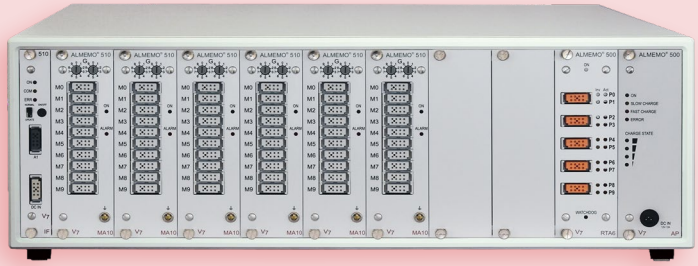
Data logger ALMEMO® 510



ALMEMO® data logger of the latest generation V7.

Modular data logging with active measuring circuit boards, up to 100 measuring inputs for all sensors.

Operation as PC interface for online measurement with WinControl software.

Technical data and functions ALMEMO® 510

- ALMEMO® device of the latest generation V7.
- Operation as a PC interface for online measurement with WinControl software from WC2 standard (accessory).
- Modular measuring system with active measuring circuit boards. Each measuring circuit board has its own address (adjustable). 3 different housing designs are available.
- 2 measuring circuit boards as standard, 20 ALMEMO® input sockets, galvanically isolated for the connection of up to 20 ALMEMO® sensors of all generations (analog/DIGI/D6/D7), up to 200 sensor channels (sensor-dependent).
- Expansion with additional measuring circuit boards, depending on the housing width, up to 100 measuring inputs with up to 1000 measuring channels.
- Sensors with analog signals are measured with the built-in fast and high-resolution AD converter. The additional electrical isolation between measurement inputs and supply (device ground) increases the measurement quality. Digital D6 sensors and the new digital D7 sensors transmit their measured values digitally to the measuring device. The measuring device supports all ALMEMO® connector and sensor functions. The complete configuration of all sensor parameters for ALMEMO® standard, D6 and D7 sensors is carried out via the ALMEMO® Connect software.
- The KL option allows multi-point adjustment or linearization to be programmed in the ALMEMO® connector for ALMEMO® sensors (e.g. for temperature sensors or pressure sensors). This is possible with all ALMEMO® connector versions: standard connectors (analog or with DIGI range), ALMEMO® D6 and D7 connectors.
- Interface card with digital interface via 1 ALMEMO® output socket A1 (common for all measuring circuit boards). All ALMEMO® networks are possible via the digital ALMEMO® output cables: RS232, USB, Ethernet, WLAN, ALMEMO® radio module.
- The complete configuration of all device parameters is carried out with the ALMEMO® Connect software.
- Display of the operating states on the interface card and the measuring circuit boards via LEDs.
- For long-term measurements, a rechargeable battery pack is available (accessories) to bridge (brief) interruptions in the power supply.
- If the connection to the PC is interrupted, the measured values in each measuring circuit board can be buffered in the built-in data memory (FAIL SAVE mode, configurable).
- The RTA6 relay/trigger/analog interface is available as a plug-in card (accessory) for the output of alarm and control signals. The outputs can be controlled either directly from the measuring device or from the WinControl software (with alarm function, optional).

Technical data

Measuring inputs:	
Standard configuration:	20 ALMEMO® input sockets for all ALMEMO® sensors (Standard, DIGI, D6, D7)
Channels (Standard):	up to 200 measuring channels
Extension:	up to 100 inputs depending on the housing
Precision class:	AA technical data see chapter beginning
Measuring rate for analog sensors, DIGI, D6 sensors:	100, 50, 10 and 2.5 Measurements/s
Galv. isolation for analog sensors	with semiconductor relay (50 V) additional galv. isolation between measuring inputs and supply (device ground)
Sensor voltage supply:	12 V, max. 400 mA per measuring circuit board, max. 1.2 A per data logger When battery operated: also 6/9 V
Interface:	1 ALMEMO® output socket A1 for interface cable

Standard equipment:	
Memory:	8 MB Flash (400 000 up to 1.5 million meas. values)
Time and date:	Real-time clock (4.7 ppm), lithium battery
Power supply:	**via ALMEMO® DC socket**
Mains adapter:	ZA1312NAx, 100 ... 240 V AC to 12 V DC, at least 2 A galv. isolated
Battery (accessories):	2 lithium batteries, total 13.8 Ah, Quick-charging circuit (3 h) integrated
Power consumption without input and output modules	ca. 180 mA without sensor / sensor system (Standard configuration)
Housing	
Desktop housing TG3	W179 x H158 x D232 mm, ca. 2.1 kg
Desktop housing TG8	W444 x H158 x D232 mm, ca. 4 kg
Rack housing BT8	W483 x H132 x D273 mm, ca. 4.2 kg
Ambient conditions see general technical specifications	

Accessories

	Order no.
WinControl software for recording measured values, for any number of measuring circuit boards (devices) and channels, for versions and description see Software chapter	SW5600WC2
Active measuring circuit board MA10 (extension), 2 slots, 10 ALMEMO® input sockets	ES510MA10
Relay/trigger/analog card, 2 slots. Up to 4 cards are supported per system, see chapter Output modules	ES500RTA6
Battery pack (Li-Ion) 13.8 Ah. Space requirement 2 slots, incl. power supply unit ZB 1212NA11	ES510AP
Transport case, aluminum profile frame/ABS, for ALMEMO® 510 in TGx desktop housing	ZB5600TK3
Rack case with carrying handle, for ALMEMO® 510 in rack housing BT8	ZB5090RC

