

SOFTWARE

State-of-the-art measuring instruments must be able to interconnect with their environment.

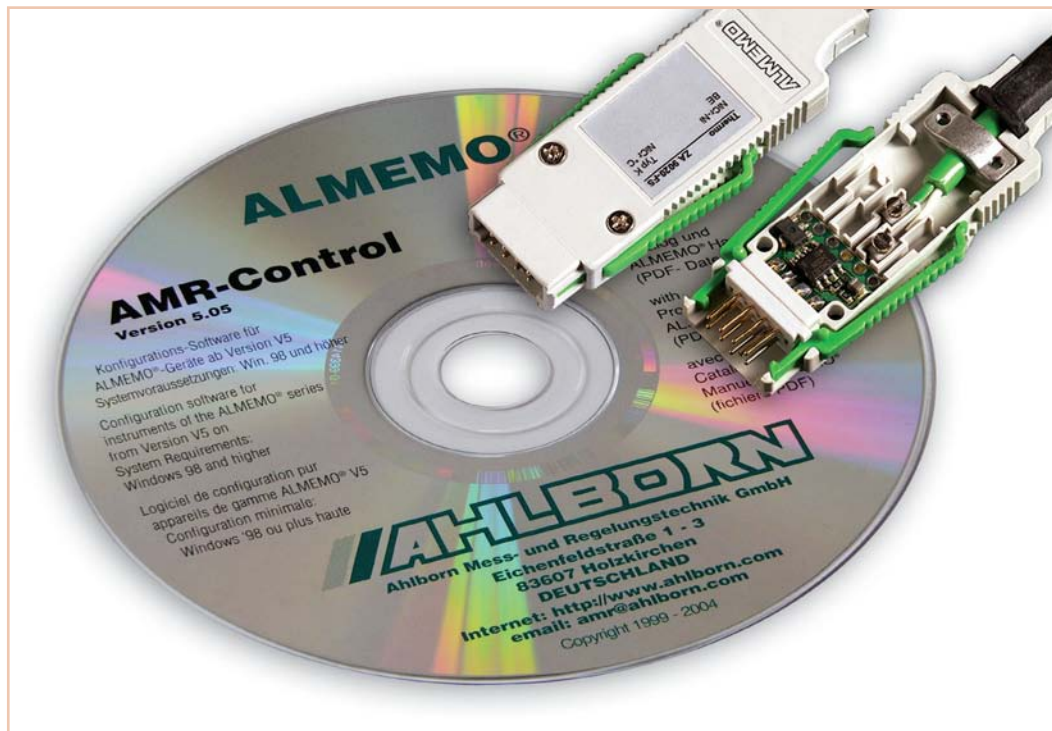
Special ALMEMO® software programs give you complete control of the whole measuring setup and ensure convenient device handling. Once measured values have been acquired by the ALMEMO® measuring instrument, this data can be transmitted to a computer via modem, data line, optic fiber, or radio link.

“AMR-Control”, the WINDOWS configuration software, is included free-of-charge with all ALMEMO® devices. This software package lets you program all the device parameters and scan all measured data via a single computer.

The “WinControl” package has been specially developed for data acquisition and measured data processing with ALMEMO® equipment. Acquired measured values can be displayed, arithmetically processed, stored, printed out, and exported to other software applications for further processing. It is also possible, from the acquired or calculated variables, to derive alarm conditions and to perform selective control measures. Ideal network support is provided by a version of “Com2ips”, specially developed for ALMEMO® devices. ALMEMO® measuring instruments can thus be addressed in an already established corporate network.

A demo version of AMR WinControl can be downloaded free-of-charge from www.ahlborn.com.

AMR-Control®: Full Control over the Instrument Setup and Convenient Device Handling



The software AMR-Control is supplied with each ALMEMO® data logger and allows for the complete programming of the sensors, for the configuration of the measuring instrument and for the read-out of the data memory via serial interface.

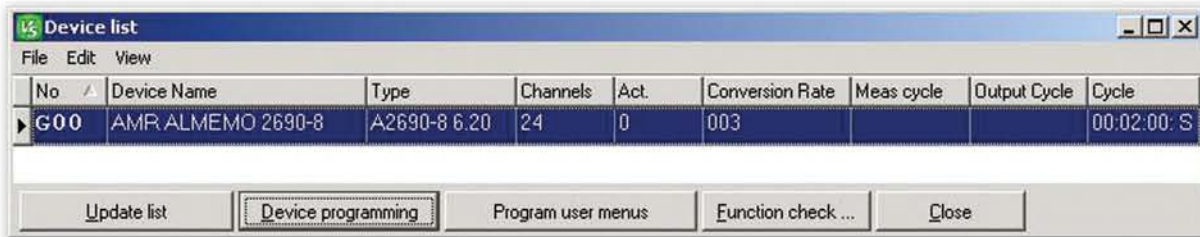
The only item required is an ALMEMO® data cable. The integrated terminal even allows to obtain online measurements from the PC. As a result, you can keep a constant overview and can completely control your measuring task!

+ The latest program version is available for download from www.ahlborn.com.

