

ALMEMO® Measuring Instruments

ALMEMO® 8590 /8690 series



ALMEMO® precision measuring instrument for measured data acquisition, with data logger function. Comprehensive range of functions for all application areas. Increased measuring accuracy, fast measuring rate 9 measuring inputs. Operates as data logger or PC interface, also with rechargeable batteries.

10/2021 • We reserve the right to make technical changes.

Technical data and functions, ALMEMO® 8590 /8690

- Increased measuring accuracy and stability
- Fast measuring rate, up to 50 measuring operations per second
With SD memory card, up to 100 mops, optional for 1 channel up to 500 mops
- 9 measuring inputs, electrically isolated
- Over 65 standard measuring ranges
- Support for ALMEMO® plugs with multi-point adjustment, special linearization, and special measuring ranges
- Option KL for independent multi-point adjustment or special linearization programmable in 30 points and management of calibration data saved in the sensor connector and the measuring instrument
- Higher measuring quality thanks to electrical isolation between measuring inputs and device power supply (device ground)
- Improved cold junction compensation with 2 sensors
- Data logger option
Internal EEPROM sufficient for 100,000 measured values (option S) configurable as linear or ring memory - or memory connector with micro SD (accessory)
- Sleep mode for long-term recording
- 2 ALMEMO® output sockets, suitable for digital interfaces, analog output, trigger input, alarm contacts, memory card
- 5 LEDs for indicating various operating states
- Key for switching on and start / stop measuring
- Complete sensor and device programming by means of AMR-Control software (included in delivery).

Technical data ALMEMO® 8590 /8690

| | | | |
|---|---|--|---|
| Precision class | AA (see page 01.04) | Operation | 1 key, 5 LEDs, 2 coding switches |
| Measuring rate | (100), 50, 10 and 2.5 mops | Internal memory (option S) | Internal EEPROM sufficient for 100,000 measured values, configurable as linear or ring memory |
| Measuring inputs | 9 ALMEMO® input sockets | External memory (accessory) | ALMEMO® memory connector with micro SD card |
| Electrical isolation for analog sensors | with semiconductor relays (50 V) Additional electrical isolation between measuring inputs and power supply (device ground) | Date and time-of-day | Real-time clock, buffered with lithium battery |
| Additional channels | 4 function channels, device-internal | Current consumption (without input and output modules) | |
| Outputs | 2 ALMEMO® sockets, suitable for all output modules (analog / data / trigger / relay cables, memory, etc.) | Active mode | approx. 25 mA |
| | | Sleep mode | approx. 0.05 mA |
| | | Environmental conditions and general technical data | see page 01.04 onwards |

ALMEMO® 8590 /8690, accessories

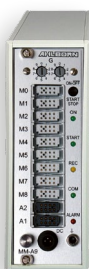
| | Order no. |
|---|-----------|
| Memory connector with micro SD, including USB card reader (see chapter „General accessories“) | ZA1904SD |
| DC adapter cable, 10 to 30 VDC, 12 V / 1 A, electrically isolated | ZB3090UK2 |

ALMEMO® 8590 /8690, connecting cable

| | Order no. |
|--|-----------|
| USB data cable, electrically isolated | ZA1919DKU |
| 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 alarm cable (2 relays, 0.5 A, 50 V) | ZA1006EKG |
| Network technology, Bluetooth modules (see chapter „Networking“) | |

ALMEMO® Measuring Instruments

ALMEMO® 8590-9



Precision measuring instrument, 9 measuring inputs
Data logger option with internal memory or external memory connector (accessory)

ALMEMO® 8690-9A



Precision measuring instrument, 9 measuring inputs
Data logger option with internal memory or external memory connector (accessory)
Runs on rechargeable batteries, charging via the device itself

Technical data and functions

- Technical data and functions, as for ALMEMO® 8590 / 8690

Technical data

Technical data, as for ALMEMO® 8590 / 8690

| | |
|---------------------|--|
| Sensor power supply | Mains adapter 12 V, maximum 0.5 A |
| Power supply | |
| Mains adapter | ZB1212NA12 100 to 240 VAC to 12 VDC, 1.5 A, electrically isolated |
| DC adapter cable | ZB3090UK2 10 to 30 VDC, 1 A, electrically isolated |
| Housing | 180 x 49 x 137 mm (LxWxH) Polystyrene (PS) Weight approx. 490 g |

Technical data and functions

- Technical data and functions, as for ALMEMO® 8590 / 8690
- Runs on rechargeable batteries, high-speed charging in the device itself using mains unit, included in delivery

Technical data

Technical data, as for ALMEMO® 8590 / 8690

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|--------------------------------|--|
| Rechargeable battery pack | 8 rechargeable NiMH batteries, 9 to 11 V, 1600 mAh With intelligent high-speed charging (3.5 hours) |
| Sensor power supply | |
| Mains adapter | 12 V, maximum 0.5 A |
| Runs on rechargeable batteries | 9 to 11.5 V, maximum 0.5 A |
| Power supply | |
| Mains adapter | ZB1212NA12 100 to 240 VAC, to 12 VDC, 1.5 A |
| DC adapter cable | electrically isolated ZB3090-UK2 10 to 30 VDC, 12 VDC, 1 A |
| Housing | 218 x 77 x 145 mm (LxWxH) Polystyrene (PS) Weight approx. 1.2 kg |

Options

Order no.

| | |
|---|-----------------|
| Internal data memory sufficient for 100,000 values | OA8590S |
| Multi-point adjustment, special linearization, management of calibration data | OA8590KL |
| Temperature ranges for 8 refrigerants (see 10.08) | SB0000R2 |
| Measuring rate for 1 measuring channel, 500 mops (SD card required) | SA0000Q5 |
| DIN rail mounting | OA2290HS |

Standard delivery

Order no.

| | |
|---|----------------|
| Mains plug assembly ZB1212NA12, operating instructions, manufacturer's test certificate | |
| Precision measuring instrument ALMEMO® 8590-9 for measured data acquisition | MA85909 |

Options

Order no.

| | |
|---|-----------------|
| Internal data memory sufficient for 100,000 values | OA8590S |
| Multi-point adjustment, special linearization, management of calibration data | OA8590KL |
| Temperature ranges for 8 refrigerants (see 10.08) | SB0000R2 |
| Measuring rate for 1 measuring channel, 500 mops (SD card required) | SA0000Q5 |
| DIN rail mounting | OA2290HS |

Standard delivery

Order no.

| | |
|---|-----------------|
| Rechargeable batteries, mains plug assembly ZB1212NA12, Operating instructions, manufacturer's test certificate | |
| Precision measuring instrument ALMEMO® 8690-9A for measured data acquisition | MA86909A |