

## TP 3M 255 E

### Type TP 3M 255 E



#### Scope of delivery

- Test certificate
- Mains cable
- Insert exchange tool
- PC- and network cable
- Operating manual
- Sensor basket, suction pump, transport cover
- Magnetic stirrer with magnet lifter
- Sensor lid with 5 silicone plugs

#### Optional accessories

- Transport case
- Adapter sleeve
- Tube insert
- Infrared calibration sleeve
- Surface calibration sleeve
- External reference sensor TF 255-3-300
- PC software
- Network-switch, barcode-reader, WLAN-router
- DAkkS certificate
- Works certificate

#### Technical data

<b>Type</b>	TP 3M 255 E
<b>Control sensor</b>	Switchable internal / external
<b>Micro Bath</b>	
<b>Temperature range</b>	RT...255 °C
<b>Tolerance</b>	±0.1 °C
<b>Stability</b>	±0.05 °C
<b>Measurement zone</b>	110...150 mm
<b>Dry block</b>	
<b>Temperature range</b>	RT...255 °C
<b>Tolerance</b>	±0.3 °C
<b>Stability</b>	±0.05 °C
<b>Measurement zone</b>	123...163 mm
<b>Infrared</b>	
<b>Temperature range</b>	RT...255 °C
<b>Tolerance</b>	±0.5 °C
<b>Stability</b>	±0.05 °C
<b>Measurement zone</b>	110 mm
<b>Surface</b>	
<b>Temperature range</b>	RT...200 °C
<b>Tolerance</b>	±1 °C
<b>Stability</b>	±0.2 °C
<b>Measurement zone</b>	
<b>Block</b>	
	Ø 60 mm / depth 170 mm
<b>Display</b>	
<b>Display</b>	Brilliant Color-Touchscreen (7") Viewing angle 120...140° Brightness 400 cd / m² Unit °C / °F
<b>Display range</b>	-50...165 °C
<b>Resolution</b>	0.1 / 0.01 / 0.001 °C
<b>General data</b>	
<b>Dimensions</b>	
→ Width	210 mm
→ Height	380 + 50 mm
→ Depth	300 mm
<b>Weight</b>	Approx. 13 kg
<b>Power supply</b>	100...240 VAC, 50 / 60 Hz
<b>Power consumption</b>	Approx. 400 VA



# Overview temperature calibrators

	TP Basic				TP Solid			
-55...200 °C			TP 17 200		TP 17 200 S			
-35...165 °C		TP 17165 M	TP 17 165	TP 17 166	TP 17 165 S		TP 17 166 S	
-10...100 °C					TP 17 Zero			
RT...200 °C	TP 18 200 E							
RT...225 °C								
RT...255 °C								
RT...450 °C				TP 17 450			TP 17 450 S	
RT...650 °C		TP 17 650 M	TP 17650		TP 17 650 S			
RT...850 °C	TP 18 850 E					TP 28 1300 E		
400...1300 °C								
Metrology*								
Best Resolution	1 °C	1 °C	0.1 °C	0.1 °C	0.01 °C	0.5 °C	0.01 °C	
Stability	0.1 °C	0.1 °C	0.1 °C	0.1 °C	0.05 °C	0.5 °C	0.05 °C	
Tolerance	1 °C	1 °C	< 0.8 °C	< 0.6 °C	< 0.4 °C	2 °C	< 0.3 °C	
Testholder								
Block Ø	18 / 28 mm	28 mm	28 mm	60 mm	28 mm	18 / 28 mm	60 mm	
Dry block	✓	✓	✓	✓	✓	✓	✓	
Infrared							✓	
Microbath								
Surface								
Scope of delivery								
PC connection					✓	✓	✓	
External reference connection								
Internal precision measuring instrument								
Data logger function								
Controller OFF			✓	✓	✓		✓	
Manual control			✓	✓	✓		✓	
Set-value memory					✓		✓	
Temperature levels					✓		✓	
Gradient control					✓		✓	
Periodic counter	✓	✓	✓	✓	✓		✓	
Optional accessories								
Transport case	✓	✓	✓	✓	✓	✓	✓	
Service transport bag**		✓	✓	✓	✓		✓	
PC software					✓	✓	✓	
PC cable					✓	✓	✓	
Precision measuring instrument								
External calibration reference sensor								

\* The specifications listed are for guidance.

Detailed information can be found on the individual product pages.

\*\* For calibrators with slim body only

53

# Accessories

## Adapter sleeves

Dry-block calibrators are designed to simplify temperature calibration in the lab and in the field. With the help of adapter sleeves, straight temperature sensors with almost any length and diameter can be calibrated. The dry block covers the entire temperature range of the calibrator with no need for changing the calibration medium. Viscosity, flash point and outgassing are of no concern. Every adapter sleeve can be equipped with a single or several multi bores. Bores with diameters ranging from 1.5 to 25.5 mm can be realised in 0.5 mm steps. Ideally, the internal diameter of the sleeve is 0.5 mm larger than the outer diameter of the test item.

## Calibration liquids

Using a liquid calibration medium is advantageous for checking temperature sensors with unusual shapes or dimensions. The test item is immersed in the liquid without an insulating air gap, resulting in direct contact between the calibrator and the test item. The calibration liquid is chosen according to the desired calibration temperature. The sensor lid with 5 silicone plugs and / or a support base ensures the stable positioning of the test items in the calibration bath. The lid reduces heat emission over the surface of the liquid, thereby ensuring optimum measurement results.

	Demineralised water	Silicone oil 10 CS	Silicone oil 20 CS	Silicone oil 50 CS
Limits	2...95 °C	-35...155 °C	7...220 °C	50...270 °C
Flash point		165 °C	230 °C	280 °C

## Tub insert

Our tub insert is the ideal solution for applications in which a variety of liquids are used. It eliminates the time-consuming task of exchanging the liquids and cleaning the bath. The separate tub insert is just as leak-proof as the bath itself.

## Calibration and testing software

The in-house calibration software application is used for temperature calibrators that are equipped with an external interface for programming and evaluating the calibration values. It can be operated easily from an external PC. The following calibration tasks can be performed:

- Programmable ramp functions
- Programmable temperature cycles
- Series tests (e.g. for incoming goods inspection)
- Preparing the test data in graphical and in tabular form
- Incorporating customer data in the certificates
- Programmable temperature gradients



## For your test equipment monitoring

### TT-Scan

Resistance thermometers, thermocouples, temperature transmitters and switches must be calibrated using an instrument that measures the output signal and displays it as a temperature.

Checking groups of temperature sensors can be automated by extending your SIKA calibrator with a TT-Scan unit and calibration software. Up to eight test items can be checked at the same time with this arrangement. The configuration of the test item type is free programmable. A reference sensor can be connected. The TT-Scan unit has a USB port for connection to a PC. SIKA calibration software analyses the measurement data and presents the results in graphic or tabular form. At the same time it automatically generates up to 8 certificates, which may also include customer data.

