

ALMEMO® Measuring Instruments

ALMEMO® 710



ALMEMO® precision measuring instrument, latest V7 generation
With data logger function and touchscreen.
Comprehensive range of functions for all application areas.
Increased measuring accuracy, fast measuring rate.
10 measuring inputs

Data logger from our latest V7 generation

Data logger ALMEMO® 710 offers outstanding functions - thanks to our latest D7 sensors.

High-quality display - easy and convenient touchscreen operation

The brightly illuminated, generously dimensioned 5.7-inch color graphics display shows all measured values and functions clearly and precisely. The device is operated easily and conveniently via touchscreen. The menu guidance system, incorporating wizards and help windows, has a clear, straightforward structure.

Measured values, peak values, average values, and limit values can all be displayed in an easy-to-understand way in various forms, namely list, bar chart, or line graph (up to 4 lines).

Users can even configure their own customized user menus to display those parameters required by a particular application.

Choice of languages : German, English, French

One measuring instrument for every use

The measuring instrument is enclosed in a handy, compact housing with rubberized impact protection. This device can be used in a wide variety of ways, in mobile applications or as a desktop unit, on a folding stand or as a stationary unit in a wall-mounted housing.

It incorporates a powerful rechargeable lithium battery to ensure a long operating time.

Data logger for all storage applications

For the purpose of saving measured values the device incorporates an 8-MB flash memory. This can also be configured as a ring memory for monitoring tasks.

To save larger data quantities an external memory is available in the form of a plug-in SD card.

For autonomous long-term monitoring the data logger can also be run in energy-saving sleep mode.

Measuring inputs for 10 ALMEMO® sensors, all generations

Data logger ALMEMO® 710 incorporates 10 measuring inputs. All new and already existing sensors designed for any measurable variable can be connected and evaluated.

Sensors using analog signals pass via the integrated high-speed, high-resolution A/D converter. Additional electrical isolation between measuring inputs and power supply (device ground) increases measuring quality.

Digital D6 and the latest digital D7 sensors transfer measured values to the measuring instrument directly in digital form.

The measuring instrument supports all ALMEMO® plug connectors and sensor functions. Digital D6 / D7 sensors can be configured directly via the touchscreen.

New digital ALMEMO® D7 sensors

With these digital ALMEMO® D7 sensors the ALMEMO® system is enhanced by many new functions.

They operate via an all-digital interface to the ALMEMO® 710 measuring instrument ensuring high-speed serial transmission of all measured values.

The measuring ranges of ALMEMO® D7 plugs are independent of the measuring instrument and can be expanded as and when required for new applications.

Measured values can be displayed with up to 8 digits (depending on range) and the units with up to 6 characters. Sensor designation and information can be up to 20 characters.

Each connected D7 sensor has its own processor. These all work in parallel at their sensor-specific sampling rate. D7 sensors thus attain very high measuring speeds in dynamic measuring operations. Scanning times on the ALMEMO® 710 can be set individually for quick-acting and slow-acting sensors.

The ALMEMO® D7 plug can process up to 10 channels for measured values and function values. This includes new applications, especially for multi-purpose sensors (e.g. Meteorological sensors) and for linking up to complex third-party devices (e.g. chemical analysers, power analysers).

Other equipment

With 3 ALMEMO® output sockets it is possible to connect simultaneously a PC / network, an ALMEMO® output interface with relays and analog output, and an SD memory card.

The ALMEMO® 710 incorporates an atmospheric pressure sensor to ensure automatic pressure compensation for measuring operations involving inter alia air flow or humidity variables.

With option KL it is possible - for analog sensors (e.g. temperature or pressure sensors) - to program multi-point adjustment or linearization in the ALMEMO® plug connector..



