Pocket Temperature Calibration and Measurement Instrument DIGISTANT®

Model 4417

Code:	4417 EN
Delivery:	4 weeks
Warranty:	24 months

NEW

- **Calibration and measurement instrument for 10 thermocouples types (K, E, J, T, R, N, R, S, B, L, U)**
- **Internal and external reference junction**
- **Calibration and measuring instrument for Pt100**
- **Calibration and measuring instrument for mV**

Application

The portable, exceptionally handy temperature and process calibrator is ideally suited for on-site use.
Model 4417 is always an inexpensive solution when it comes to measuring and calibrating temperatures in service operations, commissioning or fast inspection of a measuring chain.

The DIGISTANT® model 4417 measures and simulates thermocouples of types K, E, J, T, N, R, S, B, L and U according to DIN EN 60584 and resistance sensor Pt 100 according to DIN EN 60751.

The measured or simulated value is displayed in °C or °F. In addition to this, it is possible to enter and measure up to 110 mV of voltage.

The exceptional stability of the output signal for calibration allows for very effective testing of the reliability of the inspected devices.

Description

Operation is carried out via the UP/DOWN buttons for every digit. Measurement ranges are set using a rotary switch and the measurement mode is set using a sliding switch.

The on-screen user guidance is in English. The DIGISTANT® model 4417 can be used as a multiple range thermometer. It is possible to connect a Pt 100 in 3-wire configuration.

Reference junction temperature compensation upon entering a thermocouple signal is performed using integrated temperature sensors. An optional external RJ sensor can be used for higher precision in temperature compensation.

The SHIFT button can be used to select temperature or RTD.
Temperature sensors with bare ends can be connected directly.

Technical Data

Source functions and measurement functions

Accuracy = ± (% of source or measurement value + value in °C) at 23 °C ± 5 °C for 1 year

Range Selection	Range of Generated Signal/Indication	Accuracy Source Function	Accuracy Measurement Function	Resolution
K	**- 200.0 to 1372.0 °C** **- 328 to 2498 °F**	0.05 % + 1 °C (> -100 °C) 0.05 % + 2 °C (≤ -100 °C)	0.07 % + 1.5 °C (> -100 °C) 0.07 % + 2 °C (≤ -100 °C)	0.1 °C
E	**- 200.0 to 1000.0 °C** **- 328 to 1832 °F**	0.05 % + 1 °C (> -100 °C) 0.05 % + 2 °C (≤ -100 °C)	0.07 % + 1.5 °C (> -100 °C) 0.07 % + 2 °C (≤ -100 °C)	0.1 °C
J	**- 200.0 to 1200.0 °C** **- 328 to 2192 °F**	0.05 % + 1 °C (> -100 °C) 0.05 % + 2 °C (≤ -100 °C)	0.07 % + 1.5 °C (> -100 °C) 0.07 % + 2 °C (≤ -100 °C)	0.1 °C
T	**- 200.0 to 400.0 °C** **- 328 to 752 °F**	0.05 % + 1 °C (> -100 °C) 0.05 % + 2 °C (≤ -100 °C)	0.07 % + 1.5 °C (> -100 °C) 0.07 % + 2 °C (≤ -100 °C)	0.1 °C
N	**- 200.0 to 1300.0 °C** **- 328 to 2372 °F**	0.05 % + 1 °C (> -100 °C) 0.05 % + 2 °C (≤ -100 °C)	0.07 % + 1.5 °C (> -100 °C) 0.07 % + 2 °C (≤ -100 °C)	0.1 °C
R	**0 to 1768 °C** **+ 32 to 3214 °F**	0.05 % + 3 °C (< 100 °C) 0.05 % + 2 °C (≥ 100 °C)	0.07 % + 3 °C (< 100 °C) 0.07 % + 2 °C (≥ 100 °C)	1 °C
S	**0 to 1768 °C** **+ 32 to 3214 °F**	0.05 % + 3 °C (< 100 °C) 0.05 % + 2 °C (≥ 100 °C)	0.07 % + 3 °C (< 100 °C) 0.07 % + 2 °C (≥ 100 °C)	1 °C
B	**600 to 1800 °C** **1112 to 3272 °F**	0.05 % + 4 °C (< 1000 °C) 0.05 % + 3 °C (≥ 1000 °C)	0.07 % + 4 °C (< 1000 °C) 0.07 % + 3 °C (≥ 1000 °C)	1 °C
L	**- 200.0 to 900 °C** **- 328 to 1652 °F**	0.05 % + 0.5 °C (< 0 °C) 0.05 % + 1 °C (≥ 0 °C)	0.07 % + 1.5 °C (< 0 °C) 0.07 % + 2 °C (≥ 0 °C)	0.1 °C
U	**- 200.0 to 400 °C** **- 328 to 752 °F**	0.05 % + 0.5 °C (< 0 °C) 0.05 % + 1 °C (≥ 0 °C)	0.07 % + 1.5 °C (< 0 °C) 0.07 % + 2 °C (≥ 0 °C)	0.1 °C
100 mV	**- 10.0 to 110 mV** (Source) **0.00 to 110 mV** (Measure)	0.05 % + 30 µV	0.05 % + 30 µV	10 µV
Pt 100	**- 200.0 to 850 °C** **- 328 to 1562 °C**	0.05 % +0.6 °C	0.05 % + 0.6 °C	0.1 °C
400 Ω	**0.0 to 400.0 Ω**	0.05 % + 0.2 Ω	0.05 % + 0.2 Ω	0.1 Ω

