

ALMEMO® Measuring Instruments

ALMEMO® 2470



ALMEMO® professional measuring instrument with data logger function

Functions for all application areas, 1 or 2 measuring inputs

Also with integrated sensor for temperature, atmospheric humidity, atmospheric pressure

Technical data and functions, ALMEMO® 2470 series

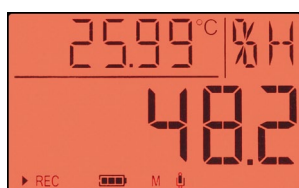
- **new** Segmented color display with bright, white illumination
- Clear and easy-to-understand display of programming and measured values in 5 different colors and alarm display on a red background
- **new** In the event of a limit value being overshoot / undershot various freely configurable alarm messages are available, namely acoustic signal, visual LED signal, alarm display on a red background.
- **new** With the 2470-1S /-2S these alarm messages are also configurable for long-term recording; in sleep mode the messages remain active and the most recent measured value is displayed continuously.
Good measuring accuracy, measuring rate up to 10 measuring operations per second (mops)
- More than 65 standard measuring ranges
- Support for ALMEMO® plugs with multi-point adjustment, special linearization, and special measuring ranges
- Easy and convenient to operate by means of 7 keys, with configurable locking for keys and functions
- Measuring functions : Maximum and minimum values, measured value smoothing, zero-setting, sensor adjustment
- Programming functions : Limit values, sensor correction with base value and factor
- All ALMEMO® functions programmable via interface
- Modern, compact housing (IP54 option)

Technical data, ALMEMO® 2470 series

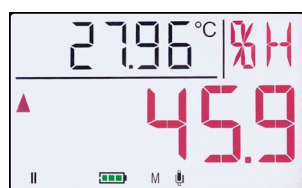
| | | | |
|---------------------|--|--|--|
| Precision class | A (see page 01.05) | Power supply | 1 ALMEMO® DC socket |
| Measuring rate | 2.5 / 10 measuring operations per second | Mains adapter | ZA1312NA7 230 VAC to 12 VDC, 1A, electrically isolated |
| Sensor power supply | Battery mode Sensor voltage 6 V, 400 mA 9 V, 300 mA and 12 V, 200 mA | DC adapter cable, el. isol. | ZA2690UK 10 to 30 V, 0.25 A |
| With mains adapter | 12 V, 400 mA | Current consumption (without input and output modules) | |
| Standard equipment | | Active without illumination | approx. 12 mA |
| Display | 16 segments Measured value 5 characters, 15 mm Units 2 characters, 9 mm Function 4½ characters, 9 mm 21 symbols, Illumination 2 RGB LEDs | Active with illumination | approx. 30 mA |
| | 7 segments 21 symbols, Illumination 2 RGB LEDs | Sleep mode | approx. 60 µA |
| Keypad | 7 silicone keys | Housing | 127 x 83 x 42 mm (LxWxH) ABS (maximum 70 °C), 290g |

ALMEMO® 2470 series, accessories

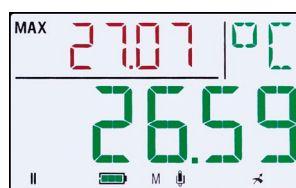
| | | Order no. |
|------------------------------------|-----------|---|
| Rubberized impact protection, gray | ZB2490GS2 | DC cable 10 to 30 V, 12 V / 0.25 A, electr. isol. |
| Instrument case | ZB2490TK2 | DIN rail mounting |
| Mains adapter 12 V / 1 A | ZA1312NA7 | Magnetic fastening |
| | | ZB2490MH |



Automatic alarm (red background). Display shows incorrect measured value



Dual display
1. Humidity Measured value overshoots limit value (red).
2. Temperature



1. Measured value is inside limit values (green).
2. Peak value MAX overshoots limit value (red)



Programming of
1. Save-to-memory cycle
2. Sleep mode

ALMEMO® 2470-1S



**Professional measuring instrument,
1 measuring input
Data logger with integrated memory**

Technical data and functions

- Technical data and functions as for ALMEMO® 2470 series
- Data logger functions: Internal EEPROM, memory cycle, real-time clock
- Long-term recording in sleep mode with AA batteries
- Operating time up to 1.5 years with memory cycle of 15 minutes and temperature / humidity sensor..

Technical data

| | |
|----------------------|---|
| Measuring inputs | 1 ALMEMO® input socket |
| Outputs | ALMEMO® DC socket for mains adapter or USB cable with supply ZA 1919 DKU5 |
| Memory, internal | EEPROM sufficient for 100,000 measured values |
| Date and time-of-day | Real-time clock, buffered by device battery |
| Power supply | 3 AA batteries |

Connecting cable

USB data cable with 5-V power supply

Order no.

ZA1919DKU5

Option

Measuring instrument IP54
(if water-proof plugs / sensors are used)

Order no.

OA2470W

Standard delivery

Batteries, operating instructions, manufacturer's test certificate
Professional measuring instrument ALMEMO® 2470-1S
MA24701S

Order no.

MA24701S

ALMEMO® 2470-1SRH



**Professional measuring instrument,
1 measuring input, Data logger with integrated
memory, Integrated sensor for temperature,
atmospheric humidity, atmospheric pressure**

Technical data and functions

- Technical data and functions, as for ALMEMO® 2470 series
- Data logger functions
- Internal EEPROM, memory cycle, real-time clock
- Long-term recording in sleep mode with AA batteries
- Operating time up to 1.5 years with memory cycle of 15 minutes and temperature / humidity sensor.

