

# ALMEMO® Measuring Instruments

## ALMEMO® 2450-1



**Compact ALMEMO®  
measuring instrument  
1 measuring input,  
over 35 measuring ranges**

### Technical data and functions

- Generously dimensioned 2-row segment display including units
- Easy and convenient to operate by means of 7 keys.
- Over 35 measuring ranges for
  - Thermocouple and NTC sensors  
For the customer's own sensors ready-to-use ALMEMO® connectors are available. (see chapter 07)
  - Atmospheric humidity sensor, capacitive, dewpoint sensor, water detection probe, moisture in wood FHA636MF (see chapter 13)
  - Pressure transducer FDA602L/D, FD8214, FD8612, Tachometer, turbine flowmeter (see chapter 10)  
Current clamps FEA604, Voltage / current measuring modules ZA990xAB (see chapter 11)
  - Meteorological radiation probe heads FLA613 (see chapter 12)
  - Carbon dioxide sensor FYAD00CO2, Carbon monoxide probe and ozone probe (see chapter 15),
- ALMEMO® plugs with multi-point adjustment are supported.
- Measuring functions: Measured value, zero-setting, saving of maximum / minimum values, hold function
- Test functions: Segment monitoring, range monitoring, sensor breakage indication, battery voltage check and display.
- 2 ALMEMO® output sockets, suitable for all interface cables, network cables, trigger / relay cables (except Ethernet data cable ZA1945-DK)
- Complete sensor and device programming via interface
- ALMEMO® DC socket for mains adapter.

### Technical data

Measuring input	1 ALMEMO® socket
Precision class	C (see page 01.06)
Measuring rate	2.5 mops
Measuring ranges (see 01.08 / 01.09)	
NiCr-Ni(K), NiCroSil-NiSil(N), Fe-CuNi(L), Cu-CuNi(U), Cu-CuNi(T), PtRh10-Pt(S), Fe-CuNi(J), NTC	-200 to +950 °C
NTC	-20 to +100 °C
Voltage	-26 to +26 mV, -260 to +260mV, 0 to 2.6V
Current	0 to 26 mA, 4 to 20 mA
	Double connectors with 2 x differential voltage / differential current (input D - B) are not possible.
Humidity, capacitive	0 to 100 % RH, (% RH, HcRH, HRH)
Dew point, mixture ratio, partial vapor pressure, enthalpy, rotating vanes, digital process (0 / 100 %), frequency, pulse, rotational speed, digital	
Resolution	(see page 01.08 / 01.09)
Linearization accuracy	(see page 01.08 / 01.09)
Sensor power supply	9 V, maximum 0.5 A
Option U	9 V, maximum 70 mA

Outputs	2 ALMEMO® sockets, suitable for all interface cables
with option OA2450I only	Internal RS485 interface, electrically isolated, via DC socket
Standard equipment	
LCD 7 segments	Measured value 5 characters, 15 mm
16 segments	Function 4½ characters, 9 mm
	Units 2 characters, 9 mm
	9 symbols
Keypad	7 silicone keys
Power supply	
Battery set	3 AA alkaline batteries
DC socket	10 to 30 VDC not electr. isolated
Mains adapter	ZA1312NA10 100 to 240 VAC to 12 VDC, 2 A
Current consumption	approx. 10 mA without input modules
Housing ABS	127 x 83 x 42 mm (LxWxH)
Operating temperature	-10 to +60 °C
Atmospheric humidity (ambient)	10 to 90 % RH (non-condensing)

## ALMEMO® 2450-1



**Compact measuring instrument with interface.  
Runs in battery mode or via mains unit**

### Accessories

### Order no.

Rubberized impact protection, gray  
DIN rail mounting  
Magnetic fastening  
Instrument case  
Mains adapter 12 V, 2 A, with ALMEMO® plug  
DC adapter cable 10 to 30 VDC, 12 V / 0.25 A, electrically isolated

ZB2490GS2  
ZB2490HS  
ZB2490MH  
ZB2490TK2  
ZA1312NA10  
ZA2690UK



DIN rail mounting



Rubberized protection



Magnetic fastening

### Connecting cables

### Order no.

USB data cable, electrically isolated  
Analog output cable, -1.25 to +2.0 V, 0.1 mV / digit  
V24 data cable, electrically isolated  
Network technology, Bluetooth modules (see chapter „Networking“)

ZA1919DKU  
ZA1601RK  
ZA1909DK5

### Option

### Order no.

Power supply, electrically isolated, 10 to 30 VDC, 80 mA including ALMEMO® plug for DC socket  
RS485 interface, internal including, Option U via ALMEMO® DC socket  
Analog outputs (socket P0), electrically isolated, integrated internally (see page 01.56) ALMEMO® transmitter  
Measuring instrument IP54 (if water-proof plugs are used)

OA2450U  
OA2450I  
OA2450W

### Standard delivery

### Order no.

Batteries, operating instructions, manufacturer's test certificate  
**Compact measuring instrument ALMEMO® 2450-1**

MA2450I