

# Temperature Calibrator TP 37700E.2

## TP Premium Series // Dry block // RT...700 °C



Type	Highlights
TP37700E.2	<ul style="list-style-type: none"> <li>• Highest temperature range of the TP Premium Series</li> <li>• Fastest stabilization times on the market</li> <li>• Use of an extremely resilient metal alloy for long service life</li> <li>• Patented touch screen function</li> <li>• Measuring instrument with two channels and best accuracy</li> <li>• Test equipment management with barcode scanner (accessory)</li> <li>• Available with integrated measuring instrument → TP 37700E.2i</li> </ul>

Technical data	
Type	TP 37700E.2
Temperature range*	Room temperature (RT)...700 °C**
Calibration volume	Ø 29 x 150 mm
Dry block Air Shield Insert***	Ext. Reference sensor
Accuracy	±0.27 °C
Temperature stability	±0.015 °C
Temperature distribution	
→ Axial	±0.400 °C
→ Radial	±0.020 °C
Influence of load	±0.020 °C
Homogeneous temperature zone	Bottom 40 mm of the sleeve
Dry block***	Int. Reference sensor
Accuracy	±0.43 °C
Temperature stability	±0.100 °C
Temperature distribution	
→ Axial	±0.400 °C
→ Radial	±0.040 °C
Influence of load	±0.180 °C
Homogeneous temperature zone	Bottom 40 mm of the sleeve

\* At ambient temperature 20 °C / 68 °F

\*\* The TP 37700 can be operated up to 700 °C. For physical reasons, it achieves the best accuracy at temperatures up to 660 °C. For temperatures between 660 and 700 °C we recommend the use of a separate reference thermometer.

\*\*\* All values determined at 660 °C

General data	
<b>Type</b>	TP 37700E.2
<b>Stabilisation time</b> (with external reference) → to $\pm 0,05^{\circ}\text{C}$ → to $\pm 0,005^{\circ}\text{C}$	From 1 min From 5 min
<b>Heating time</b> → RT...Tmax -10 °C	19 min
<b>Cooling time</b> → Tmax...RT +10 °C	85 min
<b>Resolution</b>	0.1 / 0.01 / 0.001 °C (selectable)
<b>Hysteresis</b>	$\pm 0.015^{\circ}\text{C}$ (part of the display accuracy)
<b>Temperature units</b>	°C / °F / K (selectable)
<b>Control sensor</b>	Internal / external (selectable)
<b>Interface</b>	Ethernet, 3 x USB
<b>Dimensions</b> → Width → Height → Depth	210 mm 330 mm + 50 mm (handle) 300 mm
<b>Weight</b>	10.0 kg
<b>Power supply</b>	100...240 VAC, 50 / 60 Hz
<b>Power consumption</b>	Approx. 1000 W
<b>Adjustable temperature range</b>	0...700 °C
<b>Display</b>	Brilliant color touchscreen (7 inches), multi panel safety glass
<b>Approvals</b>	
  	

# TP 37700E.2i // with integrated measuring instrument

Technical data	
<b>DUT inputs - Resistance thermometer</b>	
Number of channels	2
Connection	4x 4 mm safety socket per channel
Connection type	2-, 3-, 4-wire technology
Resistance range → Pt100 → Pt1000	0...400 Ω 0...4000 Ω
Accuracy → Pt100 → Pt1000	±0.03 °C ±0.06 °C
<b>DUT inputs - Thermocouple</b>	
Number of channels	2
Connection	2x thermocouple socket [mini]
Measuring range	-10...100 mV
Accuracy cold junction	±0.3 °C
Accuracy → Type K → Type J → Type N → Type E → Type T → Type R → Type S	±0.08 °C ±0.07 °C ±0.13 °C ±0.06 °C ±0.09 °C ±0.78 °C ±0.73 °C
<b>Standard signal input (Current)</b>	
Number of channels	1
Connection	4 mm safety socket
Measuring range	0...24 mA
Accuracy	0.01 % full scale
<b>Standard signal input (Voltage)</b>	
Number of channels	1
Connection	4 mm safety socket
Measuring range	0...12 VDC
Accuracy	0,01 % full scale
<b>Switch test</b>	
Number of channels	2
<b>Transmitter supply</b>	
Output current	Max. 24 mA
Output voltage	24 VDC

## TP 37700E.2 // Order numbers

To order a complete calibrator, you need three order numbers:

1. Calibrator type	EP37 xx x x xxxxxx
2. Linearisation	EK1 x x x x x x x x x x
3. Adapter sleeve / insert	EZxxxxxxxxxxxx

In addition, depending on your individual calibration requirements, you can order additional adapter sleeves, necessary certificates and other accessories.

