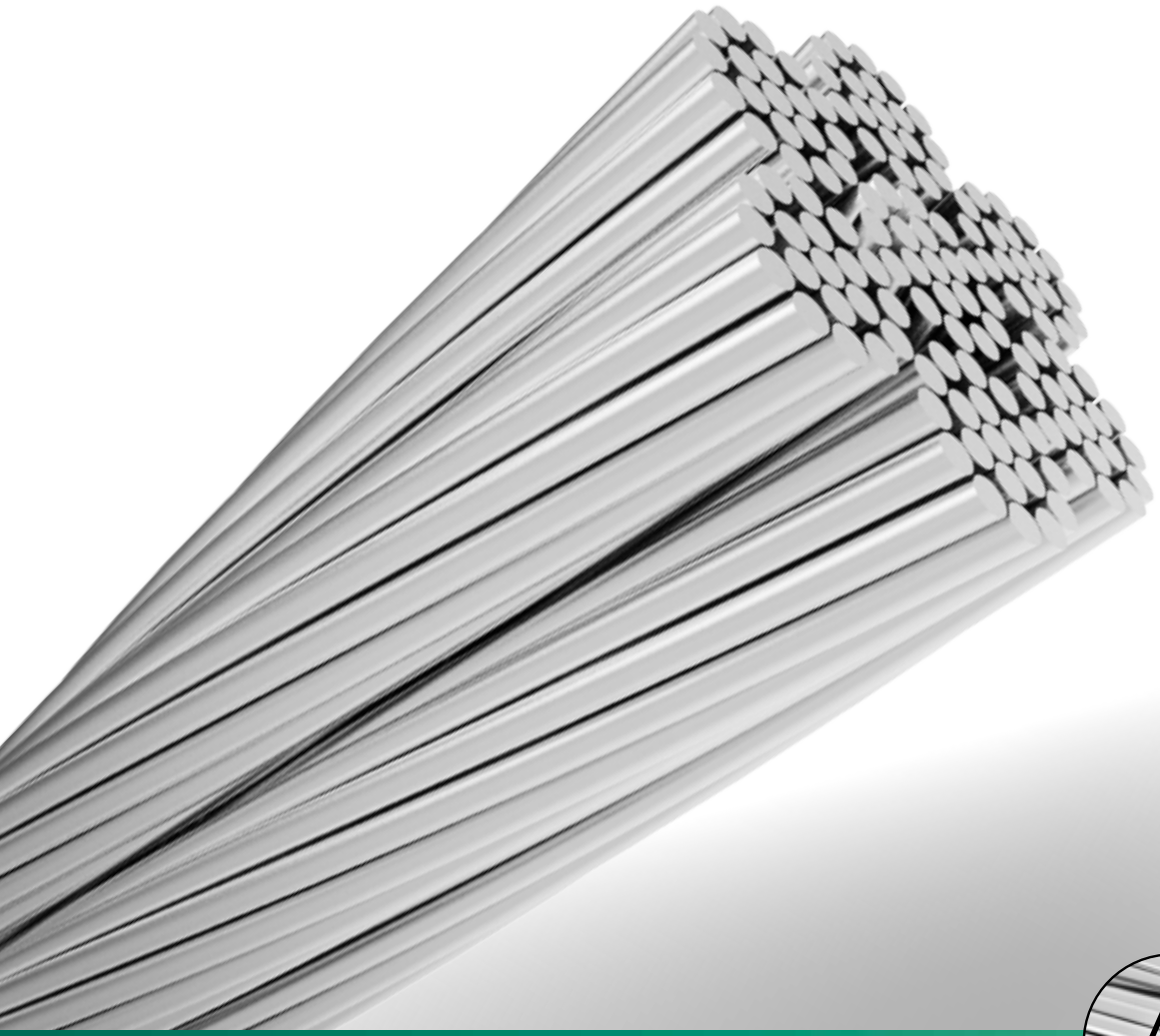
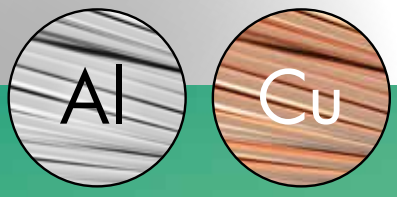
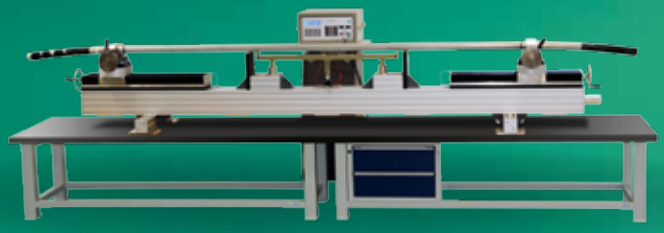
CABLE MEASUREMENT

burster







Precision to the core.

