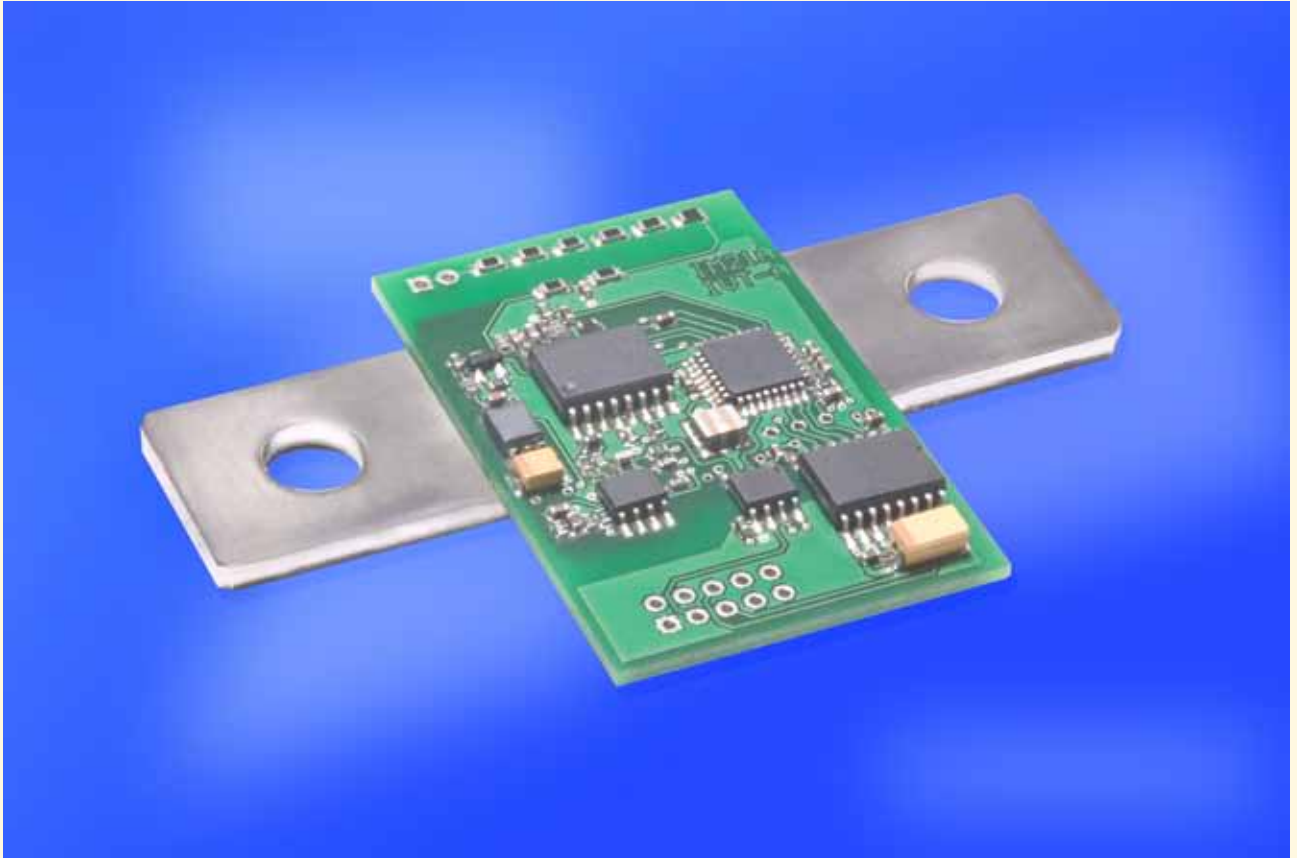


We are the benchmark — the vehicles of tomorrow need technology ahead of its time — TODAY.



Critical charge and discharge cycles impact system performance and reliability. They can be managed best with our new IMC sensor module. IMC sensors are designed for the individual integration in downstream measurement systems and are customizable to meet your specific requirements. With unparalleled performance, the IMC sensors have repeatedly proven themselves in challenging applications.

The fully calibrated advanced sensor module **IVT-A** is designed for all applications in which high currents, voltages and temperatures have to be measured. It contains a precision resistor with 100 μOhm , the **ISA-ASIC** and all analogue circuits for a complete 4-channel 16-bit data acquisition system. The internal μC supplies the clock and controls the measurements and communication with the **ISA-ASIC**. The module contains an SPI interface which allows a simple integration into an external system.

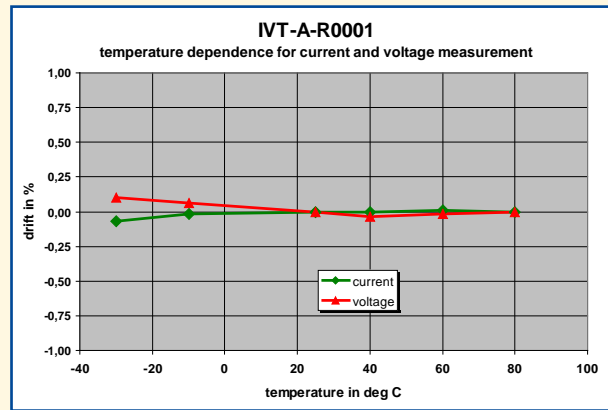
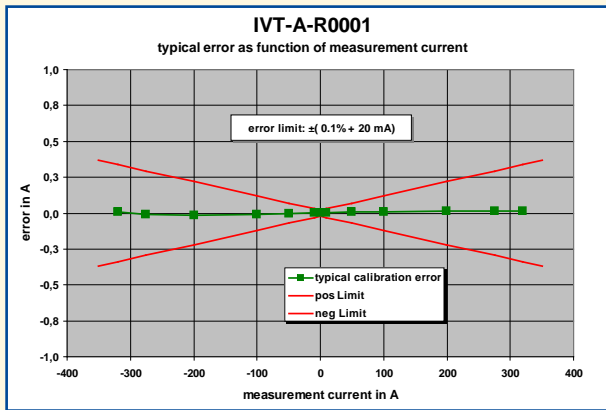
Measurement functions:

- Current – by using the voltage drop over the shunt
- Voltage – by using an internal voltage divider
- Temperature – by using internal temperature of the ISA-ASIC

Applications:

- AC/DC power monitoring
- Power train
- Power converter
- Current transducers
- AC and DC converter
- Energy conversion
- Battery management
- Hybrid power train, lithium ion battery packs
- Electrical vehicles
- Fuel cell monitoring

Power supply	Min.	Typical data	Max.
supply voltage	4.5 V	5.0 V	5.5 V
supply current	100 mA		
Current measurement			
resistance value of the shunt	100 $\mu\Omega$		
nominal current range	± 300 A		
sampling rate (dual mode)	1750 S/sec		
error	$\pm(0.1\% + 20 \text{ mA})$		
resolution	10 mA		
max. current	1500 A for 1 sec.		
Voltage measurement			
voltage range	± 600 V		
error	$\pm(0.1\% + 100 \text{ mV})$		
resolution	20 mV		
Interface: SPI clock rate	1 MHz		2 MHz
Over current detection (in 10 A steps)	300 A		500 A



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Member of
AMA



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



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

Ausgabe 04/2009

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