AMR-Control, initial screen



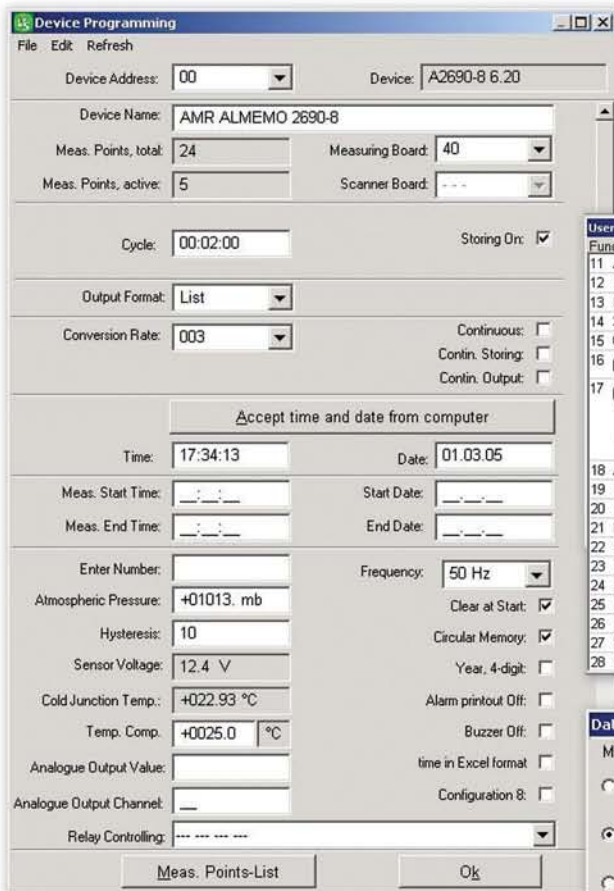
Devices list



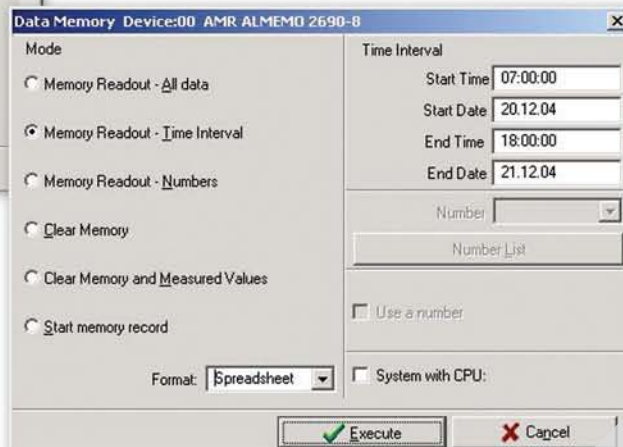
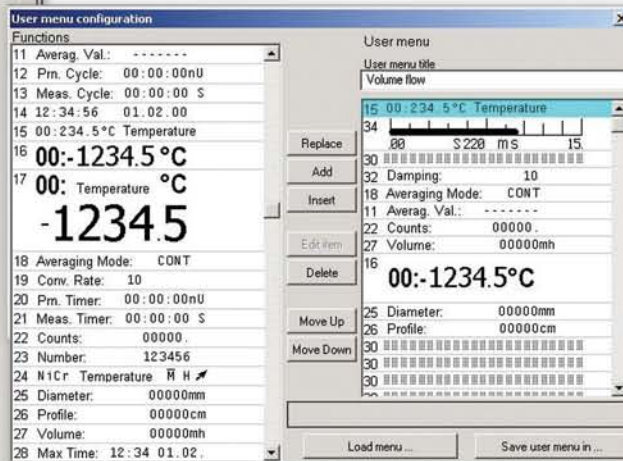
System Configuration
(programming of devices and connectors)
testing / saving



Device Programming



Programming user menus
(on ALMEMO® 2690 and 2890)



Reading out from the measured value memory

SOFTWARE

List of connectors / measuring points

Connector	Cha...	Range	Dim	Comment	LV Max	LV Min	Base	Factor	Exp	Zero ...	Slope C...	Lo...
G00: A2690-8 6.20												
=M 0												
1.	00	Ntc	°C		---	---	---	---	+0	---	---	6
2.	10	% rH	%H	Feuchte	---	---	---	---	+0	---	---	5
3.	20	HDT	°C	Taupunkt	---	---	---	---	+0	---	---	5
4.	30	HAH	gk	Mischung	---	---	---	---	+0	---	---	5
=M 5												
3.	25	S220			---	---	---	---	+0	---	---	0

Programming measuring points / programming connectors

Connector: =M 0
Measuring Point: 00

Range:	% rH	HDT	HAH
Ntc	% rH	HDT	HAH
Reference Channel B1: (00)	--	--	--
Reference Channel B2: ---	++	++	++
Multiplexer: --	M4	--	--
Decimal point of range: 2_	1	1	1
Element Flags: 00	00	00	00
Output Function: Mess	Mess	Mess	Mess
Dimension: °C	%H	°C	gk
Comment: Temperatur	Feuchte	Taupunkt	Mischung
Locking Mode: 6	5	5	5
Calibration Offset: ---	+11576	---	---
Calibration Factor: ---	40746	---	---
Zero Correction: ---	---	---	---
Slope Correction: ---	---	---	---
Base: ---	---	---	---
Factor: ---	---	---	---
Exponent: E+0	E+0	E+0	E+0
Averaging Mode: CONT	CONT	---	---
Limit Value max: ---	---	---	---
Action max: --	--	--	--
Limit Value min: ---	---	---	---
Action min: --	--	--	--
Alarm Relay Max: R_	-	-	-
Alarm Relay Min: R_	-	-	-
Min. Sensor Supply: -- V	--	--	--
Analogue Output Start: ---	---	---	---
Analogue Output End: ---	---	---	---
Print Cycle Factor: --	--	--	--
Damping: 00	00	00	00
Cross Section: 00000	00000	00000	00000

Buttons: Scale, Activate Meas. Point, Ok

Saving / loading connector / measuring point programs

Creating / saving multi-point calibration, special linearization
see page 03.03

01/2011 We reserve the right to make technical changes.

Measured values list with zero-setting / adjusting/ deleting

Connector	Channel	Range	Comment	Meas.Val	Dim	Maximum	Minimum	Avg. Val	Mode	Counts
=M 0 [1.]	00	Ntc	Temperatur	+021.80	°C	+022.03	+021.80	---	CONT	00018.
=M 0 [2.]	10	% rH	Feuchte	+0016.2	%H	+0019.3	+0015.8	---	CONT	00018.
=M 0 [3.]	20	HDT	Taupunkt	-0005.0	°C	-0002.5	-0005.2	---	---	00000.
=M 0 [4.]	30	HAH	Mischung	+0000.4	gk	+0000.5	+0000.4	---	---	00000.

Output modules list

Soc...	Abbr.	Type	No.	Name	Comment
A1	DK0	DK	0	Data Cable	RS232, RS422, DSR hardware handshake
A2	RK	RK		Analogue Cable	Analogue output

Terminal for online measuring operations and for direct programming

```

AMR ALMEMO 2690-8
MS BER.  GW-MAX  GW-MIN  BASIS  D FAKTOR EXP MITTEL KOMMENTAR!
00:Ntc   ---      ---      ---   °C   ---   E+0  CONT  Temperatur
01:NiCr  ---      ---      ---   °C   ---   E+0  ---   ---
10:% rH  ---      ---      ---   %H   ---   E+0  CONT  Feuchte
20:H DT  ---      ---      ---   °C   ---   E+0  ---   Taupunkt
30:H RH  ---      ---      ---   gk   ---   E+0  ---   Mischung
MESSZYKLUS: 00:00:00  S0508.0 F0506.0 A W010 C-S--
DRUCKZYKLUS: 00:00:10 S 9600 bd
S2
DATUM:      15.01.00
20:27:50 00: +022.13 °C 01: +0020.2 °C 10: +0019.3 %H 20: -0002.4 °C 30: +0000.6 gk
20:28:00 00: +022.14 °C 01: +0020.2 °C 10: +0019.9 %H 20: -0001.9 °C 30: +0000.6 gk
X
    
```

