Content

General accessories

ALMEMO® memory connector with micro-SD ZA 1904 SD

- for ALMEMO® data loggers, as of version 6
- Large memory
- High data security
- Measured values can be saved to a text file.
- The memory card in the data logger can be replaced quickly and easily on site.
- Files can be transferred to a PC quickly and easily via a card reader

Technical data

Measuring instruments	for ALMEMO® 202, 710, 809, 1020, 1030, 1036, 2470-2S, 2590-2/-3S/-4S, 2690, 2890, 4390, 5690, 5790, 8036. 8590, 8690 Memory connector on device output socket A2
ALMEMO® memory connector	Integrate drive for micro-SD card
Memory card	MicroSD industry standard (Industrial Grade SSD SLC Technology) with high performance, reliability and durability, possible up to 2 GB, standard FAT16 format
Measured values	With 512 MB approx. 30 million measured values
Ring memory	no
File format	ASCII text file, measured values in table format, separated by semi-colons
Reading device	USB card reader for removable storage media
Measuring software	WinControl (as of version 6), see Chapter Software

Variants

	Order no.
ALMEMO® memory connector with micro-SD memory card (512 MB) including USB card reader	**ZA1904SD**
Micro-SD memory card (512 MB as replacement)	**ZB1904SD**

Micro-SD memory card (as replacement)

ALMEMO® GPS mouse for determining current geographical data

Using the ALMEMO® GPS mouse makes it possible to display and save geographical data on an ALMEMO® measuring instrument. The data storage can occur automatically with the measuring cycle or manually.
The measured values of the connected sensors are saved simultaneously with the geographical data. This method makes it possible to assign the logged measured values to the geographical data determined at the time of measurement.

ALMEMO® GPS mouse ZAD 919-GPS

- The ALMEMO® GPS mouse determines the current geographical position.
- The ALMEMO® GPS mouse measures the northern / southern latitudes and the eastern / western longitudes in degrees and decimal minutes and displays them in 4 channels:
  Example: Position latitude 47 degrees 53,1624 minutes north and longitude 11 degrees 42,2056 minutes east
  1st channel: 47.53 Latitude
  2nd channel: 0.1624 m
  3rd channel: 11.42 Longitude
  4th channel: 0.2056 m
- The ALMEMO® measured values that are transformed to coordinates can be e.g. entered in Google Earth, and by doing so, the geographical position can be displayed.
- The power for the GPS mouse is supplied by an ALMEMO® device (6 to 12 V, approx. 100 mA). The device cannot operate in sleep mode.

Variants	Order no.
GPS mouse with approx. 2 meters cable, terminal box, with 0.5 m cable and ALMEMO® plug (range DIGI)	**ZAD919GPS**

ALMEMO® GPS mouse FGD7 01

- The ALMEMO® D7 GPS mouse determines the current geographical data.
- For current ALMEMO® V7 measuring instruments, i.a. ALMEMO® 202, 710, 809, 500.
- 14 measuring variables can be acquired. Via the ALMEMO® D7 plug it is possible to display 10 measuring channels simultaneously.
- 9 measuring channels are preprogrammed on leaving our factory:
  1st channel: degree of longitude GPRMC, up to E179°59,9999
  2nd channel: degree of latitude GPRMC, up to N089°59,9999
  3rd channel: height above Geoid in meters
  4th channel: Speed in km/h
  5th channel: direction of movement in °
  (display possible at a speed of > 0.5 km/h)
  6th channel: direction of movement in text from
  7th channel: Universal Time (UTC), resolution 1 second
  8th channel: display of the satellites
  9th channel: age of the data in seconds
- Alternatively further measuring variables are selectable: degree of longitude Google, up to E179.999999 and degree of latitude Google, up to N89.999999, Speed in m/s or mph or kn.
- The power for the GPS mouse is supplied by an ALMEMO® device (6 to 12 V, approx. 100 mA). The device does not operate in sleep mode
- Note regarding the analysis of the saved measured values by means of the ALMEMO® Control software: Once the measuring operating is completed, the measured values saved in the ALMEMO® device are retrieved. By means of a new feature of the ALMEMO® Control software, the measured values can be transformed into a Google Earth compatible markup language to enable the description of geographical data (KML = Keyhole Markup Language). Thus, waypoints (geographical positions) and saved measured values can be visualized together in Google Earth.

Track and measured data visualization in Google Earth (Example)

Variants	Order no.
GPS-mouse with 2 meters cable, terminal box, with 0.5 m cable and ALMEMO® D7-plug	**FGD701**

ALMEMO® extension cable up to 4 meters length for all ALMEMO® devices (V5, V6, V7)

Passive extension cable ZA 9060-VK for all ALMEMO® sensors (analog, DIGI, D6, D7) except for thermocouple sensors.