ALMEMO® 710



**Precision measuring instrument, latest V7 generation, 10 measuring inputs
Data logger with internal memory or external memory connector (accessory)**

Technical data

| | | | |
|---|--|--|---|
| Measuring inputs | 10 ALMEMO® input sockets for ALMEMO® sensors, all generations analog sensors, D6 and D7 sensors | Graphics display | 5.7-inch TFT LCD VGA, 640 x 480 pixels |
| Precision class | AA (see page 01.05) | Illumination | white LED, dimmable |
| Measuring rate for analog sensors, D6 sensors | 2.5 / 10 / 50 / 100 mops (measuring operations per second) | Keypad | Capacitive touchscreen and 3 additional touch keys |
| Electrical isolation for analog sensors | with semiconductor relays (50 V) Additional electrical isolation between measuring inputs and power supply (device ground) | Memory | 8-MB flash memory (400,000 up to 1.5 million meas. values) |
| Channels | Up to 100 measuring channels per device | Date and time-of-day | Real-time clock (4.7 ppm) buffered with lithium battery |
| Sensor power supply | 6 / 9 / 12 V, maximum 400 mA for supply via mains adapter 12 V, maximum 400 mA | Power supply | |
| Atmospheric pressure sensor | Integrated, meas. range 700 to 1100 mbar | Rechargeable battery/ies | 2 rechargeable lith. batteries, total 13.8 Ah Integrated, high-speed charging (3 hours) |
| Accuracy | ±2.5 mbar (at 0 to 65 °C) | Mains adapter | ZA1312NA9 230 VAC to 12 VDC, 2.5 A, electr. isol. |
| Outputs | 3 ALMEMO® sockets, suitable for all output modules (data / analog / trigger / relay cables, memory connector, etc.) | Current consumption (without input and output modules) | |
| Standard equipment | | Active mode | approx. 300 to 500 mA |
| Display | | Sleep mode | approx. 0.05 mA |
| | | Housing | 222 x 169 x 61 mm (WxDxH) 1200 g ABS / TPE, 2-shot technology with rubberized impact protection |
| | | ALMEMO® 710 | with folding stand |
| | | ALMEMO® 710 WG | with DIN rail fixture for wall-mounting, connections facing downwards |

Accessories

| | Order no. |
|---|------------------|
| Memory connector with micro SD, including USB card reader (see chapter „General accessories“) | ZA1904SD |
| Large carry case, aluminum profile frame / ABS, inside dimensions 48 x 35 x 6+6 cm (WxDxH) | ZB2590TK2 |

Connecting cables

| | Order no. |
|--|-------------------|
| Ethernet data cable, electrically isolated | ZA1945DK |
| USB data cable with 5V device supply from PC not electrically isolated (Recommended option - electrically isolated measuring module OA710GT) | ZA1919DKU5 |
| Analog output cable -1.25 to +2.0 V | ZA1601RK |
| Trigger and alarm cable (2 relays, 0.5 A, 50 VDC) | ZA1006EKG |
| Note on WinControl measuring software | |
| As measuring software WinControl is suitable for current version 7 and above. For version 6 or earlier a WinControl update is required. | |
| Variants and description (see chapter „Software“). | |

Options

| | Order no. |
|--|----------------|
| User can program multi-point adjustment or linearization for analog sensors. | OA710KL |
| Measuring rate for 1 measuring channel, 500 mops | OA710Q5 |

Standard delivery

| | Order no. |
|--|----------------|
| USB data cable ZA1919DKU, Mains unit 12 V / 2.5 A ZA1312NA9, Manufacturer's test certificate | |
| Mobile device with folding stand, in case ZB9710TK Precision measuring instrument ALMEMO® 710 | MA710 |
| Stationary device with wall-mounting, Precision measuring instrument ALMEMO® 710WG | MA710WG |
| DAkkS / DKD or works calibration KE90xx, electrical, for measuring instrument (see chapter „Calibration certificates“) | |