SOFTWARE

WIN-Control SW5600WC0/1/2/3



Software Description:

- ▶ The AMR WinControl software package has been specially developed for data acquisition and measured data processing with ALMEMO® equipment.
- ▶ This software makes it very easy and convenient for the user to program and operate ALMEMO® devices.
- ▶ The acquired measured values can be displayed, arithmetically processed, stored, printed and for further data processing (also ONLINE) can be exported to other software packages.
- ▶ It is possible to derive alarm conditions from the acquired or calculated variables and perform control measures.
- ▶ The Windows desktop and the context-sensitive online help ensure a quick familiarisation and a safe handling of the software.
- ▶ At our site (www.akrobit.de) you can find all the latest information regarding software versions and updates and also download the most recent trial version of the software.

Software Versions:

For 20 measuring points and one instrument

Order no. SW5600WC1

For any number of measuring points and instruments

Order no. SW5600WC2

For any number of measuring points and instruments, all options included (except Data server, Web server and additional modules)

Order no. SW5600WC3

For any number of measuring points and devices, all options included (except add-on modules), with an integrated data server (simultaneous access by several RMT WinControl clients).

Order no. SW5600WC4

Update of the latest software version

Order no. SW5600WCU

CrossUpdate DataControl

Order no. SW5600WCG

Options:

Network capability (for addressing several ALMEMO® devices)

Order no. SW5600WCO1

Automatic generation of measured data files (daily files / weekly files)

Order no. SW5600WCO2

Modem support

Order no. SW5600WCO3

Alarm function (alarm record, output to ALMEMO® relays, starting other applications)

Order no. SW5600WCO5

Data server see 06.12

Order no. SW5600WCO8

Web server see 06.12

Order no. SW5600WCO9

New Extended evaluation functions see page 6.09

Order no. SW5600WCO10

Additional modules

Thermal comfort and air-conditioning calculations (as per DIN 1946, EN ISO 7730); (see 13.13)

Order no. SW 5600 WCZM1

Password protection (see 06.10)

Order no. SW 5600 WCZM2

Test bench manager (prerequisite : WC3 / WC4 or WC1 / WC2 + WCO2) (see 06.12)

Order no. SW 5600 WCZM3

Thermal transmittance (U) wizard (see 06.10)

Order no. SW 5600 WCZM4

Thermal quantity wizard (see 6.10 and 14.03)

Order no. SW 5600 WCZM5

OPC export (see 6.10)

Order no. SW 5600 WCZM6

Additional protocol (selectable, requires WC3 / WC4) (see system integration, page 11.08)

Order no. SW5600WCZM7

Security package (requires WC3 / WC4) (see 6.12) including watchdog card

Order no. SW 5600 WCZM8

Complete packages (see 06.12)

Long-term / continuous monitoring

Order no. SW 5600 WCV

PIMEX - combined measured value recording, video recording, and evaluation functions

Order no. SW 5600 WCP

Hardware copy protection (see 06.12)

Hardlock USB dongle

Order no. SW 5600 HL

Hardlock USB network dongle

Order no. SW 5600 NHL

Minimum system requirements :

Components :

Computer

Minimum configuration

IBM-compatible PC

Operating system

Windows 2000, XP, 2003, Vista, 2008, 7

Memory

256 MB

Free hard-disk capacity

25 MB

Interfaces

COM (RS232)

Recommended configuration

IBM-compatible PC

Windows XP

1024 MB

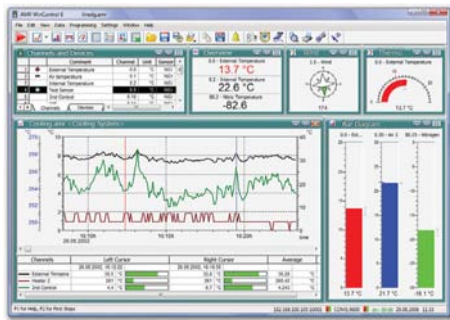
100 MB

COM (RS232), USB network card

Modem or ISDN

Function Overview	WC1	WC2	WC3	WC4
Data Scanning Number of measuring points supported Number of connections supported Support of an ALMEMO® network	20 1	unlimited unlimited	unlimited unlimited 7	unlimited unlimited 7
Connection types Seriell (COM), TCP/IP Modem-, GSM- und Funkmodemunterstützung	7	7	7 7	7 7
Data Output Display of meas. values (numerical, bar diagram, wind rose, round instruments) Line diagram (YT), XY diagram Save/load presentation characteristics as format type Table, overview Zoom functions (ONLINE and OFFLINE) Project illustrations	7 7 7 7 7	7 7 7 7 7	7 7 7 7 7	7 7 7 7 7
Data Storage Manual storage on hard disk Automatic storage on hard disk Automatic generation of daily and weekly files Automatic saving on an event-controlled basis	7 7	7 7	7 7 7 7	7 7 7 7
Data Analysis Two measuring cursors (ONLINE and OFFLINE available), statistics function Displaying local maximum and minimum values in a line chart Loading comparative characteristics in a line chart	7	7	7 7 7	7 7 7
Data Processing ONLINE and OFFLINE calculations (arithmetic channels) Processing of external table values (ONLINE and OFFLINE) Linking /splitting of files Grouping measured value files in a particular folder (wild card search) Grouping measured value files over a particular period of time	7 7 7	7 7 7	7 7 7 7 7	7 7 7 7 7
Exporting the Measured Values Clipboard File (spreadsheet software, FAMOS, QS-STAT, DIAdem, ESCORT, ASCII, binary) Dynamic data exchange (DDE, OLE) ONLINE data transmission to MS-Excel	7 7 7 7	7 7 7 7	7 7 7 7	7 7 7 7
Data Import ASCII (AMR format)	7	7	7	7
Programming of Measuring Point and Device Programming of the characteristics of the measuring point and device Automatic scaling of 3rd party sensors Local mode alarm management (relay allocation) Save/load programming of the measuring points to/from file Editing the programmed file (similar to Excel table)	7 7 7 7 7	7 7 7 7 7	7 7 7 7 7	7 7 7 7 7
Data Reduction Averaging function (ONLINE and OFFLINE) Smoothing (over time/over number of values, ONLINE and OFFLINE)	7 7	7 7	7 7	7 7
Data Logger Functions Programming of the data logger (incl. averaging functions) Read-out of data memory (all measured values/selective) Display of memory occupancy status	7 7 7	7 7 7	7 7 7	7 7 7
Alarm Functions Alarm value display in list of meas. points and in all presentations of meas. values Alarm message with confirmation Alarm value list (list + file of measured values incl. history) Transmit email / SMS messages Switching ALMEMO® output relays (measuring point specific)	7	7	7 7 7 7	7 7 7 7
Configuration Management Save/load program configuration	7	7	7	7
Printout Diagrams, tables of meas. values, list of meas. points, file overview incl. comments	7	7	7	7
Network server functions Displaying measured values and diagrams on Intranet or Internet Embedding diagrams and project images on your own Internet pages Accessing integrated web server via any browser Accessing measured data and history data via TCP/IP (open text protocol) Forwarding measured data to RMT WinControl Making measured data available even after program restart				7 7 7 7 7 7