Technical data

| | |
|----------------------|---|
| Measuring inputs | 1 ALMEMO® input socket |
| Outputs | ALMEMO® DC socket for mains adapter or USB cable with supply ZA 1919 DKU5 |
| Memory, internal | EEPROM sufficient for 100,000 measured values |
| Date and time-of-day | Real-time clock, buffered by device battery |
| Power supply | 3 AA batteries |

Digital atmospheric pressure sensor, integrated in the measuring instrument
Measuring range 700 to 1100 mbar
Accuracy ±2.5 mbar (at 0 to 65 °C)

Digital sensor for measuring temperature / atmospheric humidity
FH0D 462 plugged in on the measuring instrument

General description and other technical data (see chapter „Atmospheric humidity“)

Connecting cable

USB data cable with 5-V power supply

Order no.

ZA1919DKU5

Option

Measuring instrument IP54
(if water-proof plugs / sensors are used)

Order no.

OA2470W

Standard delivery

Batteries, digital plug-in sensor for temperature / atmospheric humidity, operating instructions, manufacturer's test certificate
Professional meas. instrument ALMEMO® 2470-1SRH
MA24701SRH

Order no.

MA24701SRH

DAkkS or works calibration KE90xx, electrical, for measuring instrument (see chapter „Calibration certificates“).
DAkkS calibration meets all the requirements regarding test resources laid down in DIN EN ISO/IEC 17025.

ALMEMO® 2470-2



**Professional measuring instrument,
2 measuring inputs**

Technical data and functions

- Technical data and functions, as for ALMEMO® 2470 series
- Power supply, 3 AA rechargeable NiMH batteries, with charging via the device itself.

Technical data

| | |
|-------------------------|--|
| Measuring inputs | 2 ALMEMO® input sockets el. isol., with semicond. relays (50 V) |
| Additional channels | 4 channels, device-internal (e.g. difference) |
| Outputs | ALMEMO® sockets A1 and A2, suitable for all output modules (analog, data, trigger, relay cables, etc.) (see chapter „Networking“) |
| Individual value memory | 99 individual measured values |
| Power supply | 3 AA rechargeable NiMH batteries Integrated charge circuitry |

Connecting cables

| | Order no. |
|--|-------------------|
| USB data cable, electrically isolated | ZA1919DKU |
| USB data cable with 5-V power supply | ZA1919DKU5 |
| V24 data cable, electrically isolated | ZA1909DK5 |
| Ethernet data cable, electrically isolated | ZA1945DK |
| Analog output cable, -1.25 to +2.0 V, 0.1 mV / digit | ZA1601RK |
| Trigger and relay cable (2 relays, 500 mA, 50 V) | ZA1006EKG |
| Network technology, Bluetooth modules (see chapter „Networking“) | |

Option

| | Order no. |
|--|----------------|
| Measuring instrument IP54 (if water-proof plugs / sensors are used) | OA2470W |

Standard delivery

| | Order no. |
|--|------------------|
| Rechargeable batteries, operating instructions, manufacturer's test certificate, carry case, mains unit Professional measuring instrument ALMEMO® 2470-2 | MA24702KN |

ALMEMO® 2470-2S



**Professional measuring instrument,
2 measuring inputs,
Data logger with internal memory**

Technical data and functions

- Technical data and functions, as for ALMEMO® 2470 series
- Power supply, 3 AA rechargeable NiMH batteries, with charging via the device itself
- Data logger functions: Internal EEPROM or external memory connector (accessory), memory cycle, real-time clock
- Long-term recording in sleep mode, internal memory, AA rechargeable NiMH batteries. Operating time up to 1 year with memory cycle of 15 minutes and temperature / humidity sensor.

Technical data

| | |
|-------------------------|--|
| Measuring inputs | 2 ALMEMO® input sockets el. isol., with semicond. relays (50 V) |
| Additional channels | 4 channels, device-internal (e.g. difference) |
| Outputs | ALMEMO® sockets A1 and A2, suitable for all output modules (analog, data, trigger, relay cables, etc.) (see chapter „Networking“) |
| Memory, internal EEPROM | sufficient for 100,000 measured values |
| Date and time-of-day | Real-time clock, buffered by device battery |
| Power supply | 3 AA rechargeable NiMH batteries Integrated charge circuitry |

Accessories

| | Order no. |
|-------------------------------------|-----------------|
| Memory connector with micro SD card | ZA1904SD |

Connecting cables

| | Order no. |
|--|-------------------|
| USB data cable, electrically isolated | ZA1919DKU |
| USB data cable with 5-V power supply | ZA1919DKU5 |
| V24 data cable, electrically isolated | ZA1909DK5 |
| Ethernet data cable, electrically isolated | ZA1945DK |
| Analog output cable, -1.25 to +2.0 V, 0.1 mV / digit | ZA1601RK |
| Trigger and relay cable (2 relays, 500 mA, 50 V) | ZA1006EKG |
| Network technology, Bluetooth modules (see chapter „Networking“) | |

Option

| | Order no. |
|--|----------------|
| Measuring instrument IP54 (if water-proof plugs / sensors are used) | OA2470W |

Standard delivery

| | Order no. |
|---|-------------------|
| Rechargeable batteries, operating instructions, manufacturer's test certificate, carry case, mains unit Professional measuring instrument ALMEMO® 2470-2S | MA24702SKN |

DAkKS or works calibration KE90xx, electrical, for measuring instrument (see chapter „Calibration certificates“).
DAkKS calibration meets all the requirements regarding test resources laid down in DIN EN ISO/IEC 17025.