11/2025 • We reserve the right to make technical changes.

Digital precision resistance sensor Pt100 up to 400 °C with resolution of 0.001 K as reference sensor, with ALMEMO® D7 connector for ALMEMO® V7 measuring devices / data logger



Digital precision resistance sensor Pt100 FPD723L0250A3D
For immersion measurements in air, gases and liquids

Technical data and functions

Digital precision resistance sensor with highest accuracy and linearity for temperature measurements in a wide temperature range.

Highest resolution 0.001 K over the entire measuring range.

Application as reference probe for comparison measurements in research, development, quality assurance and production processes.

For all ALMEMO® V7 measuring instruments/data loggers, ALMEMO® 202-S, 204, 104, 710, 510, 809.

The digital ALMEMO® D7 measuring plug operates with its own built-in AD converter. The linearization of the Pt100 characteristic is calculated according to DIN IEC 751 (no approximation method).

The overall accuracy of the measurement is independent of the ALMEMO® V7 display unit/data logger. The complete measuring chain, consisting of the Pt100 sensor and the connected ALMEMO® D7 measuring plug, can be calibrated.

Highest accuracy is achieved during calibration by a multi-point adjustment of the temperature sensor.

The digital sensor is supplied with a DAkkS accredited calibration certificate incl. multi-point adjustment.

Technical data

Precision resistance sensor Pt100	
Measuring element:	Pt100 wire wound
Class:	1/10 B (DIN EN 60751) at 0 °C
Measuring tip:	Application range: -50 °C...+400 °C
Response time T90:	5 s
Nominal length:	250 mm
Sensor tube:	stainless steel, diameter 3 mm
Connection cable:	2 m FEP/silicone

ALMEMO® D7 measuring connector	
Measuring range:	see sensor range
Resolution:	0.001 K
AD converter:	Delta-Sigma
Conversion time:	3.4 seconds
Measuring current:	approx. 1 mA
Linearization:	Calculation method (no approximation method)
Accuracy:	± 0.015 K ± 2 digits
Nominal temperature:	22 °C ± 2 K
Temperature drift:	0.003 %/K (30 ppm)
Supply voltage:	starting at 6 V from ALMEMO® device
Current consumption:	approx. 9 mA

Accessory

	Order no.
Aluminum profile case for 1 probe (up to 500 mm length)	**ZB9000TK1**

Standard delivery

	Order no.
Digital precision resistance sensor Pt100 as reference sensor, with cable and ALMEMO® D7 connector. Incl. DAkkS accredited calibration certificate (2 temperature points at 0 °C and 100 °C incl. multi-point adjustment).	**FPD723L0250A3D**

DAkkS accredited calibration or factory calibration KT90xx temperature for sensor or measuring chain (sensor + device), see chapter „Calibration certificates“. DAkkS accredited calibration meets all the requirements regarding test resources laid down in DIN EN ISO/IEC 17025.