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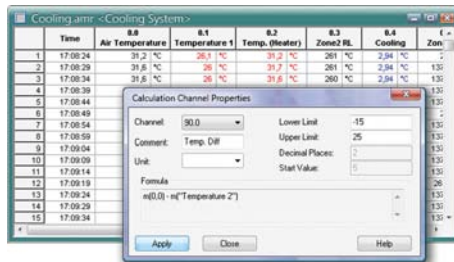
Main Window/General View:

- ▶ The main window is the platform for all operations with AMR WinControl. All actions run within this window and can be minimised to a symbol, within the window or together with the window, and run in the background.
- ▶ The measuring data can be presented as follows: Numeric presentation of measured values, bar diagram, wind rose, round instruments, line diagram, XY diagram, table, file overview.
- ▶ The program can be operated by means of menu commands. Only those commands, which can be executed in the corresponding situation, will be available. For a faster operation context-sensitive menus, keyboard commands and symbols in the tool bar are available.
- ▶ Comprehensive help information is available via the function descriptions in the status line, notes in the tool bar and a context-sensitive help system.



List of Measuring Points and Devices:

- ▶ As soon as the program is started and the serial interface is assigned, all sensors that are programmed and connected to the measuring instrument(s) will be recognized automatically and displayed in the list of measuring points.
- ▶ Apart from sensor specific data regarding the measuring range, comment, limit values, correction values the list also contains symbols for limit value exceeding, sensor breakage and online storage.
- ▶ Device-specific information, e.g. device type, memory occupancy, and settings for operating the data logger are also displayed.
- ▶ Measuring instruments can be connected via various interfaces (COM, TCP, modem) simultaneously; mixed-mode operation over various connections is possible. Information regarding the current status of connections is displayed here.



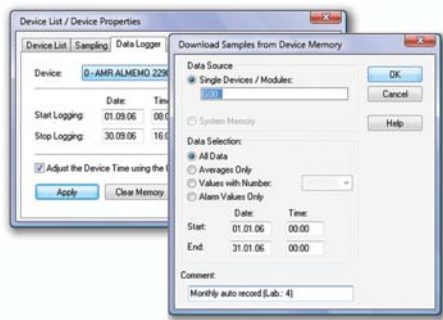
ONLINE and OFFLINE Arithmetical Operations:

- ▶ The arithmetical functions of the program allow to calculate physical variables from the measured data.
- ▶ The required variables can be defined via a formula editor and can be set as an arithmetic channel (virtual measuring point).
- ▶ Data acquired through these arithmetic channels can be, ONLINE and OFFLINE, further processed and presented.
- ▶ Depending on its definition an arithmetic channel can be globally available in the whole program or only locally within a data record (line or XY diagram, table).
- ▶ Even data records that have already been stored can be extended by arithmetic channels, as required.



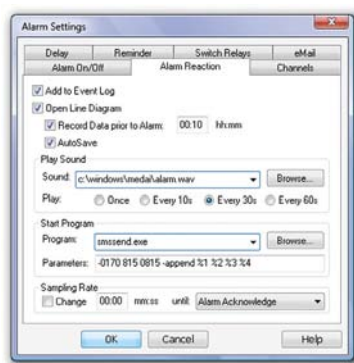
Measuring Cursors/Statistic Function:

- ▶ In the "Line Diagram" view, the acquired data can be analysed using two measuring cursors (ONLINE and OFFLINE).
- ▶ The movement of the cursors can be performed in any area within the line diagram.
- ▶ Corresponding to the position of the measuring cursors, the measured values of all displayed lines located below the cursors will be displayed in a table.
- ▶ Through the integrated statistic function the difference of the values under the cursors, the minimum and maximum value and the average value of the area defined by the cursor positions will be calculated and also provided within the table.
- ▶ It is possible to perform a printout of the diagram and of the table displayed in the window, together or individually, or to copy them to the clipboard.



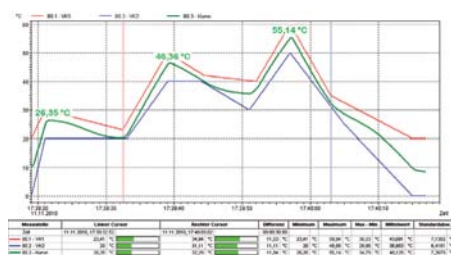
Data Logger Functions:

- ▶ The settings required for data logger operation can be programmed within a dialogue.
- ▶ In the dialogue "Program Data Logger" the current settings of the device, e.g. memory occupancy, start and end time, measuring cycle and print cycle will be displayed.
- ▶ The read-out of the device memory can be, individually or together, performed for all data loggers within the measuring network.
- ▶ An optional setting allows to define that not all measured values but only a selection of the stored data should be read out of the device memories. The selection criteria available include "Average Values Only", "Alarm Values Only", "Meas. Values with Number Only" and "Only Values Within A Time Frame".



