

Reference measuring instrument ALMEMO® 1030-2



ALMEMO® Reference measuring instrument for temperature. High-precision measuring with Pt100 sensors Resolution 0.001 K

Technical features

- Temperature measurement with very high resolution, precision, and linearity, using Pt100 sensors
- Suitable as reference device in calibration laboratories and quality assurance procedures
- Very high accuracy thanks to multi-point adjustment of the Pt100 temperature sensor
- 2 electrically isolated measuring inputs for Pt100 sensors
- Resolution: 0.001 K.
- Units °C, °F, K
- High-resolution A/D converter, delta-sigma, 24-bit, 1.25 mops (measuring operations per second)
- Two output sockets for digital interface, ALMEMO® memory connector
- Compact, modern, ergonomic design
- Graphics display, illuminated with white light
- Easy and convenient to operate by means of 4 soft-keys and cursor block
- Measured value display 2 measured values and differential
- Measuring functions: Zero-setting, smoothing, maximum / minimum values, individual value memory for 100 values
- Data logger with ALMEMO® memory connector (accessory)
- Sensor programming: Smoothing, designation, units, resolution
- Device configuration: Illumination, contrast, device address, baud rate
- Choice of language: German, English, French

Technical data ALMEMO® 1030-2

Measuring inputs	2 ALMEMO® input sockets for Pt100 sensors	Standard equipment	Display Graphics display, 128 x 64 pixels, 8 rows
Electrical isolation	Semiconductor relay (50 V)	Illumination	2 white LEDs
A/D converter	Delta-sigma, 24-bit, 1.25 mops	Keypad	7 silicone keys (of which 4 soft-keys)
Measuring range	Pt100, -200 to +400 °C	Date and time-of-day	Real-time clock, buffered by device battery
Resolution	0.001 K or 0.01 K	Individual value memory, internal	100 measured values
Measuring current	1 mA	Power supply	
Measuring method	radiometric	Battery set	3 AA alkaline batteries
Accuracy	±0.010 K ±1 digit in range -50 to +400 °C	Mains adapter	ZA1312NA12 100 to 230 VAC to 12 VDC, 1.5 A, electrically isolated
Nominal conditions	23 °C ±2 K, < 90 % r.H., battery mode	Current consumption (without input and output modules)	approx. 20 mA
Temperature drift	typical 2 ppm / K	With illumination	approx. 40 mA
Outputs	2 ALMEMO® sockets for interface cable and ALMEMO® memory connector	Housing	127 x 83 x 42 mm (LxWxH) ABS, 290 g
		Ambient conditions	see starting on page 16

Accessories

Ethernet data cable	
ALMEMO® memory connector with micro SD	
Rubberized impact protection, gray	
DIN rail mounting	
Aluminum profile case for 1 sensor (up to 500 mm in length)	

Order no.

ZA1945DK
ZA1904SD
ZB2490GS2
ZB2490HS
ZB9000TK1

Set with precision resistance temperature detector Pt100



Pt100-temperature sensor FPA923L0250

Technical data FPA923L0250

Measuring element	Pt100 wire-wound	Nominal length	250 mm
Class	1/10 B (DIN EN 60751) at 0 °C	Sensor tube	Stainless steel, diameter 3 mm
Measuring tip	Operative range -50 to +400 °C	Connecting cable	2 meters, FEP / silicone
Response time T ₉₀	5 seconds	ALMEMO® plug	ZA9030FS7P3, resolution 0.001 K

Options

Order no.

Added functions for ALMEMO® 1030 and 1036:

1. Extension of the measurement range with resolution 0.001 K (P314): -200...560 °C.
2. New measurement range with resolution 0.01 K (P214): -200...850 °C.
3. The 4 sensor specific parameters R0 and A, B, C of the Callendar–Van Dusen equation can be programmed for Pt100 sensors by the user.

OA1030FE

Standard delivery

Order no.

Reference measuring instrument for temperature measurement with accessories, evaluation software, and Pt100 temperature sensor. Complete set including DAkkS calibration certificate:

Reference measuring instrument ALMEMO® 1030-2 including 3 AA alkaline batteries, Desktop mains unit ZA1312NA12, USB data cable ZA1919DKU, Instrument case, evaluation software ALMEMO® View SW5500AV (see page 150) and Pt100 temperature sensor FPA923L0250 with DAkkS calibration certificate (2 temperature points at 0 and 100 °C, including adjustment)

SP10302D

Accessories

Precision resistance temperature sensor Pt100 FPA924L0500H for the operating range -100 ... +660 °C



! To achieve high precision, it is absolutely necessary to calibrate the electrode incl. multi-point adjustment! Please order additionally!

On request: Precision resistance temperature sensor Pt100 for the application range -200 ... +250 °C

Technical data FPA924L0500H

Measuring element:	Pt100 resistor, class B	Handle:	up to 60 °C
Measuring tip:	Application range -100 ... +660 °C	Connection cable:	2 m cable
Sensor tube:	stainless steel, diameter 4 mm		in PTFE/fiberglass protection hose.
Nominal length:	465 mm (visible)	ALMEMO® connector:	ZA9030FS7P3, resolution 0.001 K

Standard delivery

Order no.

Precision resistance temperature probe for the application range -100 ... +660 °C

Measuring element Pt100, class B, probe diameter 4 mm, length 465 mm, with handle, 2 m cable and ALMEMO® connector for ALMEMO® 1030, 1033, 1036, 8036, storage case

FPA924L0500H