

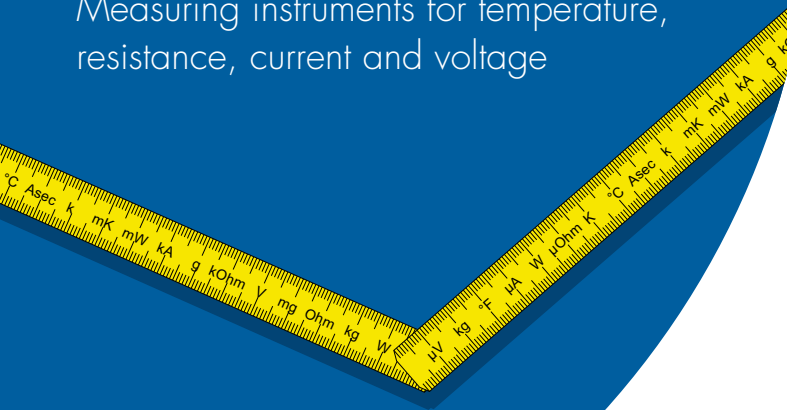


ISABELLENHÜTTE

# Precision landing

More precise. More comfortable.

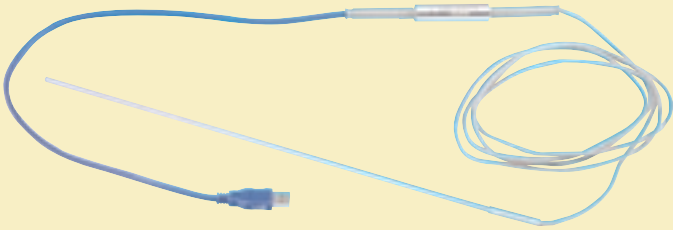
Measuring instruments for temperature,  
resistance, current and voltage



# Temperature

## ITS-RTD

Temperature measurement with extremely high system accuracy (precision)



### Applications:

- Laboratory
- Research
- Quality assurance
- Inspection equipment monitoring
- Temperature traceability
- Calibration labs

### Characteristics:

- Precision data acquisition system ISA-ASIC (active component)
- Low noise measuring system with a resolution of 16 to 20 bit
- Resolution at the entire temperature range 4 mK
- Precision in its delivery status 50 - 100 mK
- Different types of Pt100-sensors
- Temperature range -100 to 600 °C (depending on sensor)
- Connection to PC/laptop
- Windows® 2000/XP/Vista (32-bit) operating system

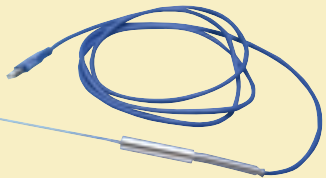
### Customer benefits:

- Highly accurate temperature measuring and calibration system
- Single and continuous measurements possible
- Temperature measurement in °C, °F, or K
- Software included and ActiveX DLL available
- Graphics and data logger function (for evaluation with standard software)
- Parallel operation of several ITS-RTD's on one PC
- Optional DKD-calibration by ISABELLENHÜTTE
- Unique measurement accuracy/precision combined with high efficiency

# Temperatur

## ITS-TC

Temperature measurement with high system accuracy (precision) in a broad temperature range



### Characteristics:

- Precision data acquisition system ISA-ASIC (active component)
- Low noise measuring system with a resolution of 16 bit
- Resolution in the entire temperature range 50 mK
- Precision in its delivery status 0.5 - 1.5 K
- Special type of thermo couple with Inconel coating
- Temperature range -200 to 1200 °C
- Integrated data acquisition and processing
- Connection to PC/laptop
- Windows® 2000/XP/Vista (32-bit) operating system

### Applications:

- Laboratory
- Research
- Quality assurance
- Inspection equipment monitoring
- Service
- Controlling temperature sources

### Customer benefits:

- Accurate, easy and robust temperature measurement on the basis of thermo couples
- Single and continuous measurements possible
- Temperature measurement in °C, °F, or K
- Measurement of fast changes in temperature
- Software included and ActiveX DLL available
- Graphics and data logger function (for evaluation with standard software)
- Parallel operation of up to 10 ITS-TC's on one PC
- Optional DKD-calibration by ISABELLENHÜTTE
- High system accuracy combined with excellent efficiency

# Resistance

## IMR-B-R020

USB precision true micro Ohm meter for measuring DC resistance and temperature



### Applications:

- Cable production
- Manufacture and test of low-ohmic resistors
- Test at cable connections
- Test at contact resistance

