

ALMEMO® MEASURING INSTRUMENTS

**Universal Data Acquisition System
suitable for connecting up to 90 sensors with large
illuminated display and 512-kbyte data memory**
ALMEMO® 5990-2



Technical advantages

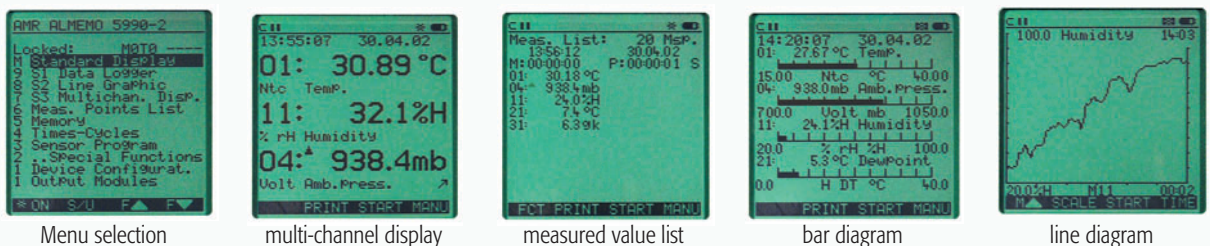
- ▶ Graphic display, 128 x 128 pixels, illuminated, 16 rows, 21 characters per row
- ▶ easy and convenient to operate - via 7 keys (4 soft-keys), Rotary selector knob
- ▶ Hot-key for returning directly to a selectable menu
- ▶ high-speed, high-resolution delta-sigma A/D converter (up to 50 measuring operations per second)
- ▶ Slot for smart media card, 8 to 32 MB
- ▶ 2 output relays for alarm reports, as standard
- ▶ up to 60 sensors (with 10-fold MU connector) in small desk-top housing, 32 U



Technical features :

- ▶ Universal data acquisition system - in modular 19" technology
- ▶ Ideally suitable for computer-aided online operation or as a stand-alone system for managing a large number of measuring points
- ▶ Measured values output as single value displays or multi-channel displays, measured value lists, line diagrams, or bar diagrams
- ▶ Easy and convenient to operate via soft-keys and rotary selector knob :
 - specific single scan or automatic measuring point scan, with storage and output of measured values and alarm values;
 - starting and ending a measuring point scan via keypad, real time clock and date, limit values or external trigger output;
 - measuring cycle and output cycle freely selectable; for each measuring point alarm value output, minimum value, maximum value, and averaging cyclic or throughout the entire measuring period, limit value, hysteresis, correction values for sensor adjustment, scaling values for sensor signals; number inputs for identifying measurements or series of measurements, difference, zero-setting, two-point adjustment, atmospheric pressure compensation and temperature compensation manual or automatic
- ▶ All measured values, functions, and programming items can be viewed in different menus.
- ▶ All sensor and device parameters can be configured without using a PC.
- ▶ Device addresses are set via a menu, so that up to 100 devices can easily be networked.
- ▶ Table format for further processing with spreadsheet software
- ▶ 512-kbyte data memory (for 100,000 measured values), buffered real time clock plus date
- ▶ 3 measuring menus configurable by the user to incorporate those functions needed for specific applications
- ▶ Access to menus and control keys lockable progressively by levels and via password
- ▶ Maximum and minimum values stored with date and time-of-day
- ▶ Volume flow measurement with average value, channel diameter, or channel cross-section (new function channels)
- ▶ Measured values displayed numerically in three selectable sizes, as lists, line diagrams, or bar diagrams
- ▶ Measured values smoothed to settable degree

Graphic display



Menu selection

multi-channel display

measured value list

bar diagram

line diagram

01/2005 We reserve the right to make technical changes.

ALMEMO® MEASURING INSTRUMENTS

01

01/2005 We reserve the right to make technical changes.

