



# High Temperature Calibrators

**SIKA**<sup>®</sup>  
gegr. 1901  
Dr. Siebert & Kühn GmbH & Co. KG

Series TP 28 000 HT



# The professional solution for all high temperatures

## Measuring and Calibration up to 1300 °C

Economic, safe, reliable and high quality working at temperatures up to 1300 °C.

Inaccurate temperature measurement reduces product quality, increases the risk of faults and leads to an increase in energy consumption.

Temperature sensors which are used in high-temperature zones in particular are subjected to drift the longer they are used. Impurities from the surrounding, often aggressive, atmosphere reduce the service life and impair the accuracy of the sensors.

Only regular calibration of the sensors provides information on the difference between the actual and the measured temperature and thus makes the specific drift visible. In sensor production, tolerances of thermocouples and resistance thermometers for high-temperature ranges can only be determined or documented exactly by calibration.

### No more burnt fingers! 1300 °C portable.

For the first time, the TP 28 000 HT series enables laboratories and service technicians to carry a high-temperature calibrator for temperatures up to 1300 °C with them.

The heating block consisting of a high-temperature alloy can be heated in 0.5 K steps to 1300 °C. Ceramic fibre insulation ensures that the housing remains lukewarm, even where the interior remains hot for a long time.



### Inspection equipment monitoring acc. DIN ISO 9000 ff

The high-temperature calibrators can be supplied optionally with a certificate from the German Calibration Service (DKD) or a SIKa works test certificate. This shows that the appliances, as required by DIN ISO 9002 "quality assurance element - control of inspection, measuring and test equipment", are recognized and confirmed by national standards.

### Operating

The block temperature is programmed by means of the keys on the front of the appliance and can be set exactly to 0.1 K. The 4 ½ digit display shows the block temperature and alternatively the temperature measured by the test piece. The switchable measuring input enables calibration of up to 6 different types of sensors as well as temperature switches and thermostats.

The test piece is inserted in a 200 mm deep hole with a diameter of 18 mm and/or 28 mm. The optimum thermal coupling (heating block to test piece) is achieved by means of adapter sleeves specific to sensor diameter.

### Interface and software

The calibrators are supplied fitted with a standard digital interface (RS232C). Analogue outputs for block and test piece temperatures are options.

The TP 28 000 HT SIKa calibrators can be controlled by an external computer via the RS232C interface. In combination with our calibration and test software appliances the TP 28 000 HT series are particularly efficient for use in development, production, quality assurance and after-sales service.

Static and dynamic calibration and test routines as well as static evaluations of serial tests can be easily and quickly programmed using the menu and can be carried out automatically.

During test operations the data of block and sensor temperature as well as the switching points of temperature detectors are transmitted continuously via the RS232C interface. Our software package can be used to display the data in table and graphic form.

We can also supply tailor-made documentation in the form of works test certificates or calibration certificates. The saved test data can be transmitted to higher-level quality data management systems (QDMS). In this way, delivery and production quality can be rapidly monitored or increased.



## Technical data



| Device type                        | TP 28 850 E  | TP 28 850  | TP 28 1300                          |
|------------------------------------|--|--|-------------------------------------|
| Temperature range                  | RT...850 °C  |  | 400...1300 °C                       |
| Tolerance                          | ±0,5 °C  |  | ±2 °C                               |
| Stability                          | ±0,05 °C   |  | ±0,5 °C                             |
| Resolution                         | 0,01 °C (up to 200 °C)<br>0,1 °C (200 °C to 850 °C)  | 0,1 °C   | 0,5 °C                              |
| Display                            |  |  |                                     |
| Block temperature display          | 2-line LCD,<br>16 digits   |  | 4½-digit, 1-line LED,<br>14 mm high |
| Electronic display                 | Block and set temperature  | Block temperature or test piece temperature  |                                     |
| Unit                               | °C / °F (optional)   |  |                                     |
| Devices                            | Membrane keyboard  | Keyboard and rotary switch   |                                     |
| Test piece fixture                 |  |  |                                     |
| Block material                     | High-temperature alloy / ceramics  |  |                                     |
| Block bore                         | 18 mm or 28 mm   |  | 28 mm                               |
| Block depth                        | 100 mm or 200 mm   |  | 200 mm                              |
| Adapter sleeves                    | Inside diameter between 1.5 mm and 15.5 mm in steps of 0.5 mm<br>(up to 25 mm for block bore 28 Ø) |  |                                     |
| Equipment features                 |  |  |                                     |
| Interface                          | Serial RS232C incl. protocol   |  |                                     |
| Integrated measuring instruments   |  | Pt 100 / 2- or 3-wire acc. to DIN EN 60751: 1996<br>NiCr-NiAl, type K acc. to DIN EN 60584-1: 1996<br>Pt 10 % Rh-Pt, type S acc. to DIN EN 60584-1: 1996<br>Pt 13 % Rh-Pt, type R acc. to DIN EN 60584-1: 1996<br>Pt 30 % Rh-Pt 6 % Rh, type B, DIN EN 60584-1: 1996<br>Fe-CuNi, type J acc. to DIN EN 60584-1: 1996<br>Temperature switches and / or thermostats<br>Norm signal 0 (4)...20 mA (option)<br>Customer specific measuring inputs (option) |                                     |
| General Data                       |  |  |                                     |
| Power supply                       | 230 V, 50/60 Hz  |  |                                     |
| Power consumption                  | approx. 2000 VA  |  | approx. 1000 VA                     |
| Dimensions (D x W x H)             | 410 x 290 x 415 (515) mm   |  | 510 x 290 x 415 mm                  |
| Weight                             | approx. 16 kg  |  | approx. 25 kg                       |
| Options                            |  |  |                                     |
| Accessories                        | Service and transport case, robust aluminium version   |  |                                     |
| SIKA calibration and test software | Step tests, calibration runs, ramp functions   |  |                                     |
| Certificates                       | DKD-certificate acc. to DKD-R5-4, SIKA works certificate   |  |                                     |
| Other units                        | Temperature display °F   |  |                                     |