Power supply: 4 x 1.5 V alkaline batteries or AC mains adapter

Operating time: approx. 55 hours for continuous sourcing (applies for use of alkaline batteries)

Automatic "Power Off": approx. 10 minutes (can be canceled by DIP switch)

Level setting: by four up/down keys

Response of generator (400 Ω and RTD range): approx. 20 milliseconds (from applying the current, until the output level falls within the specified accuracy)

Measurement period: approx. 1 second

Display: 5 digit, 7 segment LCD, max. display 13 000

Max. voltage: 42 VDC between each terminal to ground

Operating temperature: 0 ... 50 °C, 20 ... 85 % RH non condensation

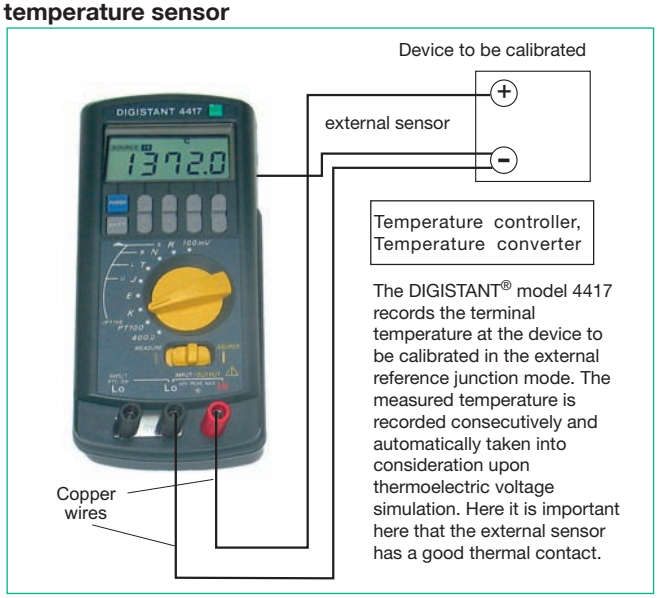
Storage temperature: -20 ... -50 °C, 90 % RH or less non condensation

Dimensions (H x W x D): approx. 192 x 92 x 42 [mm]

Weight: approx. 440 g

Application

Simulation of a thermocouple with an external temperature sensor



The DIGISTANT® model 4417 records the terminal temperature at the device to be calibrated in the external reference junction mode. The measured temperature is recorded consecutively and automatically taken into consideration upon thermoelectric voltage simulation. Here it is important here that the external sensor has a good thermal contact.

Order Information

Pocket temperature calibration and measurement instrument for Pt100, 10 thermocouples models and mV
including test certificate and proof of traceability,
carrying case, batteries and DIGISTANT® test leads **Model 4417**

Accessories (not included)

Temperature sensor for external reference junction,
suitable for DIGISTANT® **Model 4417-Z001**

DKD and Manufacturer Calibration Certificate

DKD Calibration Certificate for pocket temperature calibration and measurement device DIGISTANT® model 4417 each 2 points at simulation of thermocouples, 2 points at simulation and measuring 100 mV, Pt100 and 400 Ω ranges. **Order Code: 44DKD-4417**

Manufacturer Calibration Certificate for pocket temperature calibration and measurement device DIGISTANT® model 4417 each 2 points at simulation and measuring of thermocouples, 2 points at simulation and measuring 100 mV, Pt100 and 400 Ω ranges.
Order Code: 44WKS-4417