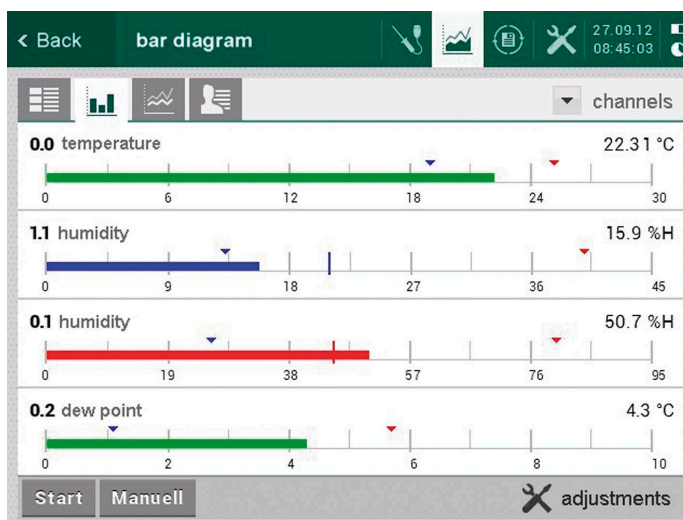
ALMEMO® Measuring Instruments

ALMEMO® 710 Clear, precise display - easy and convenient touchscreen operation

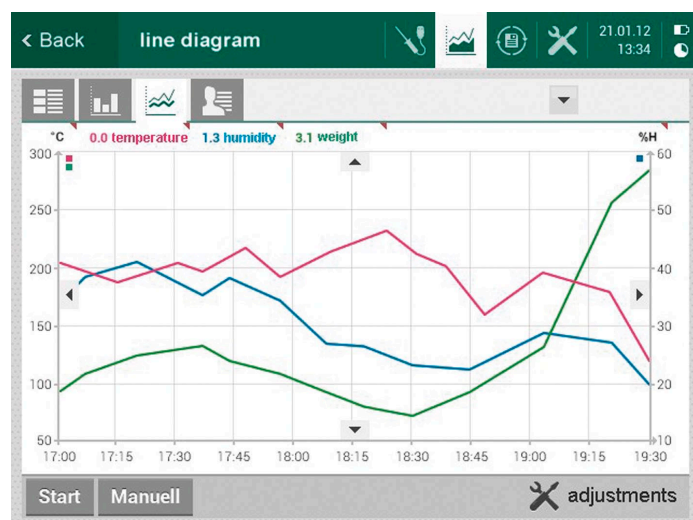
10/2013 • We reserve the right to make technical changes.

| MO | FHA746-2 | value | max | min |
|-----|----------|----------------------|-------|-------|
| 0.0 | T, t | 123.4 °C | 234.6 | 79.4 |
| 0.1 | RH, Uw | 56.8 %rH | 67.3 | 48.9 |
| 0.2 | DT, td | 15.2 °C | 23.5 | 11.7 |
| 0.3 | MH, r | 11.2 g/kg | 14.4 | 9.3 |
| 0.4 | VP, e | 8.8 mbar | 9.4 | 4.6 |
| 0.5 | AH, dv | 8.2 g/m ³ | 8.4 | 6.3 |
| 0.6 | AP, p | 998.8 mbar | 999.8 | 834.9 |

List of active measuring channels



Display of measured values as a bar chart



Display of measured values as a line graph

Channel 3.0 temperature

channel select: *J CJ-temperature

use temp. sensor as external cold junction (*J)

use temp. sensor of connector as cold junction (#J)

convert flow parameters to standard (#N)

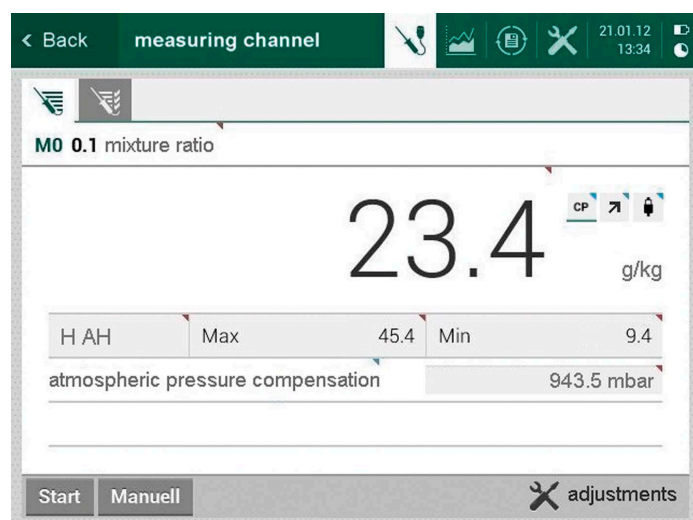
q w e r t z u i o p

a s d f g h j k l

↑ y x c v b n m

123/., _ Clr ← OK

Keypad for programming



Generously dimensioned display of measured values

-
- sensor adjustments
 - channel functions
 - display adjustments
 - data logger
 - output modules
 - device adjustments
 - locking mode
 - power supply
 - memory
 - info

Settings for all sensor and device parameters