Technical data and functions

- The passive ALMEMO® extension cables ZA 9060-VK are used for all ALMEMO® sensors (analog, DIGI, D6, D7) except for thermocouple sensors and for all ALMEMO® devices (V5, V6, V7).
- The extension cables have an ALMEMO® connector/ coupling and are plugged between the ALMEMO® sensor plug and the ALMEMO® measuring instrument.
- The measuring signal or the digital measured values and the parameters saved in the ALMEMO® sensor plug are evaluated by the ALMEMO® measuring instrument via the extension cable.
- Note: Many ALMEMO® sensors can be delivered with a longer connecting cable. Please do not hesitate to ask!

Please note:
Connecting cables must not be plugged together!

Variants:	**Order no.**
Passive extension cable for all ALMEMO® sensors (analog, DIGI, D6, D7) except for thermocouple sensors, for all ALMEMO® devices (V5, V6, V7).	
1 meter long	**ZA9060VK1**
2 meters long	**ZA9060VK2**
4 meters long	**ZA9060VK4**

Passive extension cable ZA 9020-VK up to 4 m length for ALMEMO® sensor NiCr-Ni

Technical data and functions

- The passive ALMEMO® extension cables NiCr-Ni ZA 9020-VK are used for ALMEMO® sensors NiCr-Ni and for all ALMEMO® devices (V5, V6, V7).
- The extension cables NiCr-Ni feature a specific cable with integrated compensating cable NiCr-Ni, have an ALMEMO® connector / coupling, and are plugged between the ALMEMO® sensor plug and the ALMEMO® measuring instrument.
- The measuring signal and the parameters saved in the ALMEMO® sensor plug are evaluated by the ALMEMO® measuring instrument via the extension cable
- Note: ALMEMO® extension cables are only available for thermocouple type K, NiCr-Ni. Many ALMEMO® thermocouple sensors can be delivered with a longer thermal line / compensation line. Please do not hesitate to ask.

Please note:
Connecting cables must not be plugged together!

Variants:	**Order no.**
Passive extension cable for ALMEMO® sensor NiCr-Ni and for all ALMEMO® devices (V5, V6, V7).	
1 meter long	**ZA9020VK1**
2 meters long	**ZA9020VK2**
4 meters long	**ZA9020VK4**

ALMEMO® extension cable up to 100 meters in length for all ALMEMO® devices (V5, V6, V7)

Intelligent extension cable ZA 9090-VKC up to 100 meter in length for all ALMEMO® sensors, analog, D6, except for D7, except for thermocouple sensors.

Technical data and functions

- The intelligent ALMEMO® extension cables ZA 9060-VKC are used for analog ALMEMO® sensors, D6, except for D7, except for thermocouple sensors and for all ALMEMO® devices (V5, V6, V7).
- The extension cables have an ALMEMO® connector/ coupling (each with a microcontroller) and are plugged between the ALMEMO® sensor plug and the ALMEMO® measuring instrument. The current consumption of the extension cable is approximately 8 mA.
- The analog measuring signals are transferred analogy via the intelligent extension cable, the digital measured values and the parameters saved on the ALMEMO® sensor plug are digitally transferred via CRC and evaluated by the ALMEMO® measuring instrument.
- The ALMEMO® sensors can be exchanged arbitrarily. The intelligent extension cable does not influence the measurement operation even in case calibrated sensors with adjustment / multi-point adjustment or sensors with special linearizations (saved on the ALMEMO® sensor plug) are used.
- Note: Many ALMEMO® sensors can be delivered with a longer connecting cable. Please do not hesitate to ask!

! **Please note:**
The intelligent extension cables ZA 9090-VKC are **not suitable for:**

- ALMEMO® plug for frequency, pulse, rotational speed ZA 9909-AKx,
- ALMEMO® rotational speed sensor FU A919-2,
- ALMEMO® plug for digital signals (voltage) ZA 9000-ES2/EK2,
- ALMEMO® measuring module for DC voltage / DC ZA 9900-AKx, ZA 9901-AKx (no average value),
- ALMEMO® flow sensors FV A915-Vx,
- ALMEMO® vane anemometer FV A915-x (new variant FVAD 15-x can be used),
- Meteorological transducer FM A510.

Connecting cables must not be plugged together!
If the intelligent extension cable ZA 9090-VKC is used, the device cannot operate in sleep mode.

Variants:

	Order no.
Intelligent extension cable for ALMEMO® sensors, analog, D6, except for D7, except for thermocouple sensors*, for all ALMEMO® devices (V5, V6, V7).	
5 meters long	**ZA9090VKC5**
10 meters long	**ZA9090VKC10**
20 meters long	**ZA9090VKC20**
30 meters long	**ZA9090VKC30**
50 meters long	**ZA9090VKC50**
100 meters long	**ZA9090VKC100**

*ALMEMO® extension cable with compensating cable for thermocouple sensor NiCr-Ni on request!