Monitoring Functions:

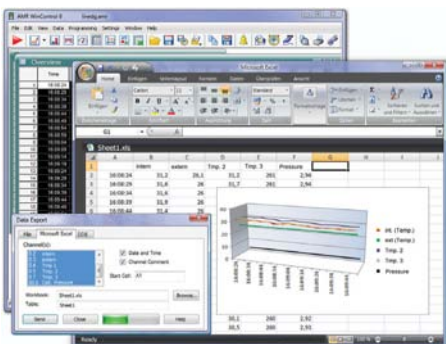
- ▶ The triggering of an alarm can be performed as a result of measured and/or calculated variables.
- ▶ The alarm messages will be provided visually and/or acoustically.
- ▶ Events triggering an alarm can be recorded with their origin and duration in a protocol (list) record.
- ▶ A line diagram with variable history can be generated for the triggering variable.
- ▶ In case of an alarm ALMEMO® output relays can be switched.
- ▶ Alarm messages can be forwarded via network.
- ▶ For specific alarm conditions it is possible to provide signals (special solutions on request).
- ▶ Signals can be provided for specific alarm conditions (special solutions on request).



Extended evaluation functions

- ▶ Measured value files can be incorporated in new or already existing line charts in the form of comparative characteristics.
- ▶ Folders containing a large number of measured value files can be conveniently grouped using various patterns based on file names and filters according to time and measuring point.
- ▶ Local maximum and minimum values can be shown in a line chart as any measured value curve required. The search radius between maximum and minimum can be freely set.

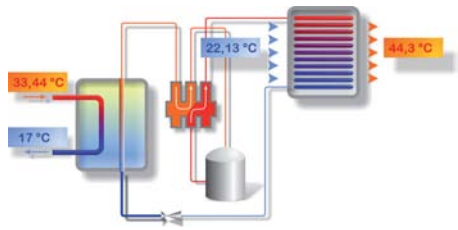
new!



Data Export:

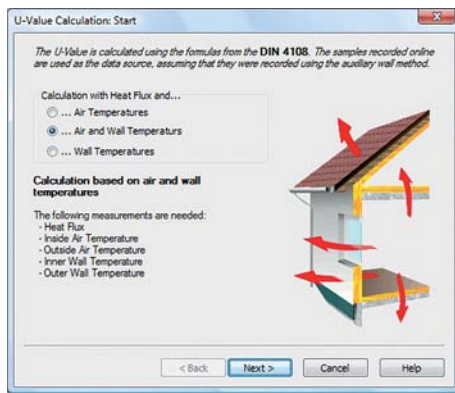
- ▶ The data files can be, ONLINE and/or at any later point in time, stored in the following formats WK1, FAMOS, QS-STAT, DIAdem, ASCII, binary.
- ▶ The line and XY diagrams and the tables can be copied to the clipboard and, for example, be inserted into a protocol text.
- ▶ Via dynamic data exchange (DDE) it is possible to transfer measured values ONLINE to other applications, for example MS-EXCEL.
- ▶ Furthermore, line diagrams can be embedded into text documents (e.g. a MS Word document) via the OLE function.

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Project Illustrations:

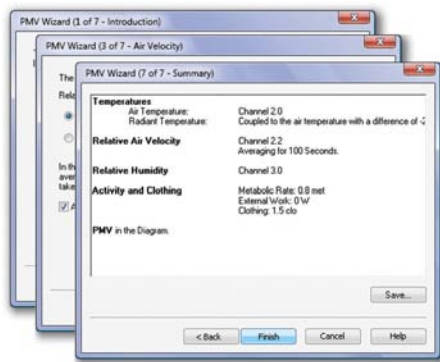
- ▶ Project illustrations allow for visualising the setups of measurements and processes by using individually designed graphics and/or photographs (bitmaps).
- ▶ The presentation of the acquired data is provided in data fields that can be freely positioned; size and colours can be freely selected.
- ▶ Text fields can be filled with legend information and descriptions and can be freely positioned.
- ▶ Any number of project illustrations can be opened at the same time, allowing, for example, to have a presentation of the total view and detailed views of a project.



Thermal transmittance (U) wizard:

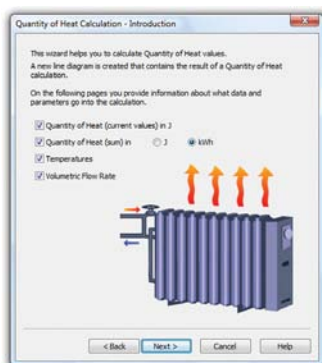
new!

- ▶ The thermal transmittance (U) wizard is available for ONLINE and OFFLINE calculations; it guides the user through all the required steps.
- ▶ The user can choose from a selection of calculation methods - for the experimental thermal transmittance value, for the thermal transmittance value according to DIN 4108, and for the official calculated value.
- ▶ Determination of the currently calculated value and the sliding average value.
- ▶ The calculation methods will be described and the allocation of the corresponding measuring variables will be provided.
- ▶ After completing all steps a line diagram will be created, which will then be filled with the measuring data and the calculated variables.
- ▶ The cursor function can be used to open the statistic table, which provides further evaluation options (see above).



PPD / PMV wizard (comfort index measurement)

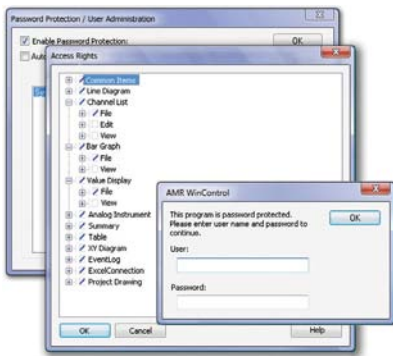
- ▶ Calculation of thermal comfort as per DIN 1946 Part 2 and ISO 7730
- ▶ User guidance by means of a wizard and easy-to-understand evaluation
- ▶ Output in the form of "predicted mean vote" (PMV) and "predicted percent of dissatisfied" (PPD)
- ▶ Online and offline calculation of PMV and PPD in real time or on the basis of measured values already existing
- ▶ Graphical representation of measured data and calculated values in a format suitable for export (e.g. ASCII, MS Excel, DiaDEM, etc.)
- ▶ Calculation parameters can be saved as a model for subsequent calculations.
- ▶ Additional PMV / PPD functions are available for use in arithmetic channels.



Thermal quantity wizard

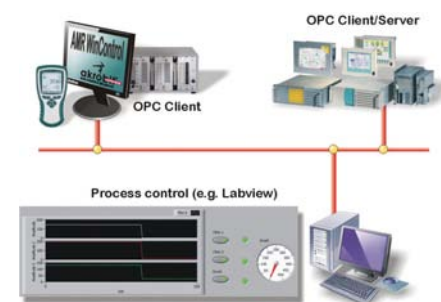
- ▶ The thermal quantity is calculated automatically from the volume flow and the temperature difference.
- ▶ You can enter settings easily and conveniently using the wizard.
- ▶ Data tables for water are included in delivery; users can define their own extensions for other media themselves.
- ▶ The thermal quantity can be calculated in real time or on the basis of existing measured value files.

$$\delta Q = c_v \cdot m \cdot dT$$



Password protection

- ▶ Integrated user management system protects AMR WinControl against unauthorized access. This policy reduces security risks to a minimum.
- ▶ Each change of user is logged in the events list for subsequent evaluation if this becomes necessary.
- ▶ Rights of access can be defined individually per user.
- ▶ Alarm confirmations can be assigned unequivocally to a particular user.



