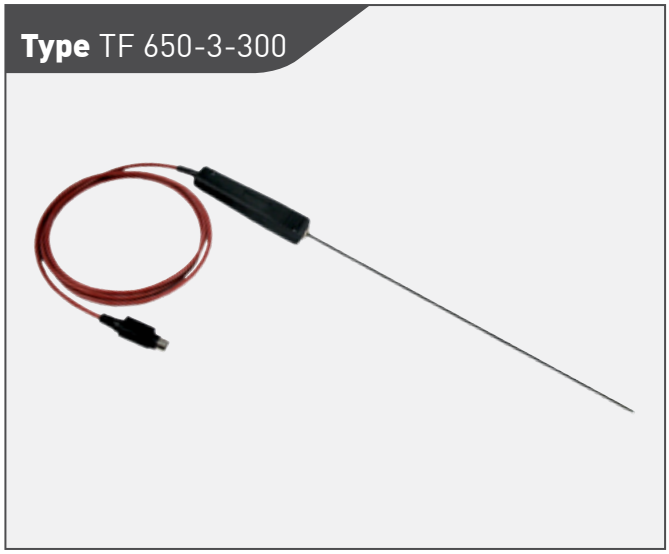
Calibration reference sensors

Type TF 650-3-300



If the sensor to be calibrated is too short to be inserted into the homogeneous temperature zone of the metal block, an external reference sensor can be used without any problems. This results in a small, flexible measurement zone.

An ace of calibration

Particular attention is given to the physical construction to ensure that shocks have minimal effect on the reference sensor.

The use of robust measuring elements in thinfilm technology ensure standardised and reliable performance.

Intensive ageing tests are carried out at the maximum operating temperature to examine longterm temperature stability. In order to detect longterm effects through thermal stress, a defined tempering process is carried out with a special selection of reference sensors over 300 hours. In the case of stress caused by thermocycling, no significant hysteresis effects were found.

The physical structure of the reference sensors requires that different materials be joined together. The special design of the joint areas prevents the occurrence of parasitic thermoelectric voltages. Thus the measurement reading is not affected by the temperature gradients from the measurement point to the handle.

In examining the self-heating characteristics it was seen that measurement currents ⩽ 1 mA are ideally suited, since no distortion of the measurement result occurs. Here the self-heating effect can be neglected.

Calibration reference sensor - Type TF

Pt100 without probe specific linearization in the controller for Series TP...S-U, TP 3...

Technical data	
Measuring range	
TF 255-3-300	-50...255 °C / sensitive area 2 mm
TF 650-3-300	-50...650 °C / sensitive area 5 mm
Tolerance	
±0.05 °C in the range of -9.99...99.99 °C, else ±0.1 °C	
Version	
Material	Rust and acid-proof Stainless steel 1.4571
	Robust plastic handle
Immersion tube	Ø 3 mm, L = 300 mm
Electrical connection	Silicon cable with 4-pin mini DIN-plug

Calibration reference sensor - Type TFEE

Pt100 with probe specific linearization through EEPROM in the handle for TT-Scan and Series TP 38...

Technical data	
Measuring range	
TFEE 255-3-300	-50...255 °C / sensitive area 2 mm
TFEE 650-3-300	-50...650 °C / sensitive area 5 mm
Tolerance	
±0.05 °C in the range of -35.00...199.99 °C, else ±0.1 °C	
Version	
Material	Rust and acid-proof Stainless steel 1.4571
	Robust plastic handle
Immersion tube	Ø 3 mm, L = 300 mm
Electrical connection	Silicon cable with 7-pin mini DIN-plug

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