Order code				
1. Calibrator type				
Temperature range	Function	Block [mm]	Power supply	
RT...700°C	Dry block	Ø 29 x 150	110...240 V	EP37 70 2 2915U3
Integrated measuring instrument				
Without				0
With				I
<b>Example order number calibrator</b>				<b>EP37 70 I 2 2915U3</b>

**Note:** Each 13-digit article number „Linearization“ starts with „EK1“, the following letters („short designation“) indicate the selected calibration function. You can also select several functions from one category. Please enter the calibration functions in alphabetical order and fill in any remaining digits with „0“.

Order code											
2. Linearisation											
Function	Insert / calibration medium			Reference sensor			Short designation				
Dry block	Air Shield Insert			external			A				
Example order number linearisation											
Function:		1	2	3	4	5	6	7	8	9	10
Order number:	EK1	A	0	0	0	0	0	0	0	0	0

Order code				
3. Adapter sleeve / Calibration insert				
Bore holes [mm]	Function	Block [mm]	Material	Order number
Air Shield Insert (ASI) incl. one bore hole by choice	Air Shield Insert	Ø 29 x 150	Aluminium bronze	Please indicate bore holes in your order

Bestellcode	
<b>4. Calibration certificate - Select your certificates as required*</b>	<b>Artikelnummer</b>
SIKA Works calibration certificate for first function	EKTPWP1FKT
SIKA Works calibration certificate for second function	EKTPWP2FKT
SIKA Gold Service Works calibration certificate	EKTPGOLDWP
SIKA Gold Service Works calibration certificate DAkKS	EKTPGOLDDAKKS
DAkKS calibration certificate for first function	EKTPDAKKS1FKT
DAkKS calibration certificate for second function	EKTPDAKKS2FKT
Additional test point DAkKS calibration certificate	EKTPDAKKSZUSP
SIKA Works calibration certificate int. measuring instrument (Pt100, Type K)	EKTPWPM1
SIKA Works calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J)	EKTPWPM2
SIKA Works calibration certificate int. measuring instrument (Pt100, Type K, mA, V)	EKTPWPM3
SIKA Works calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J, mA, V)	EKTPWPM4
SIKA Works calibration certificate each additional measuring input of your choice (Pt 500, Pt1000, Type J/N/E/T/R/S, mA, V)	EKTPWPMIZUS
SIKA Works calibration certificate complete (Pt100, Pt 500, Pt1000, Type K/J/N/E/T/R/S, mA, V)	EKTPWPMIKOMPL
DAkKS calibration certificate int. measuring instrument (Pt100, Type K)	EKTPDAKKSMI1
DAkKS calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Typ J)	EKTPDAKKSMI2
DAkKS calibration certificate int. measuring instrument (Pt100, Type K, mA, V)	EKTPDAKKSMI3
DAkKS calibration certificate int. measuring instrument (Pt100, Pt1000 Typ K, Type J, mA, V)	EKTPDAKKSMI4
DAkKS calibration certificate each additional measuring input of your choice (Pt 500, Pt1000, Typ J/N/E/T/R/S, mA, V)	EKTPDAKKSIMIZUS
DAkKS calibration certificate complete (Pt100, Pt 500, Pt1000, Typ K/J/N/E/T/R/S, mA, V)	EKTPDAKSKOMPL

Order code	
<b>5. Accessories</b>	<b>Artikelnummer</b>
<b>Transport case</b>	
Without trolley attachment frame	EZTPKOFFER003
With trolley attachment frame	EZTPKOFFER003TG
<b>More accessories</b>	
External reference sensor TF 660-4.5-300 (RT...700 °C), straight	W454P413000GX0A3
Network switch	XE2103
Barcode scanner	XE2102
W-LAN router	XE2101
DUT sensor for demo purposes (Pt100 3-wire), for int. measuring instrument	WMQMP31020050003
Bore divider for Air Shield Insert: 3 x Ø 3 mm probes from Ø 9 mm bore hole	XE2194
Instruction to the temperature calibrator by SIKA field service	EKTPEINWEISUNG
Packaging for calibrator return (for example for recalibration)**	098V

\* Each calibrator comes with a standard test certificate.

\*\* Please indicate the calibrator model when ordering.