OPC export

- ▶ "Openness, Productivity, and Collaboration"
- ▶ OPC is an established industrial standard for access procedures on a multi-vendor basis irrespective of manufacturer.
- ▶ AMR WinControl operates as an OPC client; it writes current measured values to the global variables provided by an OPC server.
- ▶ Data can be transferred in parallel to several OPC servers.
- ▶ Data from AMR WinControl can, with the aid of OPC, be visualized online in LabView™.

new!



Connecting Options:

- ▶ AMR WinControl can handle measuring instruments as well as single measuring instruments or a network of measuring instruments of the ALMEMO® series.
- ▶ The connection to the measuring instrument(s) can be established via serial interface, USB, Bluetooth, or (GSM) modem.
- ▶ In a similar way, the measuring instruments can be addressed via a computer network (TCP/IP address) and VPN.
- ▶ Connections can be set up on a time-controlled basis. Reading out from the memory on ALMEMO® devices can be automated. The memory can on request be cleared and saving to memory can be resumed automatically. Any problems encountered are noted in the events list.

new!

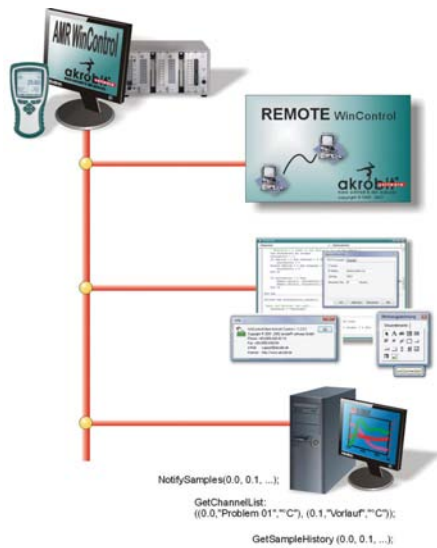


System Integration:

- ▶ AMR WinControl also provides optional support for protocols used by devices from other manufacturers for measured value scanning in parallel for any number of connections.
- ▶ "SimpleASCII" is an open text protocol that can be used for the simple and straightforward integration of various measuring instruments in AMR WinControl.
- ▶ With the "OPC-Import-Protocol" data from an OPC server (e.g. Labview) can be read into AMR WinControl and processed by it.
- ▶ Data from the climate chambers (Feutron und Weiss Umwelttechnik) can be acquired and recorded in much the same way as e.g. gas analysis data from Emerson devices "XStream" and "NGA" or the "MRU Nova H8" device .
- ▶ Using the highly flexible Modbus protocol means that many other devices that support this protocol can be addressed.
- ▶ For the purposes of measuring and recording electrical variables (current, voltage, output, power factor, energy, etc) various protocols for "Simeas-T" and "Yokogawa" devices are available.
- ▶ Communication with a PLC can also be established via a further serial interface or TCP/IP connection.
- ▶ This provides an open design for implementing automated test processes.

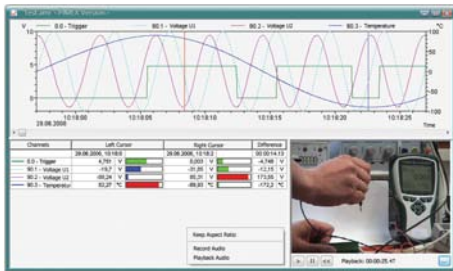
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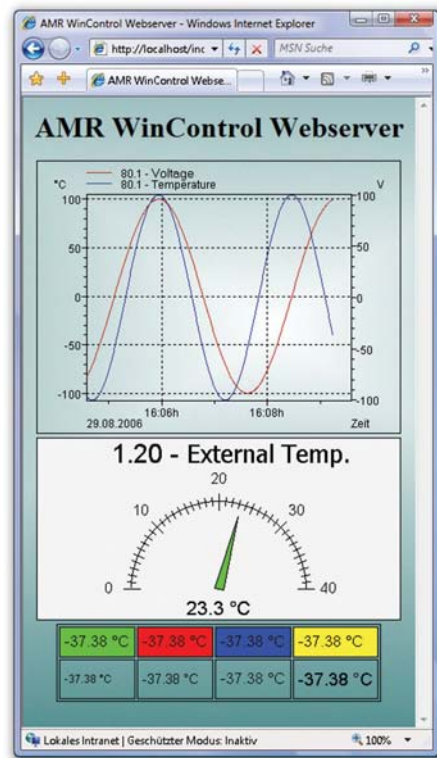
Measured value server :

- ▶ With the measured value server up to 200 users simultaneously can access current measured values and the measured values history via a TCP network (Intranet / Internet).
- ▶ Interface to any data acquisition and process control system
- ▶ Online transmission of measured data to other operating systems (e.g. LINUX, WINDOWS CE, UNIX, etc.)
- ▶ Data distribution according to any specified criteria
- ▶ Customized solutions can be implemented using straightforward ASCII commands issued via the TCP protocol; all these commands are fully documented.
- ▶ Open "read-only" interface for any user-defined connection software
- ▶ "REMOTE WinControl" and "WinControl Client OCX" provide powerful standard solutions for the measured value clients.



SW5600WCP: PIMEX

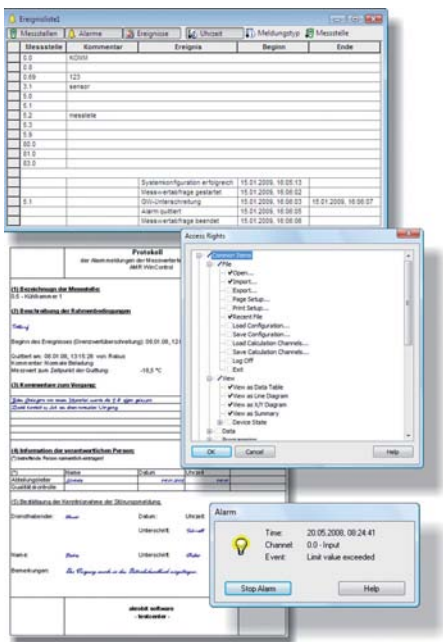
- ▶ Simultaneous acquisition of measured values from ALMEMO® devices together with video data from a digital source
- ▶ The measured data and video signal are synchronized and displayed together.
- ▶ The modes available are preview, record, and playback.
- ▶ It is also possible as an option to generate presentation videos from the acquired data.
- ▶ Possible applications : Documentation / visualization of the process environment (e.g. for safety in the workplace, quality management, etc.)