### Characteristics:

- High precision due to offset-free and low-noise ISA-ASIC (active component)
- Measurement in 4-wire True Ohm technology
- Resolution up to 10 mOhm
- Measurement currents in a range between 300  $\mu$ A and 2.4 A
- High measurement frequency possible
- 4-wire Pt100 input
- Connection to PC/laptop
- Windows® 2000/XP/Vista (32-bit) operating system

### Customer benefits:

- Highest precision in a handy size
- Software included and ActiveX DLL available
- Graphics and data logger function (for evaluation with standard software)
- Real-time data acquisition
- Calibration at factory, optional DKD calibration certificate
- Measurement of external temperatures
- Compensating of temperature coefficient of the DC-resistance
- Three predetermined materials (copper, aluminium, and nickel) plus one free input of the temperature coefficient selectable

# Current source

## ICS-A-I 500

Pulsed current source and current sink with extreme precision



### Characteristics:

- Reference measuring system (IMRS) for current, voltage and temperature
- Programmable current source (pulsed)  $\pm 500$  A, 16 bit
- Programmable current source (continuous)  $\pm 50$  A, 16 bit
- Internal current measurement  $\pm 500$  A
- Internal temperature sensor  $-40$  to  $140^{\circ}\text{C}$
- Connection and control via PC/laptop
- Windows® 2000/XP/Vista (32-bit) operating system

### Applications:

- Test laboratories
- Calibration laboratories
- Automotive industry
- Battery testing
- Testing of power management systems

### Customer benefits:

- High accuracy and stability
- Internal high current source powered by  $6/12\text{V}$  battery or external power supply
- Timing of output current regulation can be chosen (test routines)
- External hardware trigger enable the integration to complex test and control systems
- Software included
- Accessories: IUR-A-R000 for battery testing systems

# Current

## IUR-A-R0001

USB data acquisition system for current, voltage, differential voltage, and temperature



### Applications:

- Laboratory
- Service
- Mobile use
- Test benches
- Calibration systems

### Characteristics:

- Current measurement up to 1500 A; resolution up to 1 mA
- DC voltage measurement -20 V to +20 V; resolution 0.1 mV
- External differential voltage -120 mV to +120 mV
- External temperature measurement (Pt100, 4-wire) -100 to +400 °C
- Connection to PC/laptop
- Windows® 2000/XP/Vista (32-bit) operating system

### Customer benefits:

- Highest precision in a compact and lightweight design
- Powered via USB 2.0
- Calibration at factory, optional DKD calibration certificate
- Software included and ActiveX DLL available
- Graphics and data logger function (for evaluation with standard software)
- Data acquisition system for mobile use with any PC or laptop

# Current

## IHC-A-R0000 1

Electrically isolated current and voltage measurement system for use on the bus bar; for very high currents.



### Characteristics:

- Temperature range -20 °C to 60 °C
- Resistance values 5 to 15  $\mu\text{Ohm}$
- Internal temperature resistance ( $R_{thi}$ ) < 0.2 K/W
- Power supply 24 V, 50 mA
- Isolated RS232 interface
- Manifold measurement functions

### Customer benefits:

- Compact current and voltage measurement module
- High current measurement ability (+/- 1000/2000 A)
- For use directly on the bus bar
- Highest measurement accuracy 0.1%
- High data acquisition speed

### Applications:

- Stationary, battery-buffered power supplies
- Current and voltage monitoring in control cabinets
- Ah-meter
- Electroplating facilities
- Wind power stations
- Heavy drives

# ISABELLENHÜTTE

## Precision Measurement

As a modern company with a long tradition, Isabellenhütte Heusler GmbH & Co. KG employs just under 500 people. The measuring instruments produced at the manufacturing base and company location in Dillenburg distinguish themselves through their high precision and practical, comfortable operation – combinations of characteristics are often unique.

Their extraordinary performance data are achieved through decades of experience in measuring technology applications: Isabellenhütte is a worldwide leader in thermal electrical and resistance alloys as well as in low-ohmic resistors.

As one of the first companies worldwide, Isabellenhütte was able to achieve a highly precise measurement of current, voltage and temperature in automotive vehicles. The ISA-ASIC developed to this end is an extremely low-noise, offset-free 4-channel measuring system with 16-bit resolution and high linearity that is part of many precision measuring technology products.

Isabellenhütte operates its own DKD-certified laboratory and can deliver the instruments calibrated as well as with a DKD calibration certificate.

**Precision you can rely on.**



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