PRECISION MEASUREMENT FOR PRODUCTION MONITORING AND QUALITY CONTROL IN THE CABLE INDUSTRY

burster System 2383 – The New Generation of Cable Precision Measurement.

FOR PRODUCTION MONITORING AND QUALITY CONTROL OF ALUMINIUM AND COPPER POWER CABLES.

PIONEERING QUALITY ASSURANCE FOR ELECTRIC POWER CABLES

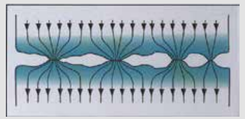
The new maintenance-free clamping technology 2383 is designed to measure the resistance of aluminium and copper cables for precisely reproducible results. A short cable sample is enough. Suitable for cable cross-sections up to 2500 mm².

One solution for two materials

The system is designed to cover the special requirements of aluminium. However copper cables can also be measured precisely – versatility that pays off.

The challenge of aluminium cables

The rapid formation of an oxide film and impurities between the wire strands of aluminium cables are the reason why standard clamping systems simply can't generate enough force to overcome the barriers and meet the requirements: as a result the measurement is less precise and non-reproducible.



Current paths.
Contact points between the individual strands.

burster system 2383 – the unrivaled power solution for aluminium cables

By applying forces of up to 100 kN the new clamping technology of burster overpowers whatever thick oxide film. The uniform power supply is ensured. Due to an exact dosing of the applied torque, reproducible reference values for resistance are achieved.

A bonus for efficiency and safety

You obtain expedient and comparable control parameters for your production planning aimed at optimizing material deployment and cost cutting. Furthermore burster resistance measurement ensures documented proof that your aluminium or copper wire batch complies with customer requirements.

Precise measurement results

The exceptionally accurate measurement of the RESISTOMAT® 2304 ohmmeter creates a sound data basis for your quality management.

Flexure-free sample fixation

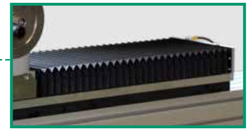
A mechanical wheel is used to reliably set the length of the cable sample. In combination with the clamp's high fixation force the measurement can be performed in a virtually straight position. By this the measurement results are independent of this influencing factor.

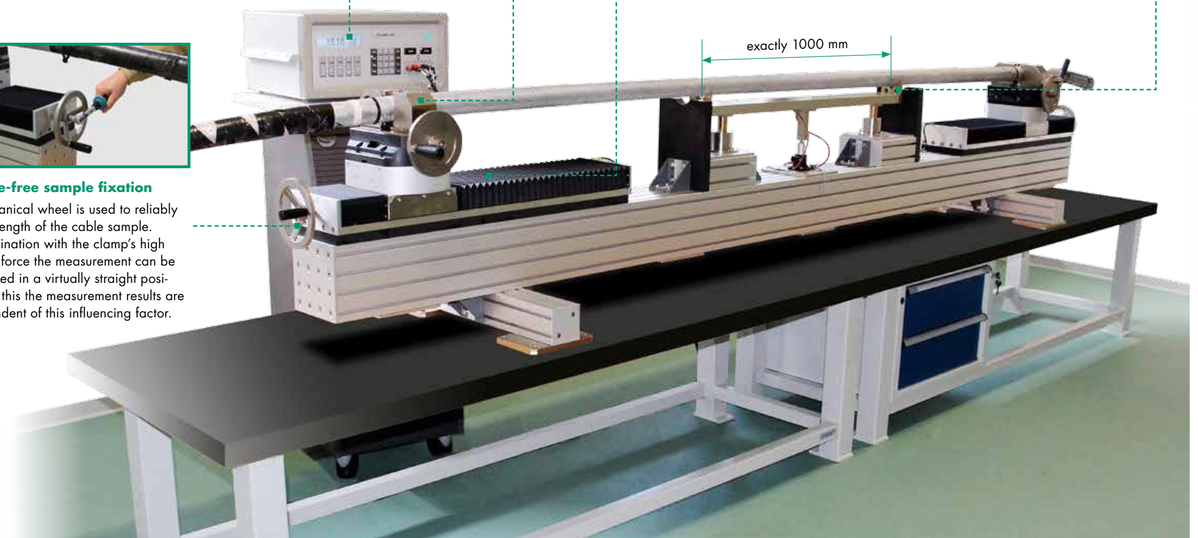
Symmetrical cable mount

Uniform mounting of the cable sample is always ensured by the special geometry of the clamping jaws. No bending or sample preparation needed. The clamping jaws optimally transfer their tremendous force to the cable probe.

