

## 3.7.10 2 analog outputs 0/4 ... 20 mA (12 bits) - EPM-S502

This module detects up to two analog control signals from the higher-level bus system and transmits them to the process level.

## Features

- ▶ 2 analog outputs
- ▶ Current output 0/4 ... 20 mA
- ▶ 12-bit resolution
- ▶ Signal function parameterisable
- ▶ 24 V DC supply voltage
- ▶ A reference potential for all outputs
- ▶ Wire-break protection
- ▶ An LED indicates if an output signal is outside the permissible measuring range

## Overview

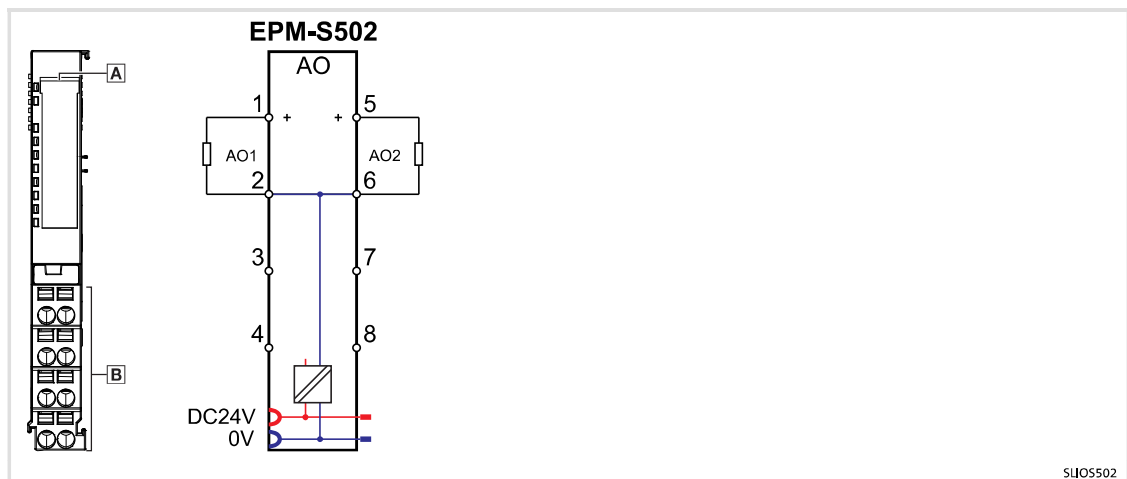





Fig. 3-53 Elements and circuit diagram


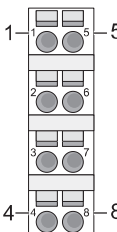
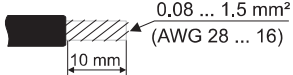
- ▣ A Displays for module status
- ▣ B Terminals
- 1 ... 8 Connection number

### Status displays

Module status LEDs 					
View	Pos.	Designation	Colour	Explanation	
 <p style="text-align: center;">SUI0001</p>	1	RUN	Green	On: Module is ready for operation	
	2	MF	Red	On: Module error (see table below)	
	3	AO1	Red	On: Channel 1, open circuit, parameterisation error	
	4	AO2	Red	On: Channel 2, open circuit, parameterisation error	
	5				
	6				
	7				
	8	-	-		Not assigned
	9				
	10				

Messages of the status LEDs RUN and MF		
RUN	MF	Meaning
On	Off	Module status OK Bus communication is OK
On	On	Module reports error Bus communication is OK
Off	On	Module reports error Bus communication not possible
Off	Off	Error in the bus supply voltage
Blinking	Blinking	Configuration error (  274)

### Terminals

Module terminals, spring terminals 			
View	Designation	Explanation	Terminal data
 <p style="text-align: center;">SUI0002</p>	1	Analog output AO1 (+)	
	2	Analog output AO1 (GND)	
	3	Not assigned	
	4	Not assigned	
	5	Analog output AO2 (+)	
	6	Analog output AO2 (GND)	
	7	Not assigned	
	8	Not assigned	



#### Note!

- ▶ When connecting the actuators, make sure that the polarity is correct.
- ▶ Outputs that are not used are not connected.
- ▶ The module does not provide any auxiliary supply for actuators.

## Product description

I/O compound modules - analog I/O

2 analog outputs 0/4 ... 20 mA (12 bits) - EPM-S502

### Technical data

EPM-S502: Rated data	
Module identifier	1282 <sub>dec</sub>
<b>Current consumption/power loss</b>	
Current consumption from backplane bus	80 mA
Power loss	0.8 W
<b>Analog outputs</b>	
Number of outputs	2
Cable length	
shielded	200 m
Load voltage	
Nominal value	DC 24 V
Current consumption from load voltage L+	15 mA (without load)
Current outputs	
Output current ranges	0 mA ... +20 mA +4 mA ... +20 mA
Max. load impedance	350 Ω
Max. inductive load	10 mH
Operational error limit	+/- 0.4 % ... +/- 0.5 %
Basic error limit	+/- 0.2 % ... +/- 0.3 %
Short circuit protection	No
Wire-break protection	Yes
Voltage at the outputs	12 V
Interference suppression (cross-talk between the outputs)	> 40 dB
Resolution	12 bits
Basic conversion time	2 ms all channels
Substitute values can be applied	Yes
Temperature error (relating to the output range)	±□0.01 %/K
Linearity distortion (relating to the output range)	±□0.1 %
Output ripple; bandwidth 0 to 50 kHz (relating to the output range)	±□0.05 %
Repeat accuracy (in steady-state vibration at 25°C, relating to the output range)	±□0.05 %
Dwell time	
for ohmic loads	0.25 ms
for inductive load	1.5 ms
Output data size	4 bytes

**EPM-S502: Rated data****Status, alarm, diagnostics**

Status display	Yes
Alarms	No
Process alarm	No
Diagnostic alarm	No
Diagnostic function	Yes
Diagnostic information can be read out	Possible
Module status	Green LED
Module error display	Red LED
Channel error display	Red LEDs per channel

**Electrical isolation**

Between the channels and the backplane bus	Yes
Between the channels and the voltage supply	Yes
Max. potential difference between the analog channel (e.g. input) and the I/O supply	DC 75 V / AC 60 V
Insulation checked with	DC 500 V