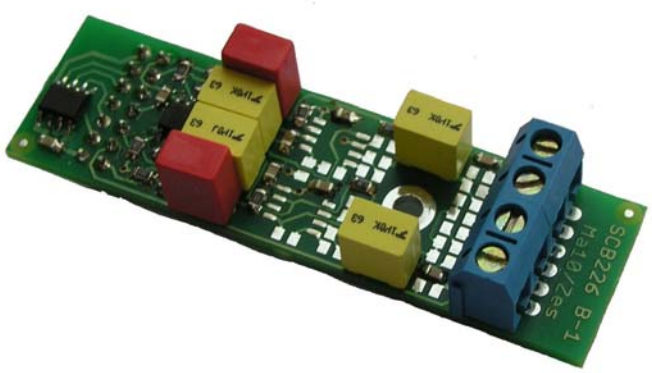
Analog converter
ZI, ZU
Amplifier for I and U input

SofCon® AUTOMATIZAČNÍ TECHNIKA

14.10

- In-built module for MA10
- Current inputs
- Voltage inputs
- Disturbance filter
- Parameters stability
- Digital calibration
- 2 measuring channels



Basic characteristic

Modules are designed for mounting into an analog inputs unit, MA10 type, with D/A converter. They are fitted as 2 voltage or 2 current inputs.

ZI module is a current input for current measuring in range 0-20mA. Input current goes through scanning resistor, where is measured voltage decrease. Voltage is filtered by 2.level active filter. To the maximal measured current of 25mA responds output voltage of 3V.

For output voltage stands following:

$$Uout = R2 \cdot Iin$$

Module ZU is current input for voltage measurements in range 0 – 10V. Voltage is decreased by voltage divider and filtered by active 2.level filter. To the maximal measured voltage of ca 10.4V responds output voltage of 3V.

For output voltage stands following:

$$Uout = Uin \cdot \frac{R2}{R2 + R1}$$

Calibration constants for both measuring channels are stored in EEPROM.

Technical data

Digital power supply	+5V±5%, max. 5mA
Analog power supply	+5V±2%, max. 10mA
	-5V±2%, max. 10mA
Input voltage	Max. ±3,5V
amplification (without calibration)	1
output (without cal.)	0,2mV
accuracy after cal.	0,1% from range
Ambient temperature	0 - 50°C
for guarantied accuracy	20 - 30°C

Current input	
Measurable range	0 – 25mA
Guarantied accuracy for	4 – 20mA
Max. input current	50mA
Input resistance	120 Ω ±1%
Voltage input	
Measurable range	0 – 10V
Guarantied accuracy for	0,1 – 10V
Input resistance	113 kΩ
Max. input voltage	30V
Dimensions	max. 20x70x22mm
Wire section	max. 2mm^2

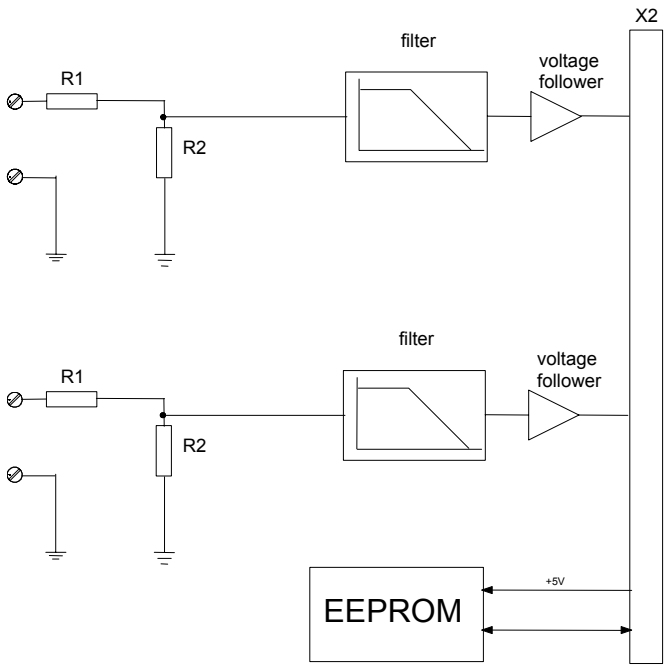
Order data

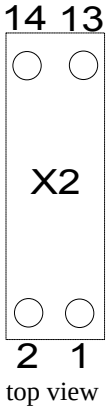
Modules are standardly supplied as a part of MA10 unit, but can be also supplied separately.

Specify ZI or ZU type mark in the order.

After agreement can be supplied modules with other parameters, e.g. module with just one current and one voltage input.

Schematic diagram and corrector connection





top view

1	GND
2	-AV
3	DO
4	UoutB
5	DI
6	GND
7	GND
8	GND
9	SK
10	UoutA
11	CS
12	+VR
13	+5V
14	+AV

Typical values of resistors

	Voltage input
R1	82 kΩ
R2	33 kΩ
	Current input
R1	0 Ω
R2	120 Ω

Mounting dimensions