ALMEMO® Measuring Instruments

The ALMEMO® system

The ALMEMO® system comprises an ALMEMO® measuring instrument and intelligent ALMEMO® connectors for the relevant sensor equipment.
An extensive range of measuring instrument variants is thus available - from the single-channel transmitter right through to data acquisition systems with over 1000 measuring points.
The only differences between most of the measuring instruments in the ALMEMO® series concern their housing (i.e. handheld instruments, desktop instruments, 19-inch systems, fitted panel instruments, transmitters, etc.), the number of measuring inputs (1 to 250), the display, output, and operating controls, and their respective power supplies.
As soon as a sensor or interface cable is connected, the ALMEMO® measuring instrument will, thanks to the intelligent ALMEMO® connector system, be completely programmed ?*? right through to process scheduling.
These measuring instruments provide a uniform range of functions with many configurable options. All parameters can be accessed via the interface and can, since the media in the connectors are always overwritten, be freely modified as and whenever necessary.

The ALMEMO® principle: Only one measuring instrument for all sensors

An extensive range of transducers, sensors, and signals can be connected to any measuring input on virtually any ALMEMO® measuring instrument - all via the patented ALMEMO® plug system Since all the sensor data is saved in the connector, no extra programming is required; as soon as a sensor is connected, the measuring instrument is configured automatically. The sensor data memory (EEPROM) ensures that each sensor can be identified, scaled, and calibrated - all on the basis of its own unique designation. This system of individual sensor designations avoids confusion and makes the measuring setup clear and logical. Sensor errors can be corrected within the plug, turning simple sensors into precision transducers.
Standard signals can be displayed in their original dimensions. For multi-purpose sensors (e.g. temperature and humidity) only one shared plug will usually be required. Programming can be protected by a graduated locking function.

With ALMEMO® measuring instruments you will not need new sensors

For your existing sensors we will provide you with a matching adapter that you can fit quickly and easily. You can also program ALMEMO® plugs yourself quickly and easily via keypad, terminal, or software. The data medium in the plug can be overwritten as and whenever necessary.

ALMEMO® measuring instruments are ideal for all sorts of application

All incorporate the same measuring input circuitry. For applications that are not sector-specific there are more than 60 standard measuring ranges available, e.g. for measuring :
Temperature, humidity, flow velocity, flow rate, heat flow, pressure, rotational speed, frequency, resistance, current, voltage, force, strain factor, displacement, pH value, redox potential, conductivity, O_2, CO_2, CO, O_3, etc. Maximum and minimum values are saved automatically. Measured values can be averaged over a series of individual measurements, over the output cycle, or over the actual measuring duration; limit values can be monitored in terms of programmable maximum / minimum values. Measured values can be corrected with regard to zero point and gain and can be scaled by factor, base value, exponent, and units.

ALMEMO® measuring instruments are real individuals

ALMEMO® instruments automatically recognize the specifications of a sensor as it is connected. Specific functions will only be activated as and when the appropriate connector, interface cable, or module is detected. With humidity sensors the dew point, mixture ratio, vapor pressure, and enthalpy will be calculated automatically. Measuring operations involving psychrometers, dynamic pressure probes, or probes for solute oxygen may require pressure compensation; for this purpose the prevailing atmospheric pressure can be entered manually or calculated automatically by an integrated pressure transducer. When measuring dynamic pressure, pH value, atmospheric humidity, solute oxygen, or conductivity it is possible similarly to perform temperature compensation. When using flow sensors to measure volume flow the appropriate cross-section can be entered. For certain special sensors there are connectors available incorporating an integrated adapter circuitry.

ALMEMO® measuring instruments meet even the most stringent requirements

ALMEMO® devices incorporate a high-resolution 16-bit A/D converter, digital linearization (for Pt100 sensors with the new ITS 90 temperature scale), and digital calibration. Optimal cold junction compensation is ensured by means of precision thermistors incorporated in the socket spring. Measuring inputs, power supply, and interfaces are all electrically isolated from each other.

