Content

clark™ solutions
valves, pumps and instrumentation

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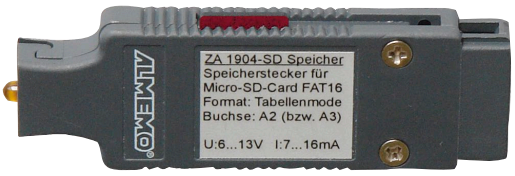
General accessories

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

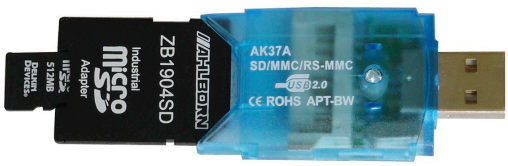
Technical data

Measuring instruments	for ALMEMO® 2590-2/-3S/-4S, 2690, 2890, 4390, 5690, 5790, 8490, 8590 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 128 MB approx. 8 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)



Micro-SD memory card, including USB card reader

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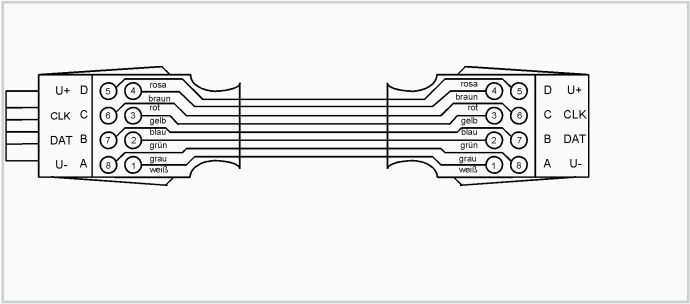
Extension cable for all other measuring probes (except thermocouples)



Extensions up to 4 meters
Passive extension cables ZA9060VK
Passive 8-pin extension cables with ALMEMO® connectors are available in lengths of 1, 2, and 4 meters (ZA 9060 VK1/2/4); these are suitable for all sensors (except thermocouples).
The cable length between sensor connector and measuring instrument must not exceed four (4) meters; if this maximum length is exceeded, communications with the connector EEPROM may be adversely affected.

! The total length of all passive extension cables connected to an ALMEMO® measuring instrument must not exceed four (4) meters. If the total length exceeds this, the device's internal data bus may, depending on environmental conditions, be subject to interference.

Extensions, 5 meters and longer
Longer sensor lines
If distances exceeding this really are necessary, then - instead of extension cables - longer sensor lines should be used. For this purpose the sensor connector must be detached, the sensor cable extended in the conventional way, and the connector then refitted to the end.

Intelligent extension cable ZA 9090 VKC with RS485 from 5 meters and above
If the sensor cable cannot be extended as such , it is still possible to use new intelligent extension cable(s) ZA9060-VKC with microcontroller for up to 100 meters. Two microcontrollers transmit EEPROM data from the sensor connector and measured data from digital sensors (DIGI) in both directions via RS485 and make this interference-resistant data available for the measuring instrument. Sensors can thus be freely interchanged as and when necessary (e.g. calibrated sensors with correction values,.multi-point calibration or special linearization (ZAxxxxSS)).
new: also for digital ALMEMO® D6 probes

! These intelligent extension cables cannot be used for thermocouples or for sensors with a frequency / pulse output (e.g. turbines / rotating vanes FVA915, frequency / pulse / rotational speed ZA 9909 AKx / FUA 9192, DC measuring modules ZA 99xx AB).

When using extension cable(s) operation in sleep mode is not possible

Types :	**Order no.**
Extension cable for all other sensors	
1 meter long (passive)	**ZA9060VK1**
2 meters long (passive)	**ZA9060VK2**
4 meters long (passive)	**ZA9060VK4**
New	
5 meters long (intelligent, with microcontroller, not sensor-specific)	**ZA9090VKC5**
10 meters long (intelligent, with microcontroller, not sensor-specific)	**ZA9090VKC10**
20 meters long (intelligent, with microcontroller, not sensor-specific)	**ZA9090VKC20**
30 meters long (intelligent, with microcontroller, not sensor-specific)	**ZA9090VKC30**
50 meters long (intelligent, with microcontroller, not sensor-specific)	**ZA9090VKC50**
100 meters long (intelligent, with microcontroller, not sensor-specific)	**ZA9090VKC100**

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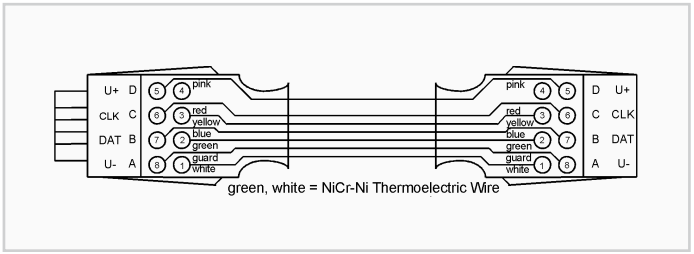
General accessories

Extension Cable for NiCr-Ni Sensors



Extensions up to 4 meters
Passive extension cables ZA9020VK (NiCr-Ni)
Passive 8-pin extension cables with ALMEMO® connectors are available in lengths 1, 2, and 4 meters; for NiCr-Ni thermocouples special extension cables with an integrated compensation line are available (ZA 9020 VK1/2/4).
The cable length between sensor connector and measuring instrument must not exceed four (4) meters; if this maximum length is exceeded, communications with the connector EEPROM may be adversely affected.