Web server :

- ▶ AMR WinControl provides a full range of web server functions for publishing web pages (HTML) in the Intranet / Internet. It also incorporates additional functions that can be used to output the contents of AMR WinControl windows directly onto web pages.
- ▶ Current measured values and measured value histories can be displayed in a variety of ways (line diagrams, XY diagrams, project illustrations) in the Intranet / Internet.
- ▶ Visualization of processes and systems
- ▶ Visual remote monitoring
- ▶ Linking presentation and real-time data on web pages
- ▶ The way in which measured values are shown does not depend on the operating system; only one browser is needed (MS Internet Explorer, Netscape Navigator, Firefox, Opera, Konqueror, etc.).
- ▶ Diagrams and measured values can also be displayed on "Smartphones".
- ▶ Very easy to use : Images generated from the contents of a window can be transmitted as soon as the program starts - without needing any further settings. For particularly demanding tasks the HTML pages must first be adapted and connected to the web server.
- ▶ The wide variety of image formats and special parameters make for transparency and loss-free scaling and permit automatic updating. Powerful real-time compression algorithms minimize the volume of data to be transmitted.
- ▶ All the layout facilities available in HTML, DHTML, and CSS can be exploited; combining with JavaScript is also possible.
- ▶ Graphics, text, and measured value displays can be combined and merged completely seamlessly.
- ▶ The web designer is free to specify, more or less independently of AMR WinControl, how the measured value displays are to appear.
- ▶ The user receives current measured data without being exposed to any sort of security risk - because there is no need for Java or special plug-ins.

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SW5600WCV Package for long-term / continuous monitoring

This package, based on the AMR WinControl "professional" version, contains all the options and modules needed to implement long-term and continuous monitoring of critical measurable variables.

- ▶ Integrated user management with individually settable access rights and password protection
- ▶ Tamper-proof event list with sort and filter functions
- ▶ Trend monitoring - pre-alarm for signaling trend developments
- ▶ Signaling of alarms and events
- ▶ In the event of alarm an MS-Excel log can be printed out automatically. Users can modify the log provided or create their own.
- ▶ Processing of measured and calculated variables in control and regulation functions
- ▶ Automatic printout and / or e-mail with daily files and event lists
- ▶ Including security package

Security package

- ▶ Data security : Automatic backup of all automatically recorded data (daily and weekly files, measured values recorded on an event-controlled basis, event lists, etc.)
- ▶ Fail-safe : In the event of failure a watchdog is triggered for PC restart and / or signaling via relay.
- ▶ Including watchdog card



Test bench manager

- ▶ Several autosave managers can be operated and organized via a convenient, easy-to-use graphical user interface.
- ▶ Measured data can thus be saved simultaneously to different files.
- ▶ Autosave managers can be started and stopped independently of one another and according to various criteria (time-driven or event-driven).
- ▶ Different measuring locations (operating in parallel) can thus be treated separately.
- ▶ Measured value files can be indicated as write-protected already during recording.

Copy protection

- ▶ AMR WinControl incorporates a copy protection system which requires a PC-dependent code to enable it. To receive this code the user must first register the software by telephone, fax, or e-mail. Per licence purchased the software may be installed and operated on one computer.
- ▶ It is also possible as an option to request a hardware copy protection mechanism, a dongle; with this the software can be installed on any number of computers but will only run on that PC into which the dongle is currently plugged.
- ▶ A network dongle may contain more than one licence; with this it is possible - without the inconvenience of moving the dongle - to run the software simultaneously on as many computers in a company network as there are licences encoded in the dongle.



SOFTWARE

RMT WinControl software for evaluating, monitoring, networking

new!



Program description

- ▶ Access to measured values on one or more AMR WinControl data servers in a local network or via the Internet
- ▶ Access to one measuring system by any number of users simultaneously
- ▶ Open and evaluate AMR files
- ▶ Same range of functions as AMR WinControl except for device access
- ▶ At our site (www.akrobit.de) you can find all the latest information regarding software versions and updates and also download the most recent trial version of the software.



RMT WinControl can perform the following :

- ▶ Monitoring of measured data from WinControl data servers at various locations
- ▶ Evaluation of acquired measured data / files independent of the recording computer
- ▶ Safe and secure access to the data acquisition system by "read-only" protocol
- ▶ Additional alarm handling and recording independent of the recording computer
- ▶ Since the measured value history is scanned, the evaluating computer therefore does not need to run continuously.

Software versions

- Basic version (like SW5600WC2 except for device access and maximum 1 connection)
- Professional version (like SW5600WC3 except for device access and maximum 1 connection)
- Web server (like SW5600WC4 except for device access and any number of connections)
- Update to the latest software version

- Order no. SW5600WCR2**
- Order no. SW5600WCR3**
- Order no. SW5600WCR4**
- Order no. SW5600WCRU**

Options

- Automatic generation of measured data files (daily files / weekly files)
- Modem support
- Alarm function (event list, alarm e-mail / SMS, switching of ALMEMO® output relays)
- Data server see page 06.12
- Web server see page 06.12
- Extended evaluation functions see page 06.09

- Order no. SW5600WCRO2
- Order no. SW5600WCRO3
- Order no. SW5600WCRO5
- Order no. SW5600WCRO8
- Order no. SW5600WCRO9
- Order no. SW5600WCRO10

Additional modules

- Thermal comfort calculations as per DIN 1946, EN ISO 7730 see page 06.10, 13.13
- Password protection see page 06.11
- Test bench manager (prerequisite : WCR3 / WCR4 or WCR2 + WCRO2) see page 06.13
- Thermal transmittance (U) wizard see page 06.10, 14.03
- Thermal quantity wizard see page 06.10
- OPC export see page 06.11

- Order no. SW5600WCRZM1
- Order no. SW5600WCRZM2
- Order no. SW5600WCRZM3
- Order no. SW5600WCRZM4
- Order no. SW5600WCRZM5
- Order no. SW5600WCRZM6