The ALMEMO® data acquisition system adapts to your requirements

The internal measured data memory incorporated in ALMEMO® data loggers can be expanded by adding external capacity and can be configured either as linear or ring memory.
This memory can be read out selectively according to time or number. The switchover between measuring points is electrically isolated using semiconductor relays that are totally wear-resistant. Continuous measuring point scanning at 10 or 50 measuring operations per second can thus be performed trouble-free. Measuring point scans can be individually programmed. Measuring cycles and output cycles can be selected independently; measured values, average values, and maximum / minimum values can be selectively output and / or saved to memory. The start / stop of each measuring point scan can be variably controlled (by keypad or interface, by date and time-of-day, by limit values, or by an external signal). All measuring instruments can be addressed via interface and are thus fully network-capable. Up to 100 devices can be networked either via cable or over a wireless link. The output of measured values from all devices in the whole network can be initiated from any one such device. For covering longer distances RS422 drivers and distributors are available. This system minimizes hardware requirements, cabling costs, and possible EMC problems, and can be expanded as and when required.

ALMEMO® measuring instruments accept virtually any peripheral equipment while maintaining optimal data transmission

Analog or digital interfaces are not integrated in the measuring instruments themselves but in the connectors and connecting cables. Depending on requirements a wide variety of adapters can be connected, e.g. analog outputs, various interfaces (RS232, RS422, optic fiber, current loop, Ethernet, Bluetooth), alarm signaling devices, or trigger inputs. Data can also be transmitted via a standard fixed-line telephone (analog or ISDN) or a wireless modem at a maximum baud rate of 9600 baud for remote interrogation purposes.

ALMEMO® measuring instruments provide evaluation of measured data easily and conveniently

Suitable output formats are provided for printers or spreadsheet software. For the graphical presentation and the evaluation of measured data there are various software packages available.

ALMEMO® instruments can be programmed quickly and easily

The software protocol and the commands list are identical for all devices. Only one terminal is enough to program all parameters and to scan the measured data. There is a free WINDOWS configuration software, AMR-Control, with terminal, available for this purpose.

Measuring humidity and moisture

ALMEMO® atmospheric humidity sensors provide 4 channels that can be programmed optionally for any of the variables - temperature, relative atmospheric humidity, dew point, mixture ratio, partial vapor pressure, or enthalpy. The first 4 variables are provided as standard.
All measuring functions (maximum, minimum, limit values) and all programming functions can be used for all these channels.
With psychrometers the atmospheric pressure function will also be activated, so that any strongly deviating atmospheric pressure (e.g. at high altitudes above mean sea level) can be entered and used for compensation purposes.
Probes for measuring moisture in materials can be set using the base value for a wide variety of materials, e.g. in the material groups - construction materials, wood, paper.

Measuring air flow velocity

When using hot-wire thermoanemometers, rotating vanes, or dynamic pressure transducers universal ALMEMO® measuring instruments 2590-2 and above can activate averaging functions, volume flow, cross section area, and diameter. The volume flow is calculated over the cross section area by matrix measuring with averaging over a series of individual values or continuous averaging. Since calculation of flow velocity in Pitot tubes is strongly influenced by air temperature, automatic temperature compensation can be activated. It is also possible to set an attenuation filter with a selectable time constant, thus ensuring that relatively smooth values can be applied to particularly critical measuring points.

Non-contacting temperature measurement

When measuring infra-red temperature the emissivity factor and background temperature must always be considered. As soon as an infra-red probe is connected these two functions are activated and the associated parameters are stored in the plug.

Radiant temperature - WBGT measurement

Wet-bulb globe temperature (WBGT) is used e.g. for evaluating heat stress in the workplace. Using a psychrometer with disengageable motor and a globe thermometer, WBGT is calculated from the dry temperature TD, the natural wet temperature TW, and the globe temperature TG.
WBGT = 0.1µ TD + 0.7µ TW + 0.2µ TG
A function channel, WBGT, is provided for evaluating this formula.

Measuring heat flow, thermal coefficient, and transmittance (U value)

The calibration value for each heat flux plate is saved as a factor in the plug, so that heat flow measuring operations can be performed without having to reset the calibration each time. It is also possible to use function channels to determine the average heat flow and the average temperature difference and, from the quotient of these two average values, to determine a thermal coefficient. Depending on how the temperature sensors are arranged, the thermal surface transfer coefficient (α), the thermal conductance coefficient (λ) or the thermal transmittance coefficient (U value) can be determined.

Force measurement including adjustment of zero-point and final value

With force transducers the basic load (tare weight) can be adjusted to zero and the final value can be entered as setpoint. From these values the correction factor will then be calculated automatically. For force transducers with an integrated reference resistor there is a connector available that switches this on for adjustment purposes.

