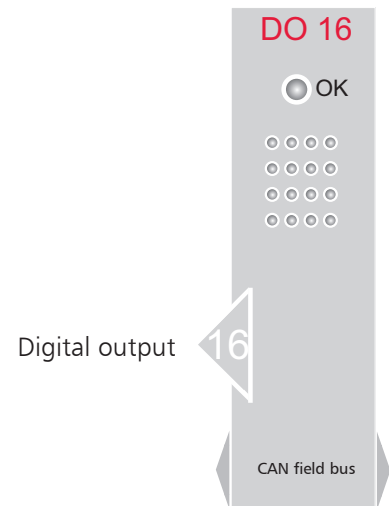


## Digital Output Interface

flexotemp®

### DO 16



#### Features

- Module for 16 digital outputs (function configurable)
- CANopen norm slave based on DS-401
- Applicable with flexotemp® MCU and flexotemp® PCU, in I/O nodes by flexotemp® CANBC
- Model ME-Bus (connectable)
- Status-LED
- Control LED's for digital outputs
- Compact design

#### Function

- Application of digital outputs as control outputs, alarms or outputs in Soft-PLC
- For heating/cooling outputs output of proportional control signal
- Complete functional integration in flexotemp® PCU and flexotemp® MCU
- Supply voltage 24 VDC for digital outputs

#### Benefits

- Easy, peripheral configuration of flexotemp® control system with remote I/O's
- Peripheral signal processing
- Easy expandability and integration in own applications
- Compact housing
- Little for installation

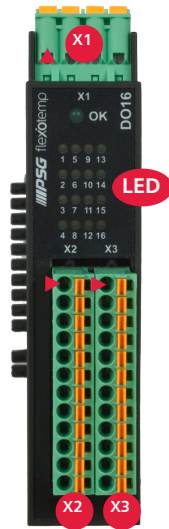
#### Ordering designations

	Order number
flexotemp® DO 16	RR 2200/DO16

## Technical Data

<b>Digital outputs (DO)</b>		Number: 16, configurable by flexotempMANAGER	
	Type	Logic output, directly coupled, internal freewheeling diode, short circuit proof	
	Rated output voltage	10...30 VDC	
	Rated output current	Per output 500 mA at $T_A=25^\circ\text{C}$	
<b>Connection data outputs</b>		Conductor cross section solid, stranded min/max 0.2 mm <sup>2</sup> /1.5 mm <sup>2</sup> ; Conductor cross section stranded with ferrule without plastic sleeve min/max 0.25 mm <sup>2</sup> /1.5 mm <sup>2</sup> ; Conductor cross section stranded with ferrule with plastic sleeve min/max 0.25 mm <sup>2</sup> /0.75 mm <sup>2</sup> ;	
<b>Protection equipment</b>		Reversed polarity of power supply: diode, over voltage of power supply: varistor	
<b>Data interfaces</b>			
	CAN	Field bus for I/O - and bus coupler modules	
	Address range	CANopen norm slave based on DS401, address range 1...127 automatically	
	Transfer rate	250 KByte fixed	
	Max. tolerable bus length (m)	250	
	Device internal terminating resistor	Automatic	
	Protocol	CANopen	
<b>Power supply</b>			
	Rated voltage / max. power consumption	Electronics: 18...30 VDC / < 2W (internal by system bus)	
	Fuse protection	Electronics: external by PCU and/or CANBC Outputs: 8 A M	
	Supply	Outputs: external mains supply 24 V	
	Connection data	Conductor cross section solid, stranded min/max 0.2 mm <sup>2</sup> /1.5 mm <sup>2</sup> ;	
<b>Ambient temperature limit</b>		Operation: 0...55 °C, transport, storage: -20...60 °C, operation limit: 0...60 °C	
<b>Atmospheric humidity limit</b>		Operation: 0...90 % relative atmospheric humidity, no condensation Transport, storage: 0...95 % relative atmospheric humidity, no condensation	
<b>Mounting</b>		Installation on DIN rail (DIN 50022); horizontal installation position; see installation	
<b>Dimensions (H x W x D in mm)</b>		99 x 22.5 x 114.5	
<b>Housing</b>		Phoenix ME 22.5 Bus 10/2	
<b>Weight</b>		0.15 kg	
<b>Electrical security</b>		Class 3, safety extra-low voltage; complies with EN 61010	
<b>Protection type</b>		Housing and terminal IP 20	
<b>Standards</b>		Complies with EN 61326-1	
<b>CE marking</b>		The device complies with the European Directives for electromagnetic compatibility (complies with EN 61326-1).	
<b>General</b>			
	LED displays	Refer to status display of LED's	
	Data backup	Data backup of all parameters in EEPROM (power failure save)	
	Software update	By CAN interface	

## Connection overview



X1	Power supply
X2	Digital outputs D1...D8
X3	Digital outputs D9...D16
LED OK	Operation display
LED 1...16	Signalizes the status of the digital outputs

## Pin assignment

### X2 Digital outputs

12-pole spring-force terminal

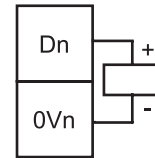
Pin	X2	Function and/or signal
1	U1	+24 VDC auxiliary voltage
2	0V1	Ground auxiliary voltage
3	nc	<without function>
4	nc	<without function>
5	D1	Digital output 1
6	D2	Digital output 2
7	D3	Digital output 3
8	D4	Digital output 4
9	D5	Digital output 5
10	D6	Digital output 6
11	D7	Digital output 7
12	D8	Digital output 8

### X3 Digital outputs

12-pole spring-force terminal

Pin	X3	Function and/or signal
1	U2	+24 VDC auxiliary voltage
2	0V2	Ground auxiliary voltage
3	nc	<without function>
4	nc	<without function>
5	D9	Digital output 9
6	D10	Digital output 10
7	D11	Digital output 11
8	D12	Digital output 12
9	D13	Digital output 13
10	D14	Digital output 14
11	D15	Digital output 15
12	D16	Digital output 16

### Digital output 1...16



### X1 Power supply

#### Digital Outputs

4-pole spring-force terminal

Pin	X1	Function / Signal
1	U1	Power supply *)
2	U2	Power supply *)
3	0V1	Ground Power supply
4	0V2	Ground Power supply

\*) External fuse protection necessary

Notice: X1/U1/U2, X2/U1, X3/U2 are internal bridged.

### Status display of LED's

LED-OK (green)	
flashing (1 Hz)	Boot mode
flashing (2 Hz)	Pre operational mode
Continuous light	Operational mode

### Installation

