

Data sheet

Universal meas. converter UMC1

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The universal measurement converter UMC1 serves to connect measuring bridges, sensors and measuring elements to IMB-ai measuring modules. It also provides signal processing as required for the application.

- When connecting measuring bridges, the UMC1 provides the bridge voltage and has a configurable instrumentation amplifier with voltage output available.
- When connecting sensors, the UMC1 provides the measuring current / voltage and has a configurable measuring amplifier with voltage output available.
- When connecting measuring elements, the UMC1 provides the respectively required supply voltage by means of appropriate DC:DC-converters and has a high-impedance measuring input with configurable amplifier available for signal matching.



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The UMC1 is delivered ex works with a 1m connection cable and a 6-pin Binder series 680 circular connector plug for connection to IMB-ai1/2/4/8 measuring modules. Connection of measuring bridges, sensors and measuring elements is carried out by means of screw terminals inside the UMC1 measurement converter case. The screw terminal cover can be removed by means of 2 screws. The measuring bridge, sensor or measuring element connection is lead outwards and secured by a cable gland with strain relief.

Technical data

Mechanical characteristics

Case	Plastic
Dimensions W x D x H	66 x 66 x 28 mm

Electrical characteristics

Supply voltage by IMB-ai1/2/4/8	+5 V
Current consumption	220 mA (max.)
Measuring bridge connection :	
Bridge voltage	4,5 V (Bridge resistance $\geq 100 \Omega$)
Instrumentation amplifier	1 ... 800 (configurable amplification)
Sensor connection :	
Supply	Measuring current / voltage, configurable
Measuring amplifier	1 ... 1000 (configurable amplification)
Measuring element connection :	
Supply	3 ... 24 V (power output max. 2 W)
Measuring amplifier	1 ... 400 (configurable amplification) <i>Input impedance > 10 MΩ</i>

Environmental conditions

Operating temperature range	0 ... 45 °C
Storage temperature range	-30 ... +80 °C

Electromagnetic compatibility (EMC)

Electromagnetic compatibility (EMC)	Interference emission according to EN50081-2 Interference resistance according to EN50082-2
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