Adjustment and temperature compensation for pH probes

Probes for measuring pH are subject to ageing and must therefore be recalibrated at regular intervals. Zero-point and gain can be calibrated at the touch of a button using the standard reference solutions. A big advantage here is that the calibration setting will be saved in the plug, thus ensuring that the probe can also be operated with other instruments. It is even possible to use several probes with their own individual calibration settings.
Temperature compensation can be performed either automatically using a combined temperature / pH probe or manually by entering the temperature of the medium.

Measuring conductivity - with temperature compensation

The conductivity probe measures the temperature of the medium and calculates conductance referred to 25 °C.

General technical specifications

Inputs

Channel switching between input sockets	4-contact with photo-MOS relays Potential separation maximum 50 V Measuring modules with higher potential separation (see chapter „Input modules“) Offset voltage <5 µV
Cold junction compensation (CJC)	effective in range -30 to +100 °C, Accuracy ±0.2 K (±0.01 K / °C)
Nominal temperature	22 °C ±2 K
Sensor power supply	6 to 12 V depending on power supply
Self-calibration	Automatic zero-point correction, measuring current calibration
Monitoring functions	Automatic sensor recognition and sensor breakage detection

		Basic measuring instruments	Professional measuring instruments	Precision measuring instruments	
Precision class	**C**	**B**	**A**	**AA**	
ALMEMO® series	2450, 2420	2490, 2590	2470, 2790 2590A	2890, 4390 5690, 8490 8590, 8690	2690A, 710
Measuring rates Measuring operations per second (mops)	2,5 mops	2,5, 10mops	2,5, 10mops	2,5, 10, 50, 100mops Option 400mops* | Option 500mops *	
Input range	0.26 to +2.6 V	-2 to +5 V	meas. range 2.6 V: -2 to +3 V in all other meas. ranges -1.9 to +2.9 V	meas. range 2.6 V: -3 to +3 V in all other meas. ranges -2.3 to +1.3 V	meas. range 2.6 V: -2 to +3 V in all other meas. ranges -1.9 to +2.9 V
Overload	-4 to +5 V	-2 to +5 V	-2 to +5 V	± 12V	± 12V
Input current	< 2nA	< 20nA	100pA	Meas. range 2.6 V: 500 nA in all other meas. ranges 500 pA	100pA
Measuring current		Pt100/1000: 0.3mA	Pt100/1000: 0.3mA	Pt100: 1mA, Pt1000: 0.1mA	
System accuracy at 2.5 mops	0.1% of measured value ±4 digits	0.03% of measured value ±4 digits	0.03% of measured value ±3 digits	0.02% of measured value ±2 digits	
Temperature drift	0.01% / K (100 ppm)	0.005% / K (50 ppm)	0.003% / K (30 ppm)	0.003% / K (30 ppm)	

*Measuring rate 400 mops (Option SA0000Q4)

*Measuring rate 500 mops (Option SA0000Q5):

It is also possible, in addition to the standard conversion rates, to set 400 or 500 mops (measuring operations per second). At the rate of 400 or 500 mops just one selected measuring channel can be saved. This can only be used with sensors with voltage or current ranges or with NTC sensors. Nor is it possible to change channels in the course of a measuring operation.

The resolution, accuracy, and sensitivity to disturbance caused by mains hum or electromagnetic interference are comparable with measuring operations performed at a rate of 50 mops. Care must be taken to ensure that the environment is free from interference and that the sensor lines are kept short.

Data can only be output to a micro SD card. Accessories ZA1904SD Memory connector with micro SD Data is saved in table format (separated by semi-colons) and with a time-stamp resolution of 0.0001 seconds. This format can be processed using the WinControl software (as of version 6.1.1.6).

Measuring instrument	
Interface to all ALMEMO® plugs / modules	I2C bus
Operating temperature	-10 to +60 °C
Storage temperature	-30 to +60 °C
Humidity range	10 to 90 % (non-condensing)
Electromagnetic compatibility Safety standards	EN 61010-1: 2001, EMC: EN 61326-1: 2013

