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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
Electrical isolation	Semiconductor relay (50 V)
A/D converter	Delta-sigma, 24-bit, 1.25 mops
Measuring range	Pt100, -200 to +400 °C
Resolution	0.001 K or 0.01 K
Measuring current	1 mA
Measuring method	ratiometric
Accuracy	±0.010 K ±1 digit in range -50 to +400 °C
Nominal conditions	23 °C ±2 K, < 90 % r.H., battery mode
Temperature drift	typical 2 ppm / K
Outputs	2 ALMEMO® sockets for interface cable and ALMEMO® memory connector

Standard equipment	
Display	Graphics display, 128 x 64 pixels, 8 rows
Illumination	2 white LEDs
Keypad	7 silicone keys (of which 4 soft-keys)
Date and time-of-day	Real-time clock, buffered by device battery
Individual value memory, internal	100 measured values
Power supply	
Battery set	3 AA alkaline batteries
Mains adapter	ZA1312NA12 100 to 230 VAC to 12 VDC, 1.5 A, electrically isolated
Current consumption (without input and output modules)	approx. 20 mA
With illumination	approx. 40 mA
Housing	127 x 83 x 42 mm (LxWxH) ABS, 290 g
Ambient conditions see general technical specifications	

Accessories

	Order no.
Ethernet data cable	**ZA1945DK**
ALMEMO® memory connector with micro SD	**ZA1904SD**
Rubberized impact protection, gray	**ZB2490GS2**
DIN rail mounting	**ZB2490HS**
Aluminum profile case for 1 sensor (up to 500 mm in length)	**ZB9000TK1**

Set with precision resistance temperature detector Pt100



Pt100-temperature sensor FPA923L0250

Technical data FPA923L0250

Measuring element	Pt100 wire-wound
Class	1/10 B (DIN EN 60751) at 0 °C
Measuring tip	Operative range -50 to +400 °C
Response time T_{90}	5 seconds

Nominal length	250 mm
Sensor tube	Stainless steel, diameter 3 mm
Connecting cable	2 meters, FEP / silicone
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 accredited 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 chapter software) and Pt100 temperature sensor FPA923L0250 with DAkkS accredited 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, according to ITS90
Measuring tip:	Application range -100 ... +660 °C
Sensor tube:	stainless steel, diameter 4 mm
Nominal length:	465 mm (visible)

Handle:	up to 60 °C
Connection cable:	2 m cable
	in PTFE/fiberglass protection hose.
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

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