Input connectors

	Order no.
USB data cable, galvanically isolated	ZA1919DKU
Ethernet data cable, galvanically isolated	ZA1945DK
WLAN module	ZA1739WL
ALMEMO® radio module, wireless connection directly to the PC For description see chapter Network technology	ZA1739BPVU

Option

	Order no.
Program multi-point adjustment or linearization yourself with all ALMEMO® connector versions	OA510KL

Standard delivery

ALMEMO® 510, data logger, data acquisition system with interface card and 2 active MA10 measuring circuit boards, 20 ALMEMO® input sockets for all ALMEMO® sensors (analog/DIGI/D6/D7), plug-in power supply ZA1312NA11, operating instructions, manufacturer‘s test certificate

ALMEMO® 510 A20 TG3



Data acquisition system in TG3 desktop housing,
20 inputs, 3 free slots **MA510A20TG3**
Expandable with one MA10 meas. circuit board (10 inputs)

ALMEMO® 510 A20 TG8



Data acquisition system in TG8 desktop housing,
20 inputs, 16 free slots **MA510A20TG8**
Expandable with eight MA10 meas. circuit boards (80 inputs)

ALMEMO® 510 A20 BT8



Data acquisition system in 19” rack housing,
20 inputs, 16 free slots **MA510A20BT8**
Expandable with eight MA10 meas. circuit boards (80 inputs)

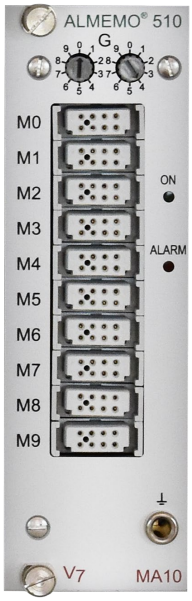
09/2026 • We reserve the right to make technical changes.

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Interface card, active measuring circuit boards and extensions for ALMEMO® 510 data logger



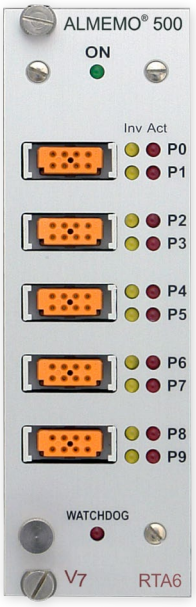
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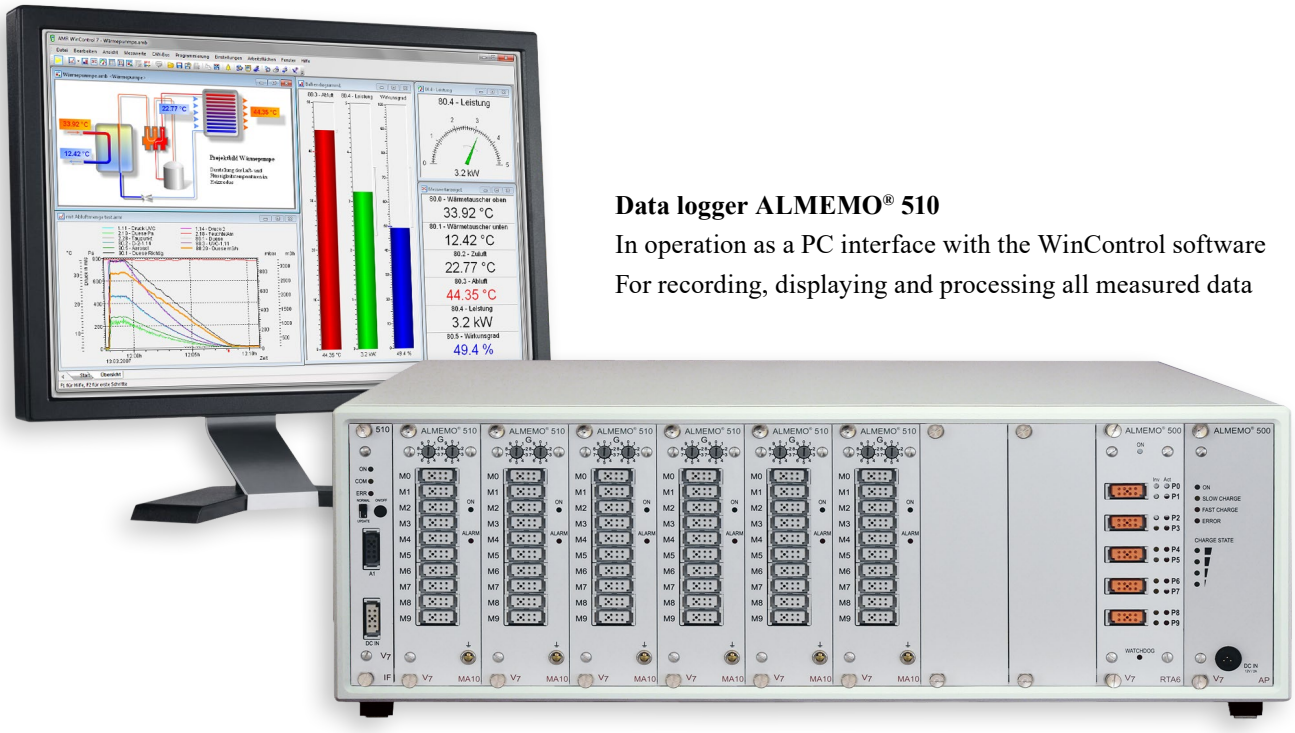
MA10



AP



RTA6



Data logger ALMEMO® 510

In operation as a PC interface with the WinControl software

For recording, displaying and processing all measured data