Measuring ranges

Sensor type	Type	Measuring range	Units	Resolution	Linearization accuracy	Connector programming
Resistance temperature detectors:						
Pt100 / Pt1000 -1 4-wire	FP Axxx	-200.0 to +850.0	°C	0.1 K	±0.05 K ±0.05 % of measured value	ZA 9030 FS1/4
Pt100 / Pt1000 -2 4-wire	FP Axxx	-200.00 to +400.00	°C	0.01 K	±0.05 K	ZA 9030 FS2 / 5
Pt100 -3 4-wire	FP Axxx	-8.000 to + 65.000	°C	0.001 K	±0.002 K	ZA 9030 FS7
Ni100/1000 4-wire		-60.00 to + 240.00	°C	0.1 K	±0.05 K	ZA 9030 FS3 / 6
NTC type N	FN Axxx	-50.00 to +125.00	°C	0.01 K	±0.05 K	ZA 9040 FS
Thermocouples						
NiCr-Ni (K)	FT Axxx	-200.0 to +1370.0	°C	0.1 K	±0.05 K ±0.05 % of measured value	ZA 9020 FS
NiCroSil-NiSil (N)		-200.0 to +1300.0	°C	0.1 K	±0.05 K ±0.05 % of measured value	ZA 9021 FSN
Fe-CuNi (L)		-200.0 to +900.0	°C	0.1 K	±0.05 K ±0.05 % of measured value	ZA 9021 FSL
Fe-CuNi (J)		-200.0 to +1000.0	°C	0.1 K	±0.05 K ±0.05 % of measured value	ZA 9021 FSJ
Cu-CuNi (U)		-200.0 to +600.0	°C	0.1 K	±0.05 K ±0.05 % of measured value	ZA 9000 FSU
Cu-CuNi (T)		-200.0 to +400.0	°C	0.1 K	±0.05 K ±0.05 % of measured value	ZA 9021 FST
PtRh10-Pt (S)		0.0 to +1760.0	°C	0.1 K	±0.3 K	ZA 9000 FSS
PtRh13-Pt (R)		0.0 to +1760.0	°C	0.1 K	±0.3 K	ZA 9000 FSR
PtRh30-PtRh6 (B)		+400.0 to +1800.0	°C	0.1 K	±0.3 K	ZA 9000 FSB
AuFe-Cr		-270.0 to +60.0	°C	0.1 K	±0.1 K	ZA 9000 FSA
Electrical and digital signals:						
Millivolts DC		-10.0 to +55.0	mV	1 µV	–	ZA 9000 FS0
Millivolts 1 DC		-26.0 to +26.0	mV	1 µV	–	ZA 9000 FS1
Millivolts 2 DC		-260.0 to +260.0	mV	0.01 mV	–	ZA 9000 FS2
Volts DC		-2.6 to +2.6	*	V	0.1 mV	– ZA 9000 FS3
Volts DC		-26 to +26	V	1 mV	–	ZA 9602 FS
For measuring bridges Supply 5 V (Example)		-26.0 to +26.0	mV	1 µV	-	ZA9650 FS1V
For potentiometers Supply 2.5 V		-2.6 to +2.6	*	V	0.1 mV	- ZA9025 FS3
Volt AC (50 Hz to 2 kHz) (Example)		0 to +26	V	0.1 V	–	ZA 9603 AK3
Volt AC (11 Hz to 250 Hz) (Example)		0 to +400	V	1 V	–	ZA 9903 AB5
Ampere AC (11 Hz to 250 Hz) (Example)		0 to +10.00	A	0.01 A	–	ZA 9904 AB2
Volts DC (sampling rate 1 kHz) (Example)		0 to +400	V	1 V	–	ZA 9900 AB5
Ampere DC (sampling rate 1 kHz) (Example)		0 to +10.00	A	0.01 A	–	ZA 9901 AB4
Milliamperes DC		-32.0 to +32.0	*	mA	1 µA	– ZA 9601 FS1
Percent (4 / 20mA DC)		0.0 to 100.0	%	0,01 %		ZA 9601 FS2
Ohms		0.00 to 500.00	*	Ω	0.01 Ω	– ZA 9003 FS
Ohms		0.0 to 5000.0	*	Ω	0.1 Ω	– ZA 9003 FS2
Frequency		0 to 15000	Hz	1 Hz	–	ZA 9909 AK1U
Pulses / measuring cycle		0 to 65000			–	ZA 9909 AK2U
Digital interface		0 to 65000			–	ZA 9919 AKxx
Digital input		0.00 to 100.00	%		–	ZA 9000 ES2
Capacitive humidity sensors:						
Rel: humidity	FH A646	5.0 to 98.0	%H	0,1 %	–	
Rel: humidity with TC	FH A646-R	5.0 to 98.0	%H	0,1 %	±0,5 %	
Dew-point temperature		-25.0 to +100.0	°C	0.1 K	±0.2 K	
Mixture ratio		0.0 to 500.0	g/kg	0.1 g/kg	±0.5 % of measured value	
Partial vapor pressure		0.0 to 1013.2	mbar	0.1 mbar	±0.1 mbar ±0.1 % of measured value	
Enthalpy		0.0 to 400.0	kJ/kg	0.1 kJ/kg	±0.5 % of measured value	
Psychrometer	FN A846				ZA 9846 AK	
Wet temperature		0.00 to +100.00	°C	0.01 K	±0.05 K	
Relative humidity		0.0 to +100.0	%H	0.1 %	±1,0 %H	
Dew-point temperature		-25.0 to +100.0	°C	0.1 K	±0.2 K	
Mixture ratio		0.0 to 500.0	g/kg	0.1 g/kg	±0.5% of measured value	
Partial vapor pressure		0.0 to 1013.2	mbar	0.1 mbar	±0.1 mbar ±0.1% of measured value	
Enthalpy		0.0 to 400.0	kJ/kg	0.1 kJ/kg	±0.5% of measured value.	