Hardware copy protection see page 06.13

- Hardlock USB dongle
- Hardlock USB network dongle

- Order no. SW5600HL
- Order no. SW5600NHL

Minimum system requirements

Component

- Computer
- Operating system
- RAM
- Free hard-disk capacity
- Interfaces

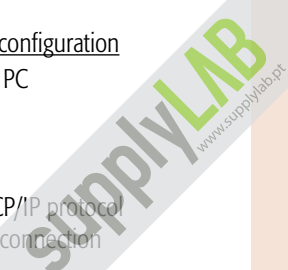
Minimum configuration

- IBM-compatible PC
- Windows 2000, XP, 2003, Vista, 2008, 7
- 256 MB
- 25 MB
- Network card TCP/IP protocol

Recommended configuration

- IBM-compatible PC
- Windows XP
- 1024 MB
- 100 MB
- Network card TCP/IP protocol
- Internet or VPN connection

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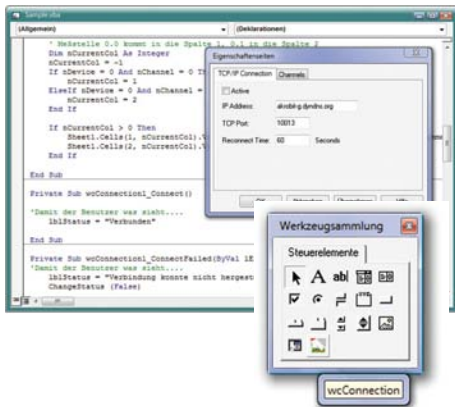


WinControl client OCX and SimpleASCII server



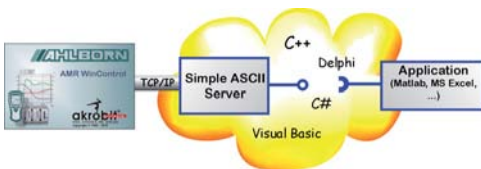
WinControl client OCX

- ▶ Access to measured values on a WinControl data servers in a local network or via the Internet
- ▶ MS ActiveX® universal components for integrating in your own applications
- ▶ Client licence for data server included
- ▶ Including documentation and simple application example for MS Excel
- ▶ This requires an AMR WinControl WC4 or option WCO8.



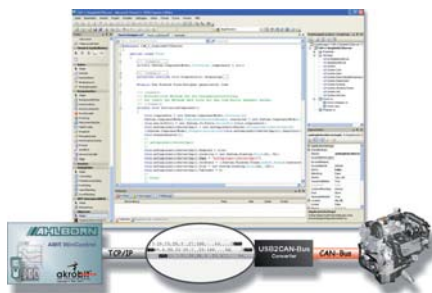
- ▶ Measured values from a WinControl data server can be transferred to your own applications by the WinControl client OCX.
- ▶ Current values and the measured value history can be scanned.
- ▶ Using OCX shortens development times appreciably because it relieves the developer of tasks involving communication with the data server.
- ▶ It can be incorporated in any application supporting OLE (Object Linking and Embedding) (e.g. MS Excel, Matlab, MS Access, MS SQL Server, etc.).
- ▶ Any programming language can be used for this purpose (C++, C#, Visual Basic (VB, VBA, VBS), Delphi, etc.).
- ▶ Since multiple objects can be used simultaneously, data from various data servers can be acquired and recorded. OCX needs to be installed on the system only once.

new!



Simple ASCII server

- ▶ Server component for sending data to AMR WinControl using the SimpleASCII protocol via TCP/IP
- ▶ MS ActiveX® universal components for integrating in your own applications
- ▶ including SimpleASCII protocol licence .
- ▶ Including documentation and simple application example for MS Excel.



Simple ASCII server

- ▶ Using the SimpleASCII server measured values or data can be transferred to AMR WinControl from another source (application or measuring instrument).
- ▶ Using this component shortens development times appreciably because it relieves the developer of tasks involving the programming of a TCP/IP server; in programming languages (e.g. VBA, VBS) this is not possible without additional components.
- ▶ It can be incorporated in any application supporting OLE (Object Linking and Embedding) (e.g. MS Excel, Matlab, MS Access, MS SQL Server, etc.).
- ▶ Any programming language can be used for this purpose (C++, C#, Visual Basic (VB, VBA, VBS), Delphi, etc.).
- ▶ With ActiveX-Control you can e.g. develop your own driver for incorporating an additional measuring instrument in AMR WinControl.

Software version

Client licence with OCX (client licence for the AMR WinControl server and OCX developer's licence)
SimpleASCII server (SimpleASCII protocol licence for AMR WinControl with ActiveX-Control)

Order no. SW5600COCX

Order no. SW5600WCZM7

Minimum system requirements

The configuration actually needed depends on the software in which ActiveX-Control is integrated.

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SOFTWARE

ALMEMO® View



ALMEMO® View is a software package that can be used to evaluate and display measured data on any ALMEMO® device with 2 or 3 measuring inputs.

ALMEMO® View runs under MS-Windows and can be used to drive an ALMEMO® device with up to four measuring points.

As soon as the connection between the computer and the measuring instrument has been established the program detects and lists these measuring points automatically.

The measured values are then read at a sampling rate selected by the user.

Data logger

The measured value memory on an ALMEMO® data logger (maximum four measuring points) can be read out, displayed as a line chart or table, and saved to a file. The parameters needed to operate the measuring instrument can be set via a dialog and programmed with **ALMEMO® View**

Display of measured values

The recorded data can be displayed in numeric form, in a table, and as a line chart. It is possible to display just one measuring point or several measuring points at the same time in different modes.

Saving measured values

Measured values can be archived in line chart or table form.

Printing out

ALMEMO® View can also be used directly to print out diagrams, tables, or a list of all measuring points with their associated correction values, e.g. for the purposes of technical documentation. The results can be viewed in advance before printing out in the print preview. The program supports all printers that can normally be installed under MS-Windows.

Documentation

To compile protocols using some other software the line charts, tables, and lists in **ALMEMO® View** can be copied via the MS-Windows clip-board to other application programs.

 **New** In AMR WinControl with effect from version 6 the AMR2ips functions are already integrated.

Software versions

Basic **ALMEMO® View** software for maximum four measuring channels

(1 measuring instrument with maximum 2 or 3 inputs)

Order no. SW5500AV

System requirements:

ALMEMO® View runs under MS-Windows 98/2000/NT/XP.

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