Hand-held digital psychrometer FNAD 46 with ALMEMO® D6 plug with integrated atmospheric pressure sensor, for automatic pressure compensation



General features,
ALMEMO® D6 sensors
see chapter ALMEMO® Measuring instruments

- A digital atmospheric pressure sensor integrated in the ALMEMO® D6 plug itself provides automatic pressure compensation for all pressure-dependent humidity variables.
- Humidity calculation on the basis of formulae as per Dr. Sonntag and the enhancement factor as per W. Bögel (correction factor fw(t,p) for real mixed gas systems). This substantially widens the measuring range and improves the accuracy of humidity variable calculations.
- Humidity variable Absolute humidity in g/m³
- High-precision NTC sensors for dry temperature and wet temperature
- Temperatures are measured using an A/D converter incorporated in the ALMEMO® D6 plug.
- The humidity variables are calculated from the three primary measuring channels (real measurable variables): Dry temperature, wet temperature, atmospheric pressure
- Freely selectable measurable variables
  Four measuring channels are programmed (at our factory): dry temperature (°C, TT, t), wet temperature (°C, HT, tw), relative humidity (%H, RH, Uw), atmospheric pressure (mbar, AP, p)
- Other humidity variables can also be selected:
  dewpoint (°C, DT, td), mixture (g/kg, MH, r), absolute humidity (g/m³, AH, dv), vapor pressure (mbar, VP, e), enthalpy (kJ/kg, En, h)
  This device can be configured directly on a PC using USB adapter cable ZA 1919 AKUV (see chapter „Networking“).

Technical data

Operating temperature	0...+60 °C (no ice formation)
Humidity measuring range	10 to 100 % RH
Measuring system	psychrometric
Accuracy	±1 % RH under nominal conditions
Accuracy in measuring range	10... 100 % r.h.: typ. ±1 % r.h. at 25 °C ±3 K, 1013 mbar
Nominal conditions	+25 °C ±3 K, 1013 mbar, 50 % RH
Temperature sensors	2 x NTC type N
Accuracy	±0.2 K at 0 to 60 °C
Ventilator power supply	via ALMEMO® D6 plug
Housing	Plastic
Dimensions	Ø 50 mm, length 245 mm
Weight	approx. 300 g
Sensor connector	Built-in plug
ALMEMO® connecting cable	coupling, 1.5 meters, PVC cable with ALMEMO® D6 plug
Supply voltage	9 to 13 VDC
Current consumption	20 mA

Digital atmospheric pressure sensor
(integrated in ALMEMO® D6 plug)

Measuring range	700 to 1100 mbar
Accuracy	±2.5 mbar (at 23 °C ±5 K)

A/D converter incorporated in ALMEMO® D6 plug

Inputs	2 NTC sensors (clamped connection in plug)
Resolution	0.01 K
Linearization	error-free computing method according to Galway Steinhart (no approximations)
Accuracy	±0.05 K
Nominal temperature	23 °C ±2 K
Temperature drift	0.004 %/K (40 ppm)
Calculated humidity variables	Analytic equation (not an approximation)
Refresh rate	0.4 seconds for all four channels

Accessories

	Order no.
Spare wicks (2 pieces)	**ZB9846ED**

Variants

	Order no.
Hand-held digital psychrometer with NTC sensor Hand-held psychrometer, connecting cable with ALMEMO® D6 plug, integrated digital atmospheric pressure sensor, water bottle, two wicks	**FNAD46**

DAkkS accredited calibration or factory calibration KH91xx, temperature, humidity, for digital sensor, see chapter „Calibration certificates“.
DAkkS accredited calibration meets all the requirements regarding test resources laid down in DIN EN ISO/IEC 17025.

03/2026 • We reserve the right to make technical changes.