* Data may vary depending on device. (see relevant device data sheet)

Sensor type	Type	Measuring range	Units	Resolution	Linearization accuracy	Connector programming
Flow sensors						
Rot. vane, snap-on head	FV AD15-Sx (e.g.)	0.50 to 40,00	m/s	0.01 m/s	-	
Rotating vane Macro	FV AD15-MA1	0.10 to 20.00	m/s	0.01 m/s		
Water turbine	FV AD15-WM1	0.00 to 5.00	m/s	0.01 m/s		
Dynamic pressure sensor	FD A602-S1K	0.5 to 40.0	m/s	0.1 m/s	± 0.1 m/s	
Dynamic pressure sensor	FD A602-S6	1.8 to 90.0	m/s	0.1 m/s	± 0.1 m/s	
Hot-wire anemometer	FV A935-TH4	0 to 2.000	m/s	0.001 m/s	–	
Hot-wire anemometer	FV A935-TH5	0 to 20.00	m/s	0.01 m/s	–	
Hot-wire anemometer	FV A605-TA1	0.01 to 1.000	m/s	0.001 m/s	–	
Hot-wire anemometer	FV A605-TA5	0.15 to 5.00	m/s	0.01 m/s	–	
Chemical probes						
Conductivity	FY A641-LF (e.g.)	0 to 20.000	mS	0.001 mS	±0.2% of measured value	
O_2 dissolved saturation	FY A640-O2	0 to 260	%	1%	–	
O_2 dissolved, concentr:	FY A640-O2	0.0 to 40.0	mg/l	0.1 mg/l	±0.2 mg/l	
O_2 in gases	FY 9600-O2	1 to 100	%	1%	–	
O_3 in gases	FY 9600-O3	0 to 300	ppb	20 ppb	–	
CO probe	FY A600-CO (e.g.)	0 to 300	ppm	1 ppm	–	
CO_2 in gases	FY A600-CO2 (e.g.)	0.000 to 2.500	%	0,01%	±0.2% of measured value	
pH probe	FY96PH-Ex	0.0 to 14.00	pH	0.01 pH	–	ZA 9610 AKY4W
Redox probe	FY96RX-Ex	0.0 to 2600.0	mV	0.1 mV	–	ZA 9610 AKY5W
Optical radiation (Examples)						
Lux measuring probe	FL A613-VL	0 to 260000	lux	1 lux	–	
Lux measuring probe	FL A603-VL2	0.05 to 12500	lux	0.01 lux	–	
Lux measuring probe	FL A603-VL4	1 to 250000	lux	1 lux	–	
UV measuring probe	FL A613-UV	0 to 87.00	W/m^2	0.01 W/m^2	–	
UVA measuring probe	FL A603-UV24	0.0004 to 100	mW/cm^2	0.1 $\mu W/cm^2$	–	
Radiometric probe	FL A603-RW4	0.00004 to 10	mW/cm^2	0.01 $\mu W/cm^2$	–	
Photosynthesis probe	FL A603-PS5	0.0002 to 100	$mmol/m^2s$	0.1$\mu mol/m^2s$	–	
Other connectable sensors / transducers (Examples)						
Heat flow plates	FQ Axxx	-260.0 to +260.0	mV	0.01 mV	–	ZA 9007 FS
Moisture content probe	FH A696-MF	0 to 50.0	%	0,1%	–	
Differential pressure	FD A612-SR	0 to 1000	mbar	0.1 mbar	–	
Barometer	FD A612-SA	0.0 to 1050 mbar		0.1 mbar	-	
Pressure transducer FDA	FD A602-xx (e.g.)	0.00 to 10.00	bar	0.01 bar	–	
Force transducer	FK Axxx (e.g.)	0.0 to 50.00	kN	0.01 kN		
Displacement transducer	FW Axxx(e.g.)	0.0 to 150.00	mm	0.01 mm	–	
Tachometer	FU A919-2	8 to 30000	rpm	1 rpm		ZA 9909 AK4U
Function values						
Differential					–	
Maximum value					–	
Minimum value					–	
Average value over time					–	
Average value over measuring point					–	
Summation over measuring points		0 to 65000			–	
Total number of pulses	ZA 9909-AK2U	0 to 65000			–	
Pulses / print cycle	ZA 9909-AK2U	0 to 65000			–	
Alarm value		0.0 to 100.00	%		–	
Thermal coefficient	M (q) / M (ΔT)					
Wet-bulb globe temperature (WBGT)(0.1 TD + 0.7 TW +0.2 TG)					–	
Measured value						
Cold junction temperature				°C		
Number of averaged values						
Volume flow		0 to 65000	m^3/h	1 m^3/h		