ALMEMO® D7 extension cable, up to 100 meters in length and electrically isolated, for ALMEMO® V7 devices and ALMEMO® D7 sensors

Digital extension cable ZAD7 00-VK, up to 100 meters in length, for ALMEMO® D7 sensors

Technical data and functions

- ALMEMO® digital extension cable ZAD7 00-VK is used for ALMEMO® V7 devices and for ALMEMO® D7 sensors.
- Each such extension cable incorporates an ALMEMO® plug / coupling (each with integrated microcontroller); it should be connected between the ALMEMO® sensor plug and the ALMEMO® measuring instrument. Current consumption for this extension cable is approx. 2 mA.
- The digital measured values and the parameters saved in the ALMEMO® sensor plug are transferred in digital form via an RS485 link with CRC to the ALMEMO® measuring instrument, which then evaluates them.
- The ALMEMO® sensors can be freely interchanged. The digital extension cable has no effect on the measuring operation; this also applies to calibrated sensors with adjustment / multi-point adjustment.
- With digital extension cable ZAD7 00-VK device operation in sleep mode is possible; (sleep delay must be programmed in the sensor plug).

! **Please note:**
Connecting cables must not be plugged together!

Variants:	**Order no.**
Digital extension cable for ALMEMO® V7 devices and for ALMEMO® D7 sensors.	
5 meters long	**ZAD700VK05**
10 meters long	**ZAD700VK10**
20 meters long	**ZAD700VK20**
30 meters long	**ZAD700VK30**
50 meters long	**ZAD700VK50**
100 meters long	**ZAD700VK100**

ALMEMO® D7 electrical isolation element ZAD7 00-GT

Technical data and functions

- Electrical isolation element ZAD7 00-GT is used to isolate the ALMEMO® V7 device and the ALMEMO® D7 sensor from one another. This also electrically isolates the ALMEMO® D7 sensor with respect to the other connected ALMEMO® sensors.
- The electrical isolation element is a short pluggable cable with ALMEMO® plug / coupling. The ALMEMO® coupling incorporates an integrated 12V DC/DC converter ensuring electrical isolation between the power supply to the ALMEMO® electronics and that to the connected sensor. The digital data link is electrically isolated via an optocoupler. The maximum insulation voltage is 50V (continuous).
- The electrical isolation element is plugged directly onto the ALMEMO® V7 device. Current consumption for this electrical isolation element is approx. 8 mA. It is also possible to use an ALMEMO® D7 extension cable between the electrical isolation element and the ALMEMO® D7 sensor.
- As with the ALMEMO® D7 extension cable, the ALMEMO® sensors can be freely interchanged. The electrical isolation element has no effect on the measuring operation; this also applies to calibrated sensors with adjustment / multi-point adjustment.
- As with the ALMEMO® D7 extension cable, device operation in sleep mode is possible; (sleep delay must be programmed in the sensor plug).

! **Please note:**
It is not permitted to connect several electrical isolation elements in series.

Variants:	**Order no.**
Electrical isolation element for ALMEMO® V7 devices and for ALMEMO® D7 sensors Plug-in cable Length = 0.2 meters	**ZAD700GT**

Accessories for measuring instruments ALMEMO® 2450, 2490, 2590 and output interface ZA 8006 RTA

	Order no.
Rubber safety holster, green	**ZB2490GS1**
Rubber safety holster, gray	**ZB2490GS2**
including carry strap	

Vent plug with handle,
to close unneeded ALMEMO® sockets,
suitable for ALMEMO 2450, 2490, 2470, 2590, 2690, 202, 710, 1020, 1030, 1036, output interface RTA3/4
GR2400BAG

Top hat rail mounting
1 battery compartment cap with top hat rail holder fitted, including top hat **ZB2490HS**

Magnetic fastening
2 pot magnets, including 2 screws (for battery compartment cap) **ZB2490MH**

Rechargeable batteries

Types	Order no.
Rechargeable battery, 12 V, 1600 mAh, NiMH with intelligent high-speed charging housed in case 174 x 29 x 137 mm (LxWXH) (without plug connections) voltage output via 3-pin socket	**ZB5690AP**
Connector mains unit, 100 to 240 VAC for charging the battery	**ZB1212NA10**
Connecting cable from battery to ALMEMO® device length = 1.5 meters, with ALMEMO® plug for ALMEMO® 2450, 2490, 2470, 2590-2/-3S/-4S, 2690	**ZA1012AKA**
With 3-pin bayonet coupling for ALMEMO® 5690, 8590, 8690	**ZB5090EKA**
With hollow connector for ALMEMO® 2890, 6290	**ZB2290EKA**

