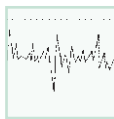


ALMEMO® MEASURING INSTRUMENTS

Universal Measuring Instrument with 2 Measuring Inputs and Data Logger Option ALMEMO® 2290-4



Option



Technical Features:

- ▶ 2 ALMEMO® input sockets, electrically isolated, for 2 ALMEMO® sensors
- ▶ Per sensor, maximum 4 channels (sensor-type-specific, measuring and function channels)
- ▶ More than 65 standard measuring ranges.
- ▶ Easy-to-read 6½-digit LCD display of measured values.
- ▶ Measuring functions:
Meas. value, hold, difference, zero-setting, two-point adjustment, smoothing with adjustable time constant, configuration of double display for temperature and humidity, storage of max and min values, manual or cyclic averaging with averaging mode and count, volume flow measurement with average value, diameter or cross section, manual or automatic temperature and atmospheric pressure compensation.
- ▶ Sensor programming:
Measuring range, correction of meas. value, scaling, dimension, monitoring of limit value, graded locking of functions, analog output scaling.
- ▶ Device programming:
Real time clock with time and date, start and end of a measurement, conversion rate and print cycle for output or storage of measuring data, baud rate, output formats for printer and spreadsheet software, activation of functions in groups with display mode, selection of language for function abbreviations and printouts of records.

Extent of the delivery

Universal measuring instrument ALMEMO® 2290-4, operating instructions, ALMEMO® Manual with AMR-Control software

Order No. MA22904

Technical Data:

Measuring inputs:	2 ALMEMO® input sockets electr. isol. for 2 ALMEMO® sensors
Channels:	per sensor, maximum 4 chann. (sensor-type-specific, meas. and function channels).
Sensor power supply:	
battery:	7 ... 9V, max. 70mA
mains adapter:	approx. 12V, max. 100mA
Outputs:	2 ALMEMO® sockets
Equipment:	
Display:	1½ digits, 7-segment: channel 5 digits, 7-segment: meas. val. 2 digits, 16-segment: dimens.
Keypad:	5 keys
Time and date:	buffered with device battery
Power supply:	7 ... 13VDC not electr. isol.
Mains adapter:	ZB2290NA 230VAC on 12VDC, 200mA electr. isol.
Adapter cable, electr. isolated:	ZB2290UK 10 ... 30VDC on 12VDC, 250mA
Current consumption:	approx. 7mA without input and output modules
Housing:	H180 x W85 x D33mm, ABS high impact strength (70°C max.)

Options

Data logger function	Order No. OA22904S
32-KB battery-buffered memory, internal, for some 3700 to 6000 measured values (depending on the number of channels); (see ordering notes on the next page)	
Special range of thermal conductivities (heat relief materials) see sections 08	Order No. SB2290L
Top Hat Rail Mounting	Order No. OA2290HS

Accessories:

ALMEMO® data cable V24 interface, electr. isol.	Order No. ZA1909DK5
ALMEMO® memory connector 128kB (25000 meas. values)	Order No. ZA1904SS4
ALMEMO® memory connector 256kB (50000 meas. values)	Order No. ZA1904SS8
Note: The internal memory of the instrument will be deactivated as long as a memory connector is connected.	
V24 adapter cable for direct read-out using a PC, 115200bd max., with add. socket for mains adapter connection, (recommended at high baudrates or when a laptop is used)	Order No. ZA1409SLK
Mains adapter 12VDC, 200mA	Order No. ZB2290NA
For more accessories, see sections 4 and 7	

03/2003 We reserve the right to make technical changes.

ALMEMO® MEASURING INSTRUMENTS

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New Functions:

- ▶ Smoothing by continuous averaging with adjustable time constant, e.g. for flow measurements with turbulence. (replacement of the special instrument for HEVAC applications, ALMEMO® 2295-6)
- ▶ Configuration of double display for temperature and humidity room monitoring. (replacement of the HEVAC instrument ALMEMO® 2296-1K)
- ▶ Option Data Logger:
Can be also subsequently activated with memory connector, 32-KB battery-buffered memory, internal, for some 3700 to 6000 measured values (depending on the number of channels), configurable as a ring memory. Attachable ALMEMO® EEPROM memory connectors, 128kB and 256kB (memory configuration as data buffer for replacement of the special instrument for HEVAC applications, ALMEMO® 2295-6).

Ordering notes:

1. The option OA22904S can be ordered in addition to the instrument. The instrument will be delivered as a data logger. For example: Instrument 2290-4 Order No. MA22904 with Option OA22904S
 2. The instrument 2290-4 without data logger function can also be subsequently changed into a data logger. For this purpose, a memory connector (ZA1904SS4 or ZA1904SS8) and the option OA22904S will be required. The memory connector performs a single unlock of the data logger function at the instrument. The connector can still be used as a removable data memory. A repeated unlocking, for example, of a further 2290-4 instrument is not possible. For example: Memory connector Order No. ZA1904SS4 with Option Order No. OA22904S
- ▶ Selection of language for function abbreviations and printout of records.

The new universal measuring instrument ALMEMO® 2290-4 has many functions for an optimal evaluation of all sensors, for a flexible process control and a universal data output. Specific measuring functions will be automatically or manually activated, as required, to simplify the operation. A range of special functions can only be accessed via the interface. A total of 10 different function groups can be set with each group releasing the corresponding functions. The applications range from a completely locked instrument to all functions being released.

 This new universal measuring instrument will include the functions of the previous types, ALMEMO® 2290-1/-2/-3, 2296-1K, 2295-6, and will completely replace these instruments. As a result of the efficient production we are able to offer this instrument at a lower price than the previous multifunctional measuring instrument ALMEMO® 2290-2, despite the larger range of functions.



ALMEMO® instrument 2290-4 with temperature/humidity sensor and atmospheric pressure module. display: atm. pressure/double display °C + rH

above: memory connector in plexiglass package
below: memory connector with option 'Data Logger'

above: mains adapter and read-out cable
below: software and memory connector for the device