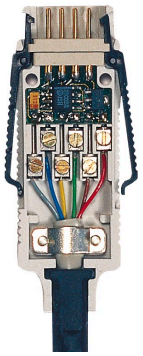
Outputs

ALMEMO® socket A1	Digital interface	Baud rates 150, 300, 600, 1200, 2400, 4800, 9600 baud, 57.6, 115.2 kilobaud Data : 8 bit serial, 1 start bit, 1 stop bit, no parity ALMEMO® data link via USB, RS232, Ethernet wireless link via Bluetooth or RS422 (see chapter „Networking“)
	Analog output	ALMEMO® analog cable and analog interface (see chapter „Output modules“)
ALMEMO® socket A2	Networking	ALMEMO® network cable or wireless via Bluetooth (see chapter „Networking“)
	Saving data	ALMEMO® memory connector with memory card (see chapter „General accessories“)
	Analog output	ALMEMO® analog cable and analog interface (see chapter „Output modules“)
	Trigger input	ALMEMO® trigger cable and trigger interface (see chapter „Output modules“)
	Relay output	ALMEMO® relay cable and relay interface (see chapter „Output modules“)
	Relay output	ALMEMO® relay cable and relay interface (see chapter „Output modules“e

Mains adapter and DC supply cable

see chapter „General accessories“

Input connector



ALMEMO® plug
In the ALMEMO® measuring system, depending on the sensor and measuring instrument, up to 4 measuring channels can be accessed at any one measuring input.
The patented ALMEMO® plug incorporates 6 screw terminals - 2 for the sensor‘s power supply and 4 for its measuring signal. With Pt100 sensors using 4-conductor circuitry all 4 free connections will be required for the measuring signal.
Only one sensor of this type can be connected therefore per measuring input. Electrical signals only require 2 connections for the measuring signal. One plug can thus acquire two different measuring signals over just one measuring channel. An atmospheric humidity sensor can example usually be combined with a temperature sensor. The associated operands (e.g. dew point, mixture ratio, partial vapor pressure, enthalpy) are programmed in the plug as additional measuring channels. Up to maximum four measuring channels can be output per measuring input.

ALMEMO® D6 plugs for digital sensors

- The digital ALMEMO® D6 sensor can be connected to any ALMEMO® measuring instrument without in any way affecting its measuring accuracy. The A/D converter incorporated in the ALMEMO® D6 sensor is exclusively responsible for the measuring accuracy of the whole system.
- The digital ALMEMO® D6 sensor is calibrated without involving the ALMEMO® measuring instrument (DAkkS / factory) and can be replaced or exchanged as and whenever necessary.
- The connecting cable for the digital ALMEMO® D6 sensor can be extended using pluggable extension cables quickly and easily and without any line losses. (see chapter „General accessories“)
- These digital extension cables provide high transmission reliability; they have no effect on measuring accuracy.
- The digital ALMEMO® D6 sensor can be connected via USB directly to a PC or be incorporated via Ethernet in an ALMEMO® network. Measured values can be processed directly using the AMR WinControl software package. (see chapter „Software“)
- These digital ALMEMO® D6 sensors can be configured (e.g. measuring range selection) directly on the PC using USB adapter cable ZA1919AKUV (see page 04.05).