Data logger ALMEMO® 710

ALMEMO® data logger
Precision measuring instrument, latest V7 generation
With 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 5 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, Czech

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.

The ALMEMO® 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. Meteo 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 an ALMEMO® sensor (e.g. temperature or pressure sensors) - to program multi-point adjustment or linearization in the ALMEMO® plug itself.

This option is possible with all ALMEMO® plug versions.

Standard connector (analog or DIGI), ALMEMO® D6 and D7 plugs.

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
Precision class	AA (see general technical data)
Total sampling rate:	up to 2000 measurements/s
Measuring rate for analog sensors, D6 sensors	2.5 / 10 / 50 / 100 mops (measuring operations per second)
Electrical isolation for analog sensors	with semiconductor relays (50 V) Additional electrical isolation between measuring inputs and power supply (device ground)
Channels	Up to 100 measuring channels per device
Sensor power supply	6 / 9 / 12 V, maximum 2 x 400 mA for supply via mains adapter 12 V, maximum 2 x 400 mA
Atmospheric pressure sensor	Integrated, meas. range 700 to 1100 mbar
Accuracy	±2.5 mbar (at 23 °C ±5 K)
Outputs	3 ALMEMO® sockets, suitable for all output modules (data / analog / trigger / relay cables, memory connector, etc.)
Standard equipment	
Display	
Graphics display	5.7-inch TFT LCD VGA, 640 x 480 pixels
Illumination	white LED, dimmable
Keypad	Capacitive touchscreen and 3 additional touch keys
Memory	8-MB flash memory (400,000 up to 1.5 million meas. values)
Date and time-of-day	Real-time clock (4.7 ppm) buffered with lithium battery
Power supply	
Rechargeable battery/ies	2 rechargeable lith. batteries, total 15.6 Ah Integrated, high-speed charging (3 hours)
Mains adapter	ZA1312NA11 100 to 240 VAC to 12 VDC, 2.5 A, electr. isol.
Current consumption (without input and output modules)	
Active mode	approx. 300 to 700 mA
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
Environmental conditions	see general technical data

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**
Analog output cable, electrically isolated, 1 x 20 mA	**ZA1601RI**
Analog output cable, electrically isolated, 2 x 10 V	**ZA1602RU**
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. Variants and description (see chapter „Software“).

Options

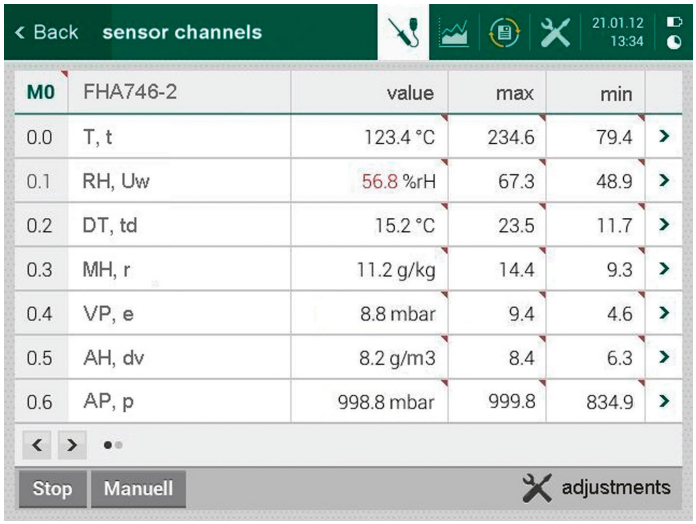
	Order no.
Multi-point adjustment and / or linearization can - with all ALMEMO® plug versions - be programmed by users themselves	**OA710KL**
Temperature ranges for 8 refrigerants	**SB0000R2**

Standard delivery

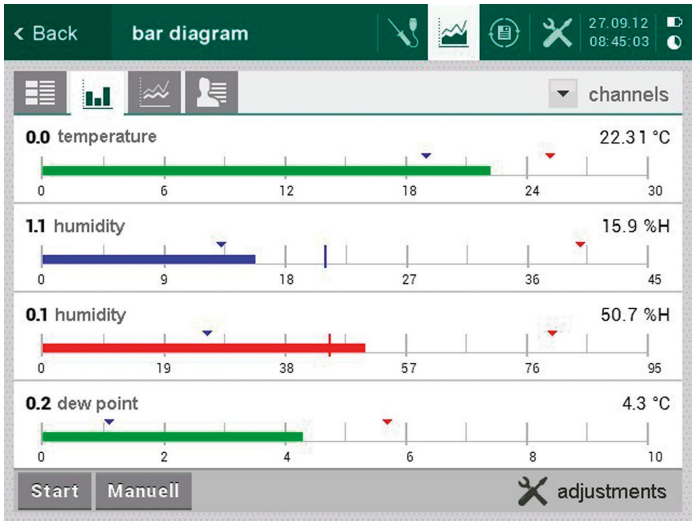
	Order no.
USB data cable ZA1919DKU, Mains unit ZA1312NA11, Manufacturer’s test certificate	
Mobile device with folding stand, in case ZB9710TK **Precision measuring instrument ALMEMO® 710**	**MA710**
Stationary device with wall-mounting, **Precision measuring instrument ALMEMO® 710WG**	**MA710WG**

