

## UR20-16DO-P

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



Digital output modules P- or N-switching; short-circuit-proof; up to 3-wire + FE

Digital output modules are available in the following variants: 4 DO, 8 DO with 2- and 3-wire technology, 16 DO with or without PLC interface connection. They are mainly used for the incorporation of decentralised actuators. All outputs are designed for DC-13 actuators acc. to DIN EN 60947-5-1 and IEC 61131-2 specifications. As with the digital input modules, frequencies of up to 1 kHz are possible. Protection of the outputs ensures maximum system safety. This consists of an automatic restart following a short-circuit. Clearly visible LEDs signal the status of the entire module as well as the status of individual channels.

In addition to the standard applications of the digital output modules, the range also includes special variants such as the 4RO-SSR module for rapidly switching applications. Fitted with solid state technology, 0.5 A is available here to each output. Furthermore, there is also the 4RO-CO relay module for power-intensive applications. It is equipped with four CO contacts, optimised for a switching voltage of 255 V UC and designed for a switching current of 5 A.

The module electronics supply the connected actuators from the output current path (UOUT).

#### General ordering data

Version	Remote I/O module, IP20, Digital signals, Output, 16-channel
Order No.	<a href="#">1315250000</a>
Type	UR20-16DO-P
GTIN (EAN)	4050118118537
Qty.	1 items

### 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	11.5 mm	Width (inches)	0.4528 inch
Length	120 mm	Length (inches)	4.7244 inch
Mounting dimension - height	128 mm	Net weight	83 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, 7cI		
REACH SVHC	Lead 7439-92-1, Diboron trioxide 1303-86-2, Lead monoxide 1317-36-8		
SCIP	b5ed5bad-cbfe-4ad3-903c-fc3d1093a415		
Product Carbon Footprint	Cradle to gate	8,684 kg CO2 eq.	

#### digital outputs

Short-circuit-proof	Yes (thermal cut-out)		
Leakage current	<0.5 mA		
Output voltage, max.	24 V		
Number of digital outputs	16		
Insulation	500 V (channel to channel)		
Type	Lamp load, Ohmic, Inductive		
Feedback-free	Yes		
Max. response time, low	250 µs		
Resistive load (min. 47 Ω)	1 kHz		
Output current per channel, max.	500 mA		
Inductive load	Frequency	0.2 Hz	
	Usage category	DC13	
	Frequency	1 kHz	
	Usage category	DC13	
	Version	with suitable free-wheeling diode	
Simultaneity factor	min.	0 %	

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	nominal	100 %
	max.	100 %
Protective circuit	Constant current with thermal switch-off and automatic restart	
Module diagnosis	Yes	
Switching frequency, lamp load	1 kHz	
Individual channel diagnosis	No	
Output current as per application	min.	0 mA
	nominal	8000 mA
	max.	8000 mA
Max. response time, high	100 µs	
Switch-off energy (inductive)	<150 mJ / channel	
Response time of the protective circuit (current limiting)	<100µs	
Actuator connection	Single-conductor	
Lamp load (12 W)	1 kHz	
Inductive load (DC13)	0.2 Hz	
Output current per module, max.	8000 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 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>		

## 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 I <sub>sys</sub> , typ.	8 mA
Current consumption from IO <sub>UT</sub> (the respective power segment)	25 mA + load		

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### System data

Module type	Digital output module	Interface	u-remote system bus
Galvanic isolation	500 V DC between the current paths	Process data	2 Byte
Connection type	PUSH IN	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
Possible connection	Single-conductor	Transmission speed of system bus, max.	48 MBit/s
Diagnostic data	1 Bit		

### Classifications

ETIM 8.0	EC001599	ETIM 9.0	EC001599
ETIM 10.0	EC001599	ECLASS 14.0	27-24-26-04
ECLASS 15.0	27-24-26-04		

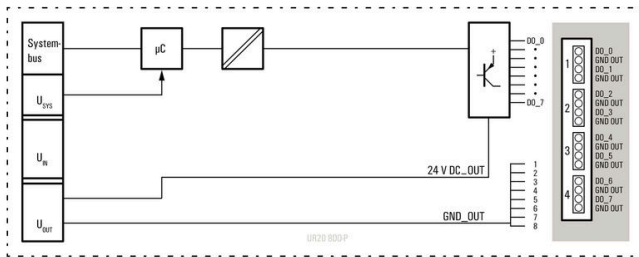
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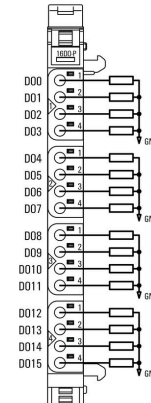
## Drawings

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### Block diagram



### Connection diagram



### Explanation of abbreviations

#### Digital output modules

