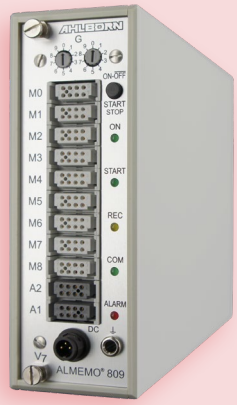
Data logger ALMEMO® 809



ALMEMO® data logger
Precision measuring instrument, latest V7 generation.
Nine measuring inputs for all sensors.
Operates as data logger or PC interface.
Increased measuring accuracy, fast sampling rate, with ALMEMO® D7 sensors up to 1000 measuring operations per second.

Data logger from our latest V7 generation.
Data logger ALMEMO® 809 offers outstanding functions and applications using our latest D7 sensors. This measuring instrument operates either as data logger or as PC interface using the WinControl measuring software (an accessory). The device parameters can be fully configured by means of the ALMEMO® Connect software.

New digital ALMEMO® D7 sensors
With these digital ALMEMO® D7 sensors the existing ALMEMO® system is enhanced by many new functions. These operate via an all-digital interface to the ALMEMO® 809 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 quantity and range) and the units with up to 6 characters. Sensor designation and information can be up to 20 characters. Each ALMEMO® D7 sensor has its own processor. They all work in parallel at their own sensor-specific sampling rate. D7 sensors thus attain very high measuring speeds in dynamic measuring operations. Scanning times on the ALMEMO® 809 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).

Measuring inputs for nine ALMEMO® sensors, all generations
Data logger ALMEMO® 809 incorporates nine measuring inputs. The measuring instrument can process up to 90 measuring channels - depending on the sensors connected. 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. All sensor parameters for ALMEMO® standard / D6 / D7 sensors can be fully configured by means of the ALMEMO® Connect software.

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.

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

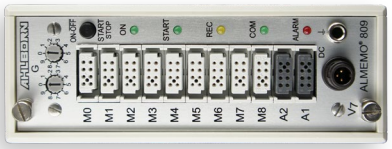
There are five LEDs for indicating various operating states. The operating key is used to switch on the device and to start / stop a measuring operation.

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

11/2025 • We reserve the right to make technical changes.

09/2026 • We reserve the right to make technical changes.

ALMEMO® 809



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

Technical data

Measuring inputs	Nine ALMEMO® input sockets suitable for all generations of ALMEMO® sensors, analog sensors, D6 and D7 sensors
Precision class	AA see general technical data
Total sampling rate	up to 2000 measurements/s
Sampling rate for analog sensors, D6 sensors	2.5 / 10 / 50 / 100 mops
Electrical isolation for analog sensors	with semiconductor relays (50 V) Additional electrical isolation between measuring inputs and power supply (device ground)
Channels	Up to 90 measuring channels per device
Sensor power supply	12 V, maximum 400 mA
Outputs	Two ALMEMO® sockets, suitable for all output modules (data / analog / trigger / relay cables, memory connector, etc.)

Standard equipment	
Operation	1 key, 5 LEDs, 2 coding switches
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) with lithium buffer battery
Power supply	
Mains adapter	ZB1212NA12 100 to 240 VAC to 12 VDC, 1.5 A, electrically isolated
Current consumption without input and output modules	
Active mode	approx. 50 mA
Sleep mode	approx. 0.05 mA
Housing	180 x 49 x 137 mm (LxWxH) Polystyrene (PS), weight approx. 490 g
Environmental conditions see general technical data	

Accessories

	Order no.
Plug-in memory with micro SD card, including USB card reader (see chapter Accessories)	**ZA1904SD**
DC adapter cable, 10 to 30 VDC, 12 V / 1 A, electrically isolated	**ZB3090UK2**
Separate rechargeable battery, 9 ... 11 V, NiMH with intelligent high-speed charging, housed in case L180 x W49 x H137, without plug connections	**ZB5690AP**
3-pin bayonet coupling	**ZB5090EKA**
WinControl software for measured data acquisition	
per device up to 20 channels	**SW5600WC1**
for any number of devices and channels	**SW5600WC2**

Connecting cables

	Order no.
USB data cable, electrically isolated	**ZA1919DKU**
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**

Options

	Order no.
Multi-point adjustment and / or linearization can - with all ALMEMO® plug versions - be programmed by users themselves	**OA809KL**
Temperature ranges for 8 refrigerants	**SB0000R2**

Standard delivery

	Order no.
Measuring instrument, Mains unit ZB1212NA12, Manufacturer's test certificate	
Precision measuring instrument ALMEMO® 809	**MA809**

DAkkS accredited calibration or factory calibration KE90xx, electrical, for measuring instruments, see chapter „Calibration certificates".
The DAkkS accredited calibration meets the requirements of DIN EN ISO/IEC 17025 for test equipment.