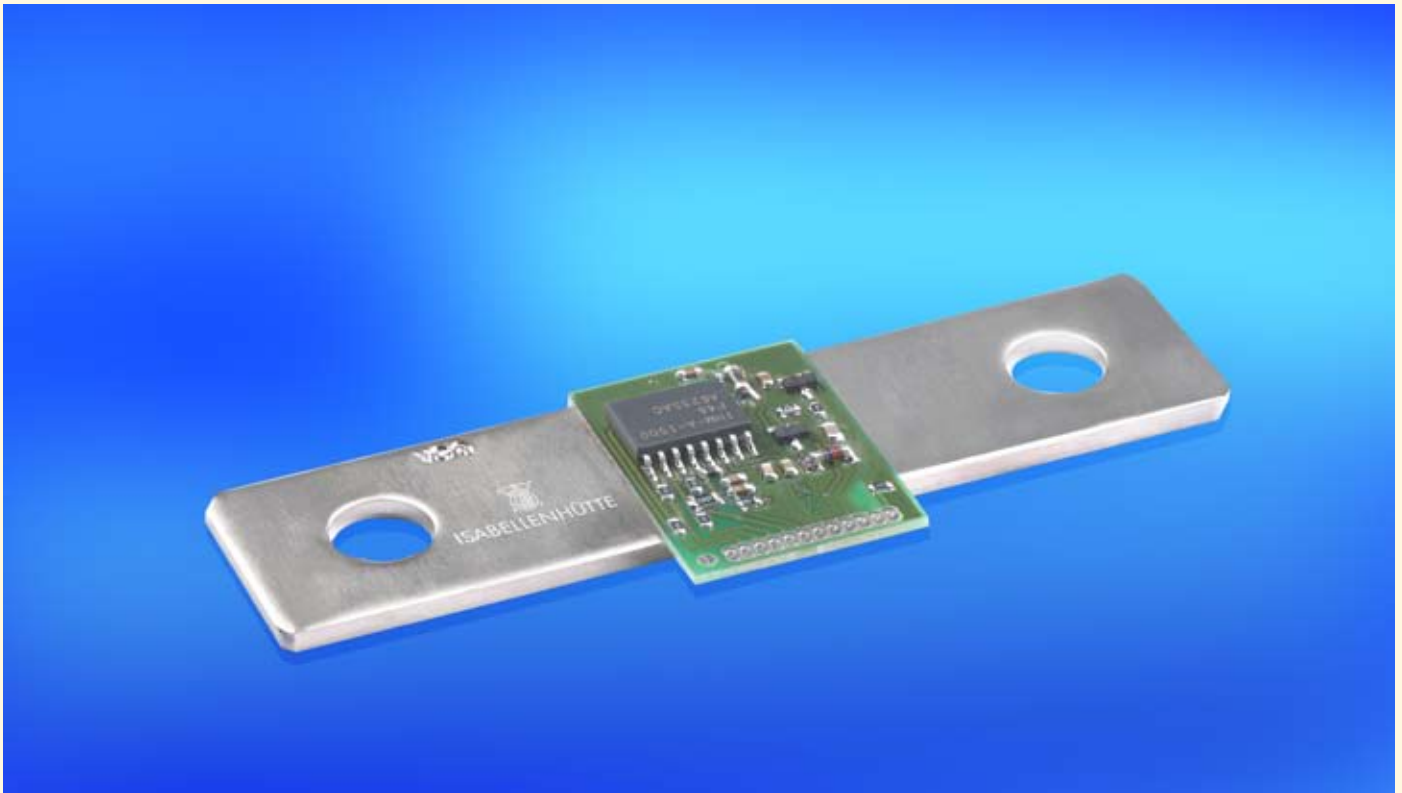


Advanced current and voltage measurement module for OEM usage



The **IMS sensor module** (IMS-B-R001) is designed for the direct measurement of current, voltage and temperature. It can be directly operated in more advanced measuring systems such as current-measuring devices and battery management systems.