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

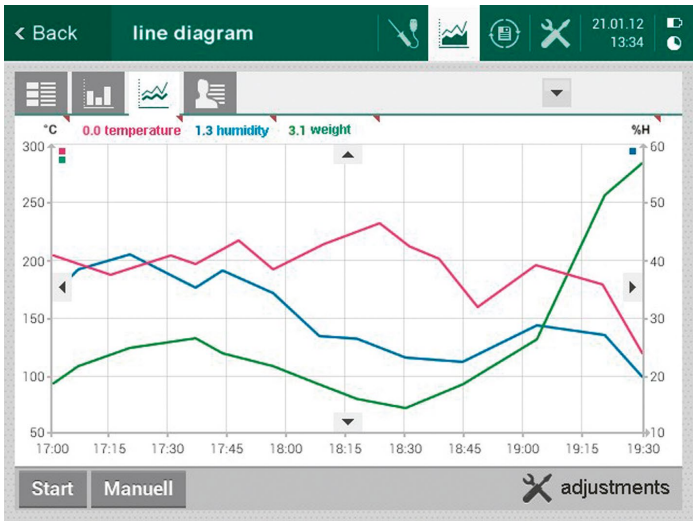
ALMEMO® 710 Clear, precise display - easy and convenient touchscreen operation



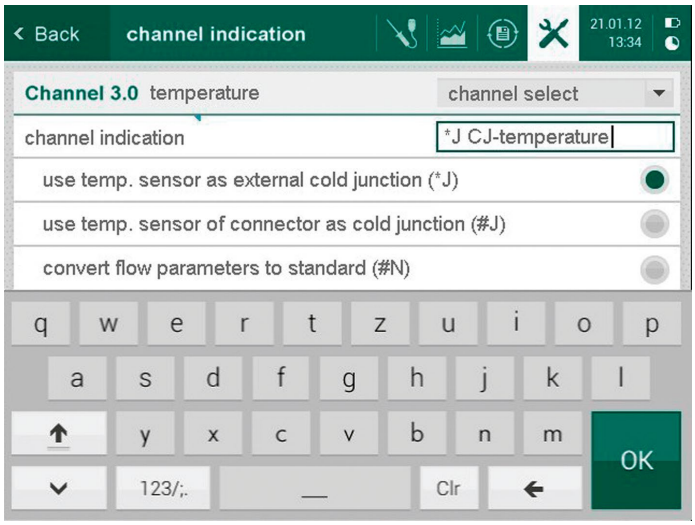
List of active measuring channels



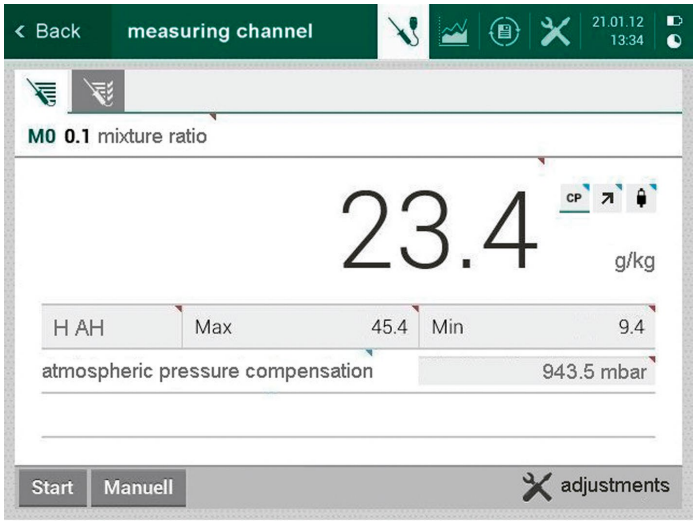
Display of measured values as a bar chart



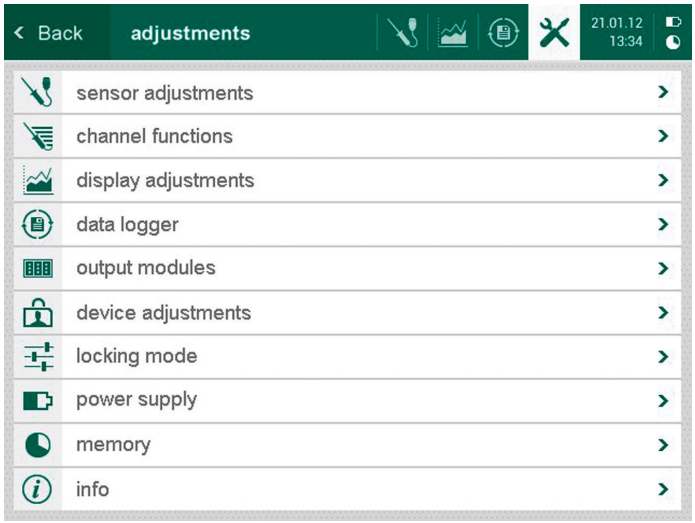
Display of measured values as a line graph



Keypad for programming



Generously dimensioned display of measured values



Settings for all sensor and device parameters