

Digital In-/Output Interface

flexotemp® / SYSTEMP® mc 08

Features

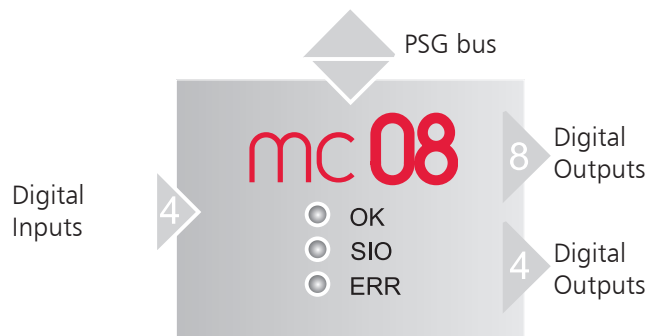
- Master module for PSG bus
- Also applicable with sysTemp®
- 4 digital outputs by terminals
- 4 digital inputs by terminals (only flexotemp®)
- 8 digital outputs by ribbon cable for PSG bus slave modules (e.g. sysTemp® SMS 01, SMS 02)
- Status-LED's for signaling of status of module and of interface operation
- Status-LED's for signaling of status of digital in-/outputs by terminal

Function

- Network by PSG bus
- Output of control signals or status information
- Reads status information
- Allocation of outputs/inputs (only flexotemp®) by configuration- and projection tool flexotempMANAGER and/or engineering tool WinKonVis

Benefit

- Less effort for installation
- Easy expandability of digital IO's in case of retrofitting/ upgrade
- Flexible allocation of outputs/inputs (only flexotemp®)



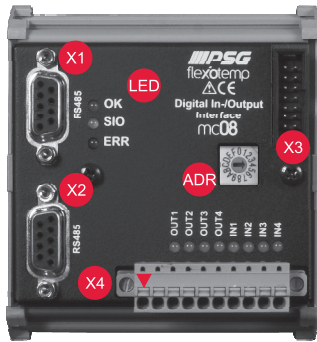
Ordering designations

	Order number
MC 08	025 201

Technical Data

Digital inputs (DI)		Number: 4	
	Type	Logic input, direct-coupled	
	Rated input voltage	0...30 VDC	
	Rated input current	5 mA at 24 VDC	
Digital outputs (DO)			
	Type	Logic output, direct-coupled, short-circuit-proof	
	Rated output voltage	0...30 VDC	
	Rated output current	Maximum 200 mA	
Digital outputs (TS)		Number: 8	
	Type	Logic output, low active, indirect-coupled, short-circuit-proof	
	Rated output voltage	0...30 VDC	
	Rated output current	Maximum 200 mA	
Protection equipment		Reversed polarity of power supply: diode, over voltage of power supply: varistor	
Data interfaces			
	PSG bus (RS485)	2-wire, input	
		Address range	0...15
		Transfer rate	125 kBit fixed, 8 Bit, 1 stop bit, NO parity
		Device internal terminating resistor	
Power Supply			
	Rated voltage / power consumption	18...30 VDC / 1 W, 24 V Class 2	
	Fuse protection for electronics	By PSG bus	
	External fuse protection for plug	X4 (24 VDC) - external 4 A M	
Ambient temperature limit		Operation: 0...55 °C, Transport, storage: -20...70 °C	
Atmospheric humidity limit		Operation: 0...90 % relative atmospheric humidity, no condensation, Transport, storage: 0..95 % relative atmospheric humidity, no condensation	
Mounting		Can be latched in mounting rail TS35	
Dimensions (W x L x D in mm)		82 x 90 x 45	
Housing		Material: FR4, combustibility class: V0 based on UL 94	
Weight		0.2 kg	
Electrical security		Complies with EN 61010-1 (VDE 0411-1), protection class III, over voltage category II, contamination class 2, operating voltage 300 V	
Protection type		Housing and terminals: IP 20, D-SUB without PVC cover: IP 00	
Electro-Magnetic Compatibility (EMC)		Complies with EN50082-2, interference resistance in industrial environment; complies with EN50081-1, emitted interference in living quarters	
CE marking		The device complies with the European Directives for electromagnetic compatibility and low voltages.	
General			
	Operating elements	Rotary switch	
	LED displays	Refer to status display of LED's	

Connection overview



X1	RS485 (interface PSG bus)
X2	RS485 (interface PSG bus)
X3	Digital outputs to slave modules
X4	Digital inputs/outputs
ADR	Setting of PSG bus address
LED OK	Operation display
LED SIO	Signalizes interface operation of RS485
LED ERR	Signalizes the status of the device

Pin assignment

Note

Standard equipment: spring-force terminal.

X1/X2 RS485 (interface PSG bus)

Pin	X1 Input	X2 Output	Function and/or signal
1	+24VDC	+24VDC	Power supply by PSG bus
2	+24VDC	+24VDC	Power supply by PSG bus
3	TRX+	TRX+	Transmit/Receive +
4	0V	0V	Ground PSG bus
5	0V	0V	Ground PSG bus
6	+24VDC	+24VDC	Power supply by PSG bus
7	+24VDC	+24VDC	Power supply by PSG bus
8	TRX-	TRX-	Transmit/Receive -
9	0V	0V	Ground PSG bus

X4 Digital in-/output

10-pole spring-force terminal

Pin	X4 _{flexotemp} [®]	X4 _{sysTemp} [®]	Function and/or signal
1	+U	+U	+24VDC external Power supply *)
2	0V	0V	External ground Power supply
3	O1	O9	Digital output 1 (DO)
4	O2	O10	Digital output 2 (DO)
5	O3	O11	Digital output 3 (DO)
6	O4	O12	Digital output 4 (DO)
7	I1	n.a.	Digital input 1 (DI)
8	I2	n.a.	Digital input 2 (DI)
9	I3	n.a.	Digital input 3 (DI)
10	I4	n.a.	Digital input 4 (DI)

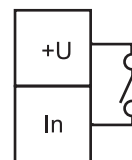
X3 TS actuator (connection for actuator)

14-pole ribbon cable (socket)

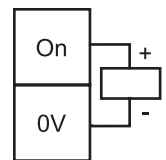
Pin	X3 Out	Function and/or signal
1	TS output 1	Actuator output 1
2	TS output 2	Actuator output 2
3	TS output 3	Actuator output 3
4	TS output 4	Actuator output 4
5	TS output 5	Actuator output 5
6	TS output 6	Actuator output 6
7	TS output 7	Actuator output 7
8	TS output 8	Actuator output 8
9-12	N.C.	
13	+UTS	Power supply actuator
14	+UTS	Power supply actuator

*) External fuse protection necessary

Digital input



Digital output



Configuration

ADR address setting

PSG bus

The address is binary coded and can be set between 0...F_{hex} (equals 0...15_{dec}) by rotary switch.

The decimal values up to 9 comply with the hexadecimal values.

10_{dec} equals A_{hex}, 11_{dec} equals B_{hex}, etc.,

15_{dec} equals F_{hex}.



Status display of LED's

OK (green)	SIO (yellow)	ERR (red)	Status
flashing (2 Hz)	*)	Continuous light	Offline (no communication by PSG bus)
Continuous light	*)	OFF	Online (communication by PSG bus)

*) Signalizes interface operation of RS485