Precision based on exact distance

Adjustability of the distance between the power input and the measurement point ensures correct results and allows the sample to be shortened from 3.40 m to 2.20 m, saving material and easing the handling.





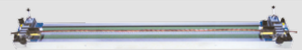
Reproducibility due to exact temperature values

Copper respectively aluminium changes its resistance by around 0.4 %/K. In order to create clearly defined measurement conditions despite temperature fluctuations the RESISTOMAT® 2304 ohmmeter is connected to a calibrated RTD sensor.

CLAMPING DEVICES FOR STRANDED COPPER CABLES, ALUMINIUM AND COPPER WIRES

- Measure wire resistance precisely in combination with a digital ohmmeter from the burster RESISTOMAT® series.
- Designed in four-wire technology – thus eliminating measurement leads and contact resistances.
- Temperature compensation for Al and Cu.
- Interface for RS232, USB and Ethernet.
- PC software available.

Clamping device model 2381



- For use in production monitoring, quality assurance and general compliance testing
- Designed as robust, warp-resistant, light-metal rail with one movable and one rigid clamping device
- Measuring length 50 – 1000 mm
- Clamping device designed for sample cross-sections of 0.1 mm² up to approx. 100 mm². Larger cross-sections are also technically feasible.
- **Optional:** guide rail model 2388, as support and guidance of the samples and as protection from air draughts and fast temperature changes on the cable probes

RESISTOMAT® 2316

- Range 2 mΩ up to 200 kΩ
- Resolution up to 0.1 µΩ

Clamping device model 2381-V001

- Measuring length 1000 mm, sample cross-sections from 1 mm² up to 1500 mm² (max. diameter 44 mm)
- Large distance between current and voltage tap ensures uniform current distribution
- Adjustable clamping support for sample straightening, particularly advantageous for larger cross-sections
- **Optional:** Customized clamping jaws and taps for sample cross-sections of up to 2500 mm² (max. diameter 57 mm)

RESISTOMAT® 2304

- Range 200 µΩ up to 20 kΩ
- Resolution up to 1 nΩ

Clamping device model 2382 L

- Measurement of resistance on wires, rails, cables or sector conductors for power cables
- Measuring length 1000 mm, sample cross-sections from 1 mm² up to 1500 mm² (max. diameter 44 mm)
- Water bath for exact temperature measurement through a built-in temperature controller. Digital ohmmeter RESISTOMAT® 2304 ensures the automatic adjustment of the measured value display to the nominal value at 20 °C
- **Optional:** Customized clamping jaws and taps for sample cross-sections of up to 2500 mm² (max. diameter 57 mm)

RELIABLE CALIBRATION

The entire measurement system can be easily, quickly and reliably verified by the use of the Copper or Manganin calibration rod which comes with a DAkkS Calibration Certificate. Series 1240 calibration resistances can be used to review the digital ohmmeter.

Our Service Portfolio.

TO MAKE QUALITY MEASURABLE AND HAPPEN.

CABLE MEASUREMENT burster

3 STEPS TO GET YOUR QUOTATION FOR THE RIGHT EQUIPMENT

STEP 1

Download the necessary form at www.burstercablemeasurement.com, fill-in measurement requirements and return it to cable@burster.com.

STEP 2

We will evaluate and suggest the most economic equipment for your application. Optional: You send probes of scope of wire, especially aluminium. We will evaluate to make sure you have the right equipment, and let you know what measurement results to expect.

STEP 3

You will receive a firm quotation from us.

BURSTER CABLE MEASUREMENT LAB

- Aluminium and copper measurements – stranded and single wire
- Video conference via Skype to participate in measurements and discuss the results

PC SOFTWARE

Optional software for measurement control, data acquisition and documentation

- Live tracking, for temperature and resistance
- Operator support for correct measurement (no measurement report without stable measurement and full measurement information), instruction for unskilled staff
- Expert mode for measurement research and new specimen to set correct parameters (clamping force, twisting, accuracy requirements etc.)
- Metric and imperial units
- English language
- Remote PC software update possible, service agreement for future operating systems and optional support
- Surcharge for optional customization
- Standard PC with WIN 7/8 operation system to be supplied by customer
- RS232 or USB interface required for connection of measurement equipment
- Free Ethernet for PC to network connection

YOUR DIRECT CONTACT TO BURSTER CABLE MEASUREMENT

Do you have any queries about our products or would you want us to assist you with personal application advice? Please feel free to contact us directly.

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