

## Digital output module

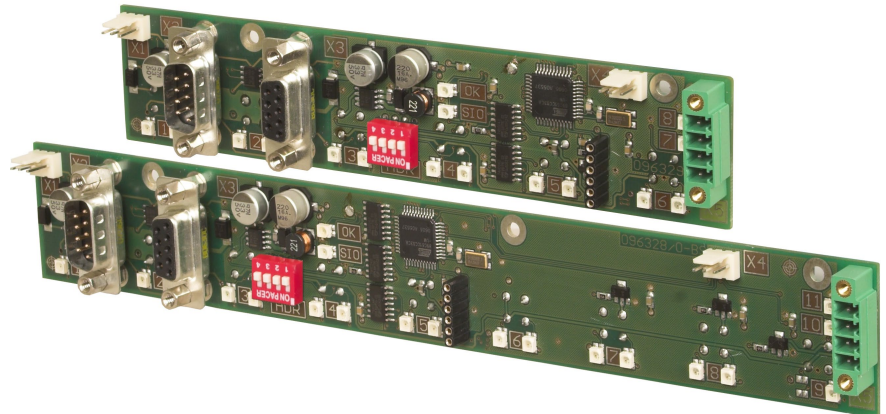
flexotemp® / SYSTEMP®

**SMA 06 G2**

**SMA 09 G2**

### Features

- Designed for control of PSG Solid State Relay (SSR) RX1A (with and without heat sink)
- Master output module for PSG-IO-Bus (RS485)
- 6 and/or 9 digital outputs
- Mounted directly on Solid State Relay
- Setting of master module address by DIP switch
- Two status LED's per module
- Two status LED's per output (activation of output, current alarm)



### Function

- Cyclic receive of degree of operation as PWM data by PSG-IO-Bus
- Output of PWM information to Solid-State-Relay outputs
- Allocation of outputs/zone by configuration- and projection tool flexotempMANAGER and/or engineering tool WinKonVis
- Definite output of module status by status LED's

### Benefit

- Configuration of power controller for temperature control at low cost
- Flexible allocation of outputs/zones
- Less wiring by network with standard connecting cables
- Easy maintenance

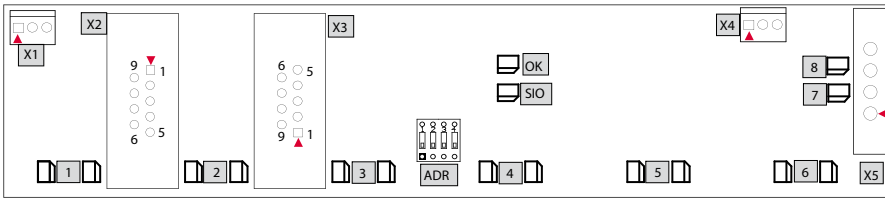
### Ordering designations

	Order number
SMA 06 G2 with sensor for PU module	025202-01
SMA 09 G2 with sensor for PU module	025203-01
SMA 06 G2 with sensor for PU module with acrylic glass	025202-02
SMA 09 G2 with sensor for PU module with acrylic glass	025203-02
Solid State Relay RX1A	See data sheet

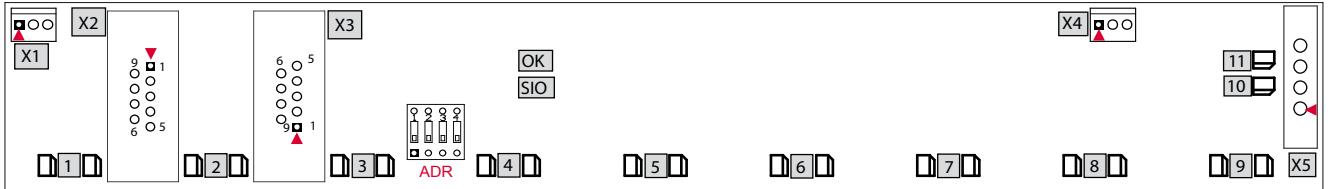
## Technical Data

<b>Digital outputs (TS)</b>	Number: 6 and/or 9 for direct installation on SSR, 2 by terminal	
Type	Logic output, low active, indirect-coupled	
Rated output voltage	0...30 VDC	
Rated output current	Maximum 250 mA/output	
<b>Connection of fan X1</b>	Variable output voltage controls fan rotation	
	Monitoring of fan by X1/3 possible	
<b>Fan temperature/ RPM dependency</b>	< 30 °C: Fan off	
	30...40 °C: RPM 1	
	40...50 °C: RPM 2	
	> 50 °C: RPM 3	
	>= adjustable alarm threshold only flexotemp (heat sink temperature alarm)	
	>= 95 °C: Threshold of switching-off (all digital outputs are switched off)	
<b>Connection of heat sink temperature sensor X4</b>	Dependent on the temperature of the heat sink the rotation speed of the fan is controlled	
Type of temperature sensor	Silicon BD245C	
Alarm threshold	Adjustable by flexotempMANAGER (Parameter HSLI; Module BACI, CANCT) (OK-LED flashing)	
Threshold of switching-off	95 °C (fix value for sysTemp / flexotemp; all digital outputs are switched off)	
<b>Protection equipment</b>	Reversed polarity of power supply: diode, over voltage of power supply: varistor	
<b>Data interfaces</b>		
PSG-IO-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	
<b>Power supply</b>		
Rated voltage / power consumption	18...30 VDC / 1 W, supplied by PSG-IO-Bus	
Fuse protection for electronics	By PSG-IO-Bus	
<b>Ambient temperature limit</b>	Operation: 0...55 °C, Transport, storage: -20...70 °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>	Snapping in on SSR Type RX1A	
<b>Dimensions (H x W x D in mm)</b>	SMA 06 G2: 34 x 157 x 40 SMA 09 G2: 34 x 234 x 40	
<b>Case</b>	Material: PA 6.6, combustibility class: V0 based on UL 94	
<b>Weight</b>	0.1 kg	
<b>Electrical security</b>	Complies with EN 61010-1 (VDE 0411-1), protection class III, over voltage category II, degree of pollution 2, operating voltage 300 V	
<b>Protection type</b>	Housing and terminals: IP 00, D-SUB without PVC cover: IP 00	
<b>Electro-Magnetic Compatibility (EMC)</b>	Complies with EN61326-1	
<b>CE marking</b>	The device complies with the European Directives for electromagnetic compatibility.	
<b>General</b>		
Operating elements	DIP switch	
LED displays	Refer to status display of LED's	