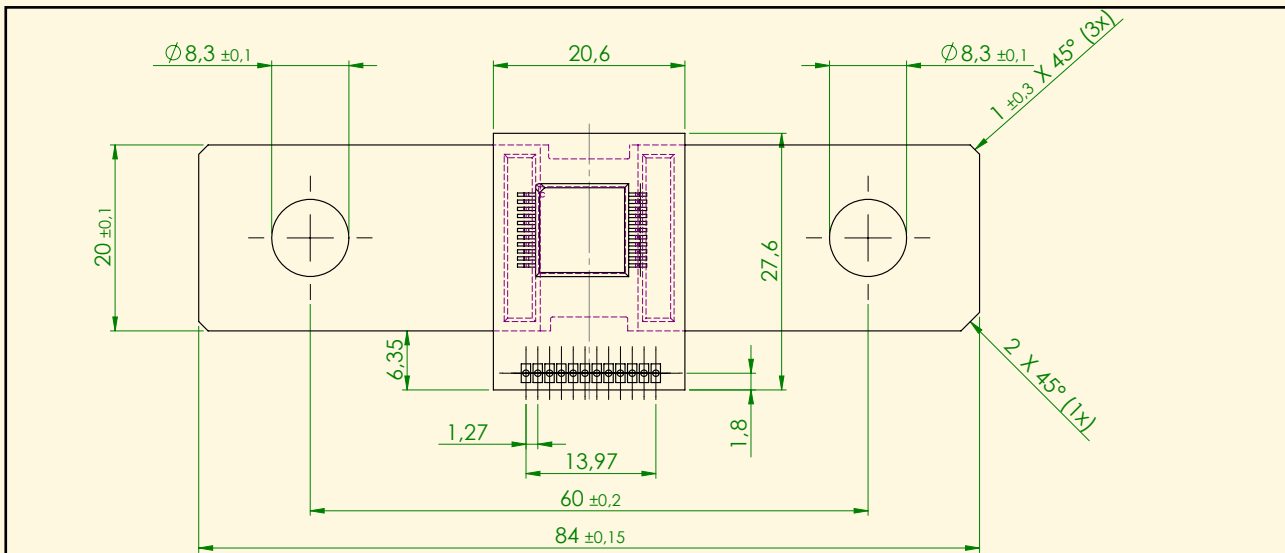
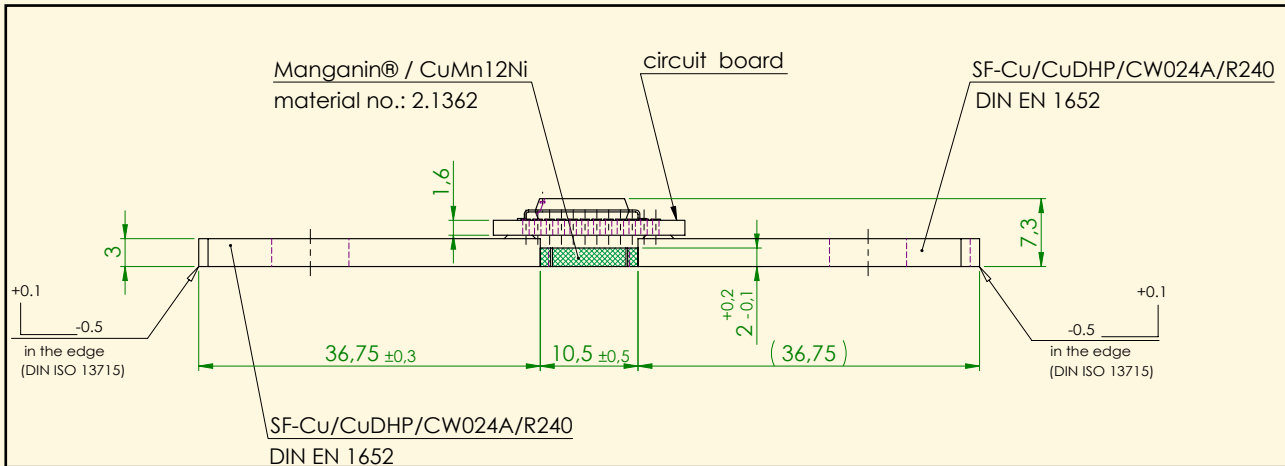
The current measurement takes place via a 100  $\mu\Omega$  shunt. Isabellenhütte's ISA-ASIC, a four-channel 16 bit data acquisition system, is used for measured value acquisition. With a measuring range of  $\pm 1500$  A at a resolution of 50 mA and a voltage measuring range of  $\pm 30$  V at a resolution of 1 mV, the system offers the possibility of achieving exact current and voltage measurements at high resolutions. Other current measurement values could be achieved by using different shunts. Channels 3 and 4 of the ISA-ASIC can be used for differential voltage measurement. Data, interface and power supply can be connected to the free accessible welding strip. The communication with following  $\mu C$  is realised with a SPI interface. For this option, ISAscale® supplies a C-code. Upon request the modul can be calibrated. The calibration data will be supplied in an Excel® file.

There is a broad range of applications in the markets industry, energy + automation, automotive and railway technology:

- Power train
- AC/DC power monitoring
- Power converter
- Current transducers
- AC and DC converter
- Energy conversion
- Battery management
- Hybrid power train
- Electrical vehicles
- Fuel cell monitoring
- Lithium-Ionen battery monitoring

Specification	Measuring range	Resolution
Current measurement	±1,500 A	50 mA
Voltage measurement	±30 V	1 mV
Internal temperature	-40 up to +125 °C	0.1 °C
Differential voltage measurement	±120 mV	4 µV

The accuracy depends on the calibration before shipment or by the customer.



Member of  
German  
Calibration  
Service  
**DKD**

Cooperation with  
German Commission for  
Electrical, Electronic &  
Information Technologies  
of DIN and VDE  
**DKE**  
VDE DIN



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Member of  
AMA  
**AMA**  
Fachverband für Sensorik e.V.

ISO/TS 16949:2002 and  
DIN EN ISO 9001:2000  
certified



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ISAscale® – precise efficiency