General accessories

Batteries and Rechargeable Batteries

Types:	Order no.
AA battery, 1.5 V	**ZB2000B1**
AA NiMH rechargeable battery, 1.2 V, 1900 mA, coded for charging in ALMEMO® unit (e.g. ALMEMO® 2690-8)	**ZB2000A1NM**

Mains Adapter

Variants	Order no.
Switching power supply / connector variant 100 to 240 VAC	
12 VDC, 2 A ALMEMO® connector e.g. for hand-held devices ALMEMO® 2450, 2490, 2590, 2690, 710, 202	**ZA1312NA10**
12 VDC, 2 A 3-pin bayonet coupling e.g. for ALMEMO® 5690, 8590, 8690, 8036, 500	**ZB1212NA10**
12 VDC, 2 A DIN hollow connector for ALMEMO® 2890-9, 6290-7B2	**ZB1112NA10**
12 VDC, 2 A With free ends	**ZB1012NA10**
Accessories	
Conversion connector for mains-powered devices Euro-plug to US standard (flat-pin)	**ZB1000UA**

DC Power Supply Cables

Supply cables for DC voltages

- Usage for car and electric fence batteries.
- For instruments that need to be supplied from the car battery.

Variants	Order no.
10 to 30 V DC, electrically isolated, with DIN hollow connector for ALMEMO® 2890-9, 6290-7B2 Output : 12V DC / 1 A (max.)	**ZB2590UK**
10 to 30 V DC, electrically isolated, with ALMEMO® connector for ALMEMO® 2450, 2490, 2590, 2690-8 710, 202 Output: 12 V DC / 250 mA (max.)	**ZA2690UK**
Output: 12 V DC / 1 A (max.)	**ZA2690UK2**
10 to 30VDC, electr. isol., with bayonet coupling for ALMEMO® 8590, 8036, 809 Output: 12VDC/250mA (max.)	**ZB3090UK**
10 to 30VDC, electr. isol., with bayonet coupling, for ALMEMO® 5690-9, 8690, 500 output: 12V DC / 1.25A (max.)	**ZB3090UK2**
Adapter cable with universal car connector	**ZB1000AKU**
New ALMEMO® power supply plug, 9 to 12 VDC, not electr. isolated, with clamp connector for ALMEMO® DC socket on hand-held devices ALMEMO® 2450, 2490, 2590, 2690, 710, 202	
Programming 0.2 A	**ZA1312FS1**
Programming 1 A	**ZA1312FS8**

New: ALMEMO® power supply cable with USB plug. NOT galv.getr., 5 V DC via USB power bank or PC. USB plug with 1.5 m cable and ALMEMO® supply plug ZA 1312-FS8. For ALMEMO® devices (from model year 2014) 2450, 2490, 2470, 2590-2/4, 2690, 202 **ZA1312U**

Instrument Cases

ZB 2590 TK2

ZB 5600 TK3

Types	Order no.
Carry cases (approx. dimensions in cm)	
Carry case, large, aluminum profile frame / ABS (acrylonitrile butadiene styrene) - e.g. for ALMEMO® 710, 2690, 2890 data logger, Inside dimensions 48 x 35 (WxD) x 6 (H) + 6 cm (removable insert)	**ZB2590TK2**
Carry case, universal, high, aluminum profile frame / ABS, e.g. for ALMEMO® 5690 measuring systems Inside dimensions 48 x 25 (WxD) x 16 (H) + 10 cm (removable insert)	**ZB5600TK3**

ZB 2490 TK2

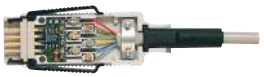
Instrument case for all ALMEMO® handheld devices, inside dimensions (WxDxH) 42 x 30 x 9 (divided into compartments, see photograph) **ZB2490TK2**

ZB 5090 RC

Rack case (approx. dimensions in cm)

Rack case with carrying handle, for ALMEMO® MA5690xxBT8 and MA500xxBT8x measuring systems, in 19-inch sub-rack, 84 DU, height 5 HU Outside dimensions (WxDxH) 54 x 50 x 27, with integrated lockable rack draw, inside dimensions (WxDxH) 40 x 37 x 7 (for cables, accessories, or laptop)

ZB5090RC



ALMEMO® input connector also for existing sensors (see Chapter Input Connectors)

ALMEMO® output modules (analog, relay, trigger) (see Chapter Output Connectors)

ALMEMO® data connection, network technology, Bluetooth modules Wireless and modem transmission (see Chapter Network Technology).

Software for the presentation and evaluation of measuring data, including many notes, is described in Chapter Software.

The software ´ALMEMO® Control´ for measurement setup and convenient device handling, as well as the manual, are included with the delivery of all ALMEMO® devices with digital outputs.