Technical Data:

Equipment :

Display	Graphic display, 128 x 128 pixels, illuminated, 16 rows, 21 characters per row
Function selection / parameter input :	7 keys (4 soft-keys), quick entry button, locking function, Selectable languages : German, English, French
Memory :	512-kbyte data memory (for 100,000 measured values), buffered with lithium battery, Slot for smart media card, 8 to 32 MB
Date and time-of-day :	real-time clock, buffered with lithium battery
Power supply :	Power supply : via desk-top mains supply unit, 12 VDC, 2 A designed for 100 to 230 VAC,
Option A (OA5590A):	Rechargeable battery supply, 1,6 Ah, charging time via desk-top mains supply unit, 2 hours
Option U (OA5590U):	Electrically isolated DC voltage supply, 10 to 36 VDC, 1 A (e.g. for car battery), Desk-top mains supply unit can also be used.
Option AU (OA5590AU):	Rechargeable battery supply, 0,8 Ah, also electrically isolated DC voltage supply, 10 to 36 VDC, 1 A (e.g. for car battery), battery charging also via desk-top mains supply unit

Active, electrically isolated master measuring circuit boards :

Analog / digital converter :	delta-sigma 24-bit, 2,5, 10, 50 measuring operations per second, see page 01.05
OA5990G2Q:	Measuring circuit board with 10 ALMEMO® input sockets, electrically isolated, for 10 ALMEMO® sensors per sensor, maximum 4 chann. (sensor-type-specific, meas. and function channels) 1 ALMEMO® output socket (A1) for alarm or recording cable, space requirement, 2 plug-in slots
OA5990G3Q:	Measuring circuit board with 64-pin spring contact strip for ALMEMO® 10-fold MU connector, 10 measuring channels (no frequency / double sensors, no sensor supply), 2 alarm contacts, shared for all inputs, space requirement, 1 plug-in slot

Passive selector switch boards :

ES5590MF:	10 ALMEMO® input sockets, electrically isolated, for 10 ALMEMO® sensors per sensor, maximum 4 chann. (sensor-type-specific, meas. and function channels) 1 ALMEMO® output socket (A1) for alarm cable, maximum 8 cards, space requirement, 2 plug-in slots
ES5590MU:	Selector switch board with 64-pin spring contact strip for ALMEMO® 10-fold MU connector, 10 measuring channels (no frequency / double sensors, no sensor supply), 2 alarm contacts, shared for all inputs, maximum 8 cards, space requirement, 1 plug-in slot

Housing dimensions :

19" desk-top housing, 32 DU : W179 x H158 x D232, 6 free slots
 19" desk-top housing, 84 DU : W444 x H158 x D2232, 19 free slots
 19" sub-rack, 84 DU : W483 x H132.5 x D273, 19 free slots

Types and ordering information :

Data acquisition system ALMEMO® 5990-2, in desk-top housing, 32 DU with plug-in standard power supply unit, including desk-top mains supply unit, 12 VDC 2 A, and slot for smart media card, without master measuring circuit board including manufacturer's test certificate

As above, in desk-top housing, 84 DU

As above, in sub-rack 19", 84 DU

Order no. MA59902TG3
Order no. MA59902TG8
Order no. MA59902BT8

Compulsory : optionally with one of the following active master measuring circuit boards :

Master measuring circuit board for 10 ALMEMO® flat connectors, 2 plug-in slots

Master measuring circuit board for ALMEMO® 10-fold MU connector, 1 plug-in slot

Order no. OA5990G2Q
Order no. OA5990G3Q

Further options :

Memory extension to 2 MB, only possible with OA5990G2Q

Rechargeable battery supply, 1.6 Ah, charging time via plug-in mains supply, 2 hours

electrically isolated DC voltage supply, 10 to 36 VDC, 1 A

Rechargeable battery supply, 0.8 Ah, electrically isolated DC voltage supply, 10 to 36 VDC, 1 A

Order no. OA5590S2
Order no. OA5590A
Order no. OA5590U
Order no. OA5590AU

Selector switch boards, maximum extension 8 boards

ES 5590-MF: Selector switch board with ALMEMO® flat sockets

ES 5590-MU: Selector switch board for ALMEMO® MU connector

Order no. ES5590MF
Order no. ES5590MU

Accessories :

ALMEMO® 10-fold MU connector

ALMEMO®-V24 data cable, electrically isolated, maximum 115.2 kbaud, 1 mA

ALMEMO®-V24 optic-fiber data cable, maximum 115.2 kbaud, 4 mA

Smart media card, 32 MB (up to 7.2 mio. measured values)

Reader for smart media card, maximum 115.2 kbd, including plug-in mains supply, 12 V 200 mA

Supply cable with banana plug, for options OA5590U and OA5590AU

Order no. ZA5590MU
Order no. ZA1909DK5
Order no. ZA1909DKL
Order no. ZB1904SC32
Order no. ZA1409SLG
Order no. ZB5090EK

AHLBORN
 www.ahlborn.com

01.27