## Connection overview SMA 06 G2



## Connection overview SMA 09 G2



X1	Connection of fan	OK	Operation display
X2	RS485 (interface PSG-IO-Bus)	SIO	Signalizes interface operation of RS485
X3	RS485 (interface PSG-IO-Bus)	1...8 SMA 06 G2	Digital outputs 1...8 to Solid State Relay
X4	Connection of heat sink temperature sensor	1...11 SMA 09 G2	Digital outputs 1...11 to Solid State Relay
X5	Connection digital outputs 7/8 and/or 10/11		
ADR	Address setting PSG-IO-Bus		

## Pin assignment

### X1 connection

#### Fan

3 pole screwed terminal

Pin	X1	Function and/or signal
1	F+	Voltage fan
2	-	Ground fan
3	n.a.	

### X2/X3 RS485

#### (interface PSG-IO-Bus)

D-SUB Plug Socket

Pin	X2 Input	X3 Output	Function and/or signal
1	+24VDC	+24VDC	Power supply by PSG-IO-Bus
2	+24VDC	+24VDC	Power supply by PSG-IO-Bus
3	TRX+	TRX+	Transmit/Receive +
4	0V	0V	Ground by PSG-IO-Bus
5	0V	0V	Ground by PSG-IO-Bus
6	+24VDC	+24VDC	Power supply by PSG-IO-Bus
7	+24VDC	+24VDC	Power supply by PSG-IO-Bus
8	TRX-	TRD-	Transmit/Receive -
9	0V	0V	Ground by PSG-IO-Bus

### X4 Connection of heat sink

#### Temperature sensor

3 pole screwed terminal

Pin	X4	Function and/or signal
1	T+	Heat sink Temperature sensor + (+U)
2	n.a.	n.a.
3	T-	Heat sink Temperature sensor - (0V)

### X5 connection

#### Digital output 7/8 and/or 10/11

4-pole screwed terminal

Pin	X5 SMA 06 G2	X5 SMA 09 G2	Function and/or signal
1	U1	U1	+24 VDC Auxiliary voltage output
2	O7	O10	Digital output 7 and/or 10
3	U2	U2	+24 VDC Auxiliary voltage output
4	O8	O11	Digital output 8 and/or 11

## Configuration

### ADR address setting PSG-IO-Bus

The address is binary coded and can be set between 0...15<sub>dec</sub> by DIP switch.

### Status display of module LED's

OK (green)	SIO (yellow)	
flashing (2 Hz)	ON *)	Alarm limit of heat sink temperature sensor reached, Online (communication by PSG-IO-Bus)
flashing (2 Hz)	OFF *)	Offline (no communication by PSG-IO-Bus)
ON	ON *)	Online (communication by PSG-IO-Bus)

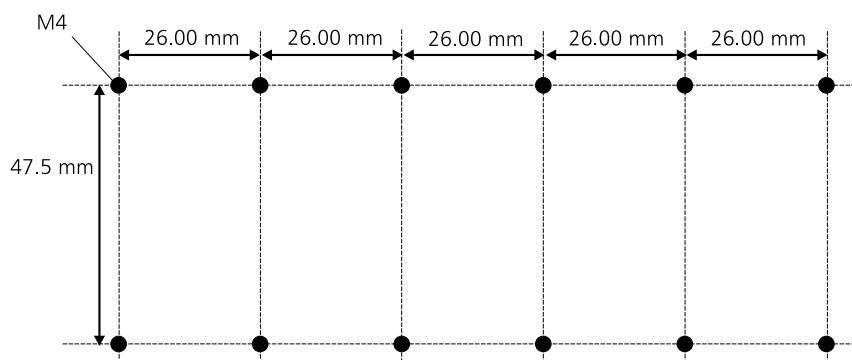
\*) Signalizes interface operation of RS485

### Status display of output LED's

SSR On (yellow)	SSR Error (red)	
On/Off		Status message of control of SSR
	flashing (1 Hz)	Thyristor alarm (SAA)
	Continuous light	Current tolerance alarm (SAE)

\*] Manual projection of alarm status in sysTemp® necessary. In flexotemp® the current alarms of the allocated SSR's are displayed.

### Drill scheme for SSR installation SMA 06 G2 on separate heat sink



### Drill scheme for SSR installation SMA 09 G2 on separate heat sink