! The total length of all passive extension cables connected to an ALMEMO® measuring instrument must not exceed four (4) meters. If the total length exceeds this, the device's internal data bus may, depending on environmental conditions, be subject to interference.

Extensions, 5 meters and longer
Longer sensor lines
If distances exceeding this really are necessary, then - instead of extension cables - longer sensor lines should be used.
For this purpose the sensor connector must be detached, the sensor cable extended in the conventional way with a compensation line, and the connector then refitted to the end.

Active extension cables ZA9020VKP (NiCr-Ni)
If for some reason it is not possible to extend the sensor cable itself, an active extension cable ZA9020VKP (NiCr-Ni) can be used.
This cable incorporates an ALMEMO® connector with an integrated EEPROM for data storage; this connector is a copy of the sensor connector. A compensation line is used for the extension. The terminals in the connectors are also made from thermo material.
If correction values or other sensor-specific settings have been programmed in the sensor connector (e.g. comments, average values, etc.), these must also be programmed (being a copy) in the ALMEMO® connector on the extension cable.
The active extension cable is then sensor-specific.

Types :	**Order no.**
Extension cable, from NiCr-Ni compensation line	
1 meter long (passive)	**ZA9020VK1**
2 meters long (passive)	**ZA9020VK2**
4 meters long (passive)	**ZA9020VK4**
10 meters long (active, with EEPROM, sensor-specific)	**ZA9020VKP10**

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GPS mouse for determining position

Variants	Order no.
Fix for current location via GPS Measuring channels for latitude and longitude	
GPS mouse with cable and ALMEMO® connectorr	**ZAD919GPS**

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	

	Order no.
Top hat rail mounting	
1 battery compartment cap with top hat rail holder fitted, including top hat	**ZB2490HS**

	Order no.
Magnetic fastening	
2 pot magnets, including 2 screws (for battery compartment cap)	**ZB2490MH**

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General accessories

Batteries and Rechargeable Batteries

Types:	Order no.
9V battery (spare)	**ZB2000B9**
Charger, int. in connector incl. 9V bat.	**ZB2000LS**
9V rechargeable battery	**ZB2000A9**
AA battery, 1.5 V	**ZB2000B1**
AA NiMH rechargeable battery, 1.2 V, 1600 mA, coded for charging in ALMEMO® unit (e.g. ALMEMO® 2690-8)	**ZB2000A1NM**

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, 90 to 260 VAC for charging the battery	**ZB1212NA9**
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**

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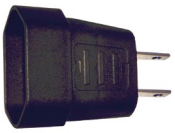
Mains Adapter

ZA 1312 NA7

ZB 1212 NA9



Variants	Order no.
Transformer power supply / desktop version 230 VAC	
12 VDC, 1 A DIN hollow connector for ALMEMO® 2890-9, 6290-7B2	**ZB1112NA7**
12 VDC, 1 A ALMEMO® connector e.g. for hand-held devices ALMEMO® 2450, 2490, 2590, 2690	**ZA1312NA7**
12 VDC, 1 A 3-pin bayonet coupling e.g. for ALMEMO® 8590-9	**ZB1212NA7**
12 VDC, 1 A With free ends	**ZB1012NA7**
Switching power supply / connector variant 90 to 260 VAC	
12 VDC, 2.5 A 3-pin bayonet coupling e.g. for ALMEMO® 5690, 8690	**ZB1212NA9**
12 VDC, 2.5 A With free ends	**ZB1012NA9**
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 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 Output: 12VDC/250mA (max.)	**ZB3090UK**
10 to 30VDC, electr. isol., with bayonet coupling, for ALMEMO® 5690-9, 8690 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	
Programming 0.2 A	**ZA1312FS1**
Programming 1 A	**ZA1312FS8**

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General accessories

Instrument Cases

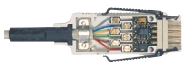
ZB 2590 TK2

ZB 5600 TK3

ZB 2490 TK2

ZB 5090 RC

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**
Instrument case for all ALMEMO® handheld devices, inside dimensions (WxDxH) 42 x 30 x 9 (divided into compartments, see photograph)	**ZB2490TK2**
Rack case (approx. dimensions in cm)	
Rack case with carrying handle, for ALMEMO® MA5690xxBT8 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 ´AMR-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.

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