastic collars
• Ratchet guarantees precise crimping
• Release option in the event of incorrect operation

General ordering data

Type	PZ 2.5 S	Version	
Order No.	2903690000	0.14mm², 2.5mm², Trapezoidal crimp	
GTIN (EAN)	4099986027008		
Qty.	1 ST		

Basic modules

General ordering data

Type	UR20-BM-SP	Version	
Order No.	1350930000	Replacement part, , Flange-mounted housing	
GTIN (EAN)	4050118402735		
Qty.	5 ST		

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