

ALMEMO® MEASURING INSTRUMENTS

new!

01

ALMEMO® 2450-1L
Measuring instrument with display, more than 35 measuring ranges with just one measuring input, Option with internal analog output

ALMEMO® 2450-1
Measuring instrument including interface



Technical features :

- ▶ Handy display device with 1 ALMEMO® input socket and 4 channels.
- ▶ Generously dimensioned 2-row static 7 / 16 segment display including units.
- ▶ Easy and convenient to operate by means of 7 keys.
- ▶ More than 35 measuring ranges for thermocouple and NTC sensors; ready-to-use connectors are available for customer-specific thermocouple sensors (see Chapter 08), Capacitive humidity sensors, dew-point sensors, moisture detection probes, moisture in wood, FHA636MF (see Chap. 09), Rotating vanes and thermoanemometers (see Chapter 10), Pressure transducers, FDA602L/D, FD8214, FD8612, speed transducers, turbine flow meters (see Chapter 11), Split-core type transformer FEA6044M, voltage and current measuring modules ZA990xAB (see Chapter 12), Meteorological radiation probe head FLA613 (see Chapter 13), Carbon dioxide sensor, hand-held, FYA600CO2H, carbon monoxide probe, ozone probe (see Chapter 16), Infra-red temperature sensor FIA908CSH (see Chapter 18).
- ▶ Support for ALMEMO® connectors with multi-point calibration.
- ▶ 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.

Option with electrically isolated internal analog output :

- ▶ ALMEMO® socket P0 for analog output (scalable with keyboard), ALMEMO® socket DC for mains adapter.

Measuring instrument 2450-1 with ALMEMO® interface:

- ▶ 2 ALMEMO® output sockets for all interface cables, network cables, trigger / relay cables
- ▶ Complete sensor and device programming
- ▶ ALMEMO® socket DC for mains adapter.

Extent of the delivery

Measuring instrument ALMEMO® 2450-1L
 1 measuring input for ALMEMO® sensors, LC display, 7 keys including 3 AA alkaline batteries and operating instructions including manufacturer's test certificate

Order No. MA24501L

Measuring instrument ALMEMO® 2450-1, like 2450-1L plus interface via 2 ALMEMO® output sockets A1, A2 and 1 ALMEMO® socket DC for mains adapter

Order No. MA24501

Technical data :

Measuring input	1 ALMEMO® socket for 1 ALMEMO® sensor
Channels	Maximum 4 (sensor-type-specific, measuring and function channels)
A/D converter	delta-sigma, 15-bit resolution
Input current	< 2 nA
Input measuring range	-260 mV to +2.6 V
Overload range	-4 to +5 V
Measuring ranges	(see pages 01.06 / 01.07) NiCr-Ni (K), NiCroSil-NiSiL(N), Fe-CuNi (L), Cu-CuNi (U), Cu-CuNi (T), PtRh10-Pt (S), NTC, Fe-CuNi (J) -200 to +950 °C Voltage -26 to +26 mV, -260 to +260mV, 0 to +2.6 V Current 0 to 32 mA, 4 to 20 mA Moisture, capacitive 0 to 100 % r. H.(%rH, HcrH, HrH)
Dew point, mixture ratio, partial vapor pressure, enthalpy, digital input (0/100 %), rotating vanes, frequency, pulse, rotational speed, digital	
Resolution	see pages 01.06 / 01.07
Linearization accuracy	see pages 01.06 / 01.07
Measuring rate	2.5 mops (measuring operations per second)
System accuracy	±0.1% of meas. value ±3 digits
Nominal temperature	22°C ± 2K
Temperature drift	0.01% / K
Cold junction compensation	effective in the range -30 to +80 °C (accuracy: ±0.2 K ±0.01K/°C)
Connector supply	Battery / mains: 9 V, max. 150 mA
Option U	9 V, maximum 80 mA
Outputs	
with option OA2450Rx only	1 ALMEMO® socket P0 for internal analog output
on ALMEMO® 2450-1 only	2 ALMEMO® sockets for all interface cables, version V6
Standard equipment	
LC display 7 segments	Measured value 5 char., 15 mm Function 4½ char., 9 mm
16 segments	Units 2 characters, 9 mm 9 symbols
Keypad	7 silicone keys
Power supply	
Battery	3 AA alkaline batteries
Current consumption	10 mA without input modules
Mains adapter (with OA2450Rx, OA2450U, and 2450-1 only): ZA1312NA1	230 VAC to 12 VDC, 200 mA, electrically isolated, via ALMEMO® socket DC
Housing	ABS (maximum 70 °C) (LxWxH) 127 x 83 x 42 mm
Operating temperature	-10 to +60 °C
Atmospheric humidity (ambient)	10 to 90 % r. H. (non-condensing)

Options

Top hat rail mounting	OA2450HS
RS485 interface, built-in, including OA2450U	OA2450I
Power supply, electrically isolated, 9 to 30 VDC, 80 mA, including ALMEMO® connector for socket DC	OA2450U
Analogue outputs, electrically isolated, built-in, including ALMEMO® connector for socket P0	
Single analog output, 0 to 10 V (0.5 mV / digit)	OA2450R2
Single analog output, 0 to 20 mA (1 µA / digit)	OA2450R3
Double analog output, 0 to 10 V (0.5 mV / digit)	OA2450R22
Double analog output, 0 to 20 mA (1 µA / digit)	OA2450R32

Accessories

Mains adapter 12 V, 200 mA, with ALMEMO® connector	ZA1312NA1
DC adapter cable 10 to 30 VDC, 12 V / 0.25 A, electrically isolated	ZA2690UK
Analog output cable, -1.25 to +2.0 V, 0.1 mV / digit, V6	ZA1606RK
V24 data cable, electrically isolated, maximum 115.2 KB	ZA1909DK5
USB data cable, electr. isol., maximum 115.2 KB	ZA1919DKU
Ethernet data cable, electr. isol., maximum 115.2 KB	ZA1945DK

04/2007 We reserve the right to make technical changes.