Operating Software Service Tool

ACS11... ACT110

for M-bus central units OZW10 / OZW111

Software for the remote operation and supervision of one or several plants equipped with an M-bus central unit OZW10 or OZW111.
MS Windows version.

Use

The software is a component of the M-bus system and is used for the remote management of all devices connected to an M-bus central unit. Remote management includes:

- Acquisition of the consumption data of M-bus-compatible meters for consumption cost billing
- Remote operation and supervision of M-bus-compatible devices (controllers, meters, etc.) in sub-stations of community or district heating systems

Functions

Remote management of the connected devices is accomplished with the following applications:

Application	*Description*	*Provided by software*		
		ACS110	*ACS111*	*ACT110*
Plant Diagram	Graphic presentation of plant and visualisation of data points		●	
Popcards	Visualisation and remote operation of all transmitted data points of the devices connected to the M-bus	●	●	●
Trend	Acquisition and presentation of the dynamic behaviour of selected data points of the plant	●	●	
File Transfer	Transmission and storage of the files of the M-bus central unit and of the ALC30 memory card	●	●	
Parameter Settings	Reading and editing the setting parameters of a device in tabular form	●	●	●
Setup Protocol	Logging the setting values of individual devices, device groups, or of the entire plant	●	●	●

Type summary

Software package	*Type reference*	*Containing software*
Without plant diagrams	**ACS110**	ACS110, ACT110, ACS900
With plant diagrams	**ACS111**	ACS111, ACT110, ACS900

Ordering and delivery

Ordering

When ordering, please give type reference **ACS110** or **ACS111**.

Delivery

The delivery is made as a set in a box containing the following items:

- CD-ROM with
  - operating software ACS110 or ACS111 (with copy protection)
  - service tool ACT110 (no copy protection)
  - alarm software ACS900 (no copy protection)
  - batchjob software ACS910 (registration file for copy protection must be ordered as a separate item)
  - documentation
- Copy protection CMD.01
- Diskette with key for copy protection
- Installation instructions

Equipment combinations

M-bus system

For information about the M-bus system, refer to the following pieces of documentation:

- Data sheet CE1N5361E, “Basic System Data“
- Basic documentation CE1P5361en, “M-Bus System“

Software combinations

In principle, the following programs can be combined with one another:

- ACS110 operating software with ACS900 alarm software and ACS910 batchjob software
- ACS111 operating software with ACS900 alarm software and ACS910 batchjob software
- ACT110 service tool with ACS900 alarm software

The programs can be run simultaneously.

For information about complementary programs, refer to the following pieces of documentation:

- Data sheet CE1N2531E, “Alarm Software“
- Data sheet CE1N5389en, “Batchjob Software“

Central units

The ACS11... operating software and ACT110 service tool are suited for use in plants equipped with the following types of central units:

- M-bus central unit OZW10 (data sheet CE1N5362E)
- M-bus central unit OZW111 (data sheet CE1N5363en)

PC hardware

PC component	*Minimum requirements*
Processor	486 / 66 MHz for Windows 95/98 or Pentium for Windows NT 4.0
RAM	24 MB for Windows 95/98 or 32 MB for Windows NT 4.0
Hard disk	10 MB free storage capacity Recommended: additional 20 MB per plant
Screen	ACS111: SVGA standard driver 1024 x 768 ACS110 and ACT110: VGA standard driver 640 x 480 possible

Ports	Serial COM1...COM4, up to 9,600 Baud for M-bus central unit (directly or via modem) Parallel port for copy protection
Operating system	Windows 95, Windows 98, Windows NT 4.0
Diskette drive	3½", 1.44 MB
CD-ROM drive	1 speed

PC software

For the further handling of exported data, a user program suited for ASCII files is required (e.g. MS Excel)

- that consists of several lines and columns, and
- whose columns are separated by tabs

Modem

Modems are required if communication takes place via the telephone network. The following modem drivers are delivered as standard:

- Elsa MicroLink 28.8k, 36.6k and 56k
- US Robotics Sportster VI
- ZyXel Elite U-1496E

Other modem settings can be made.

Technical design

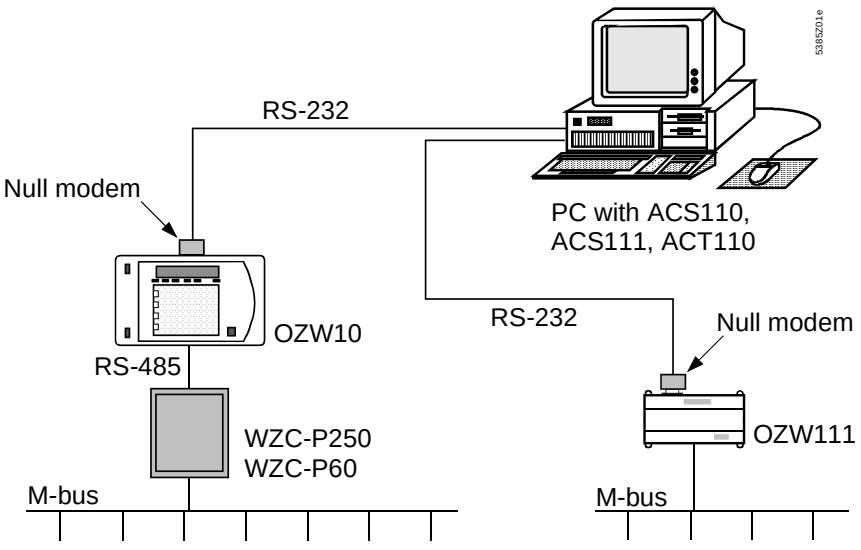
Communication

Communication with the central units takes place either directly or via modem:

Connection	*ACS110*	*ACS111*	*ACT110*
Directly	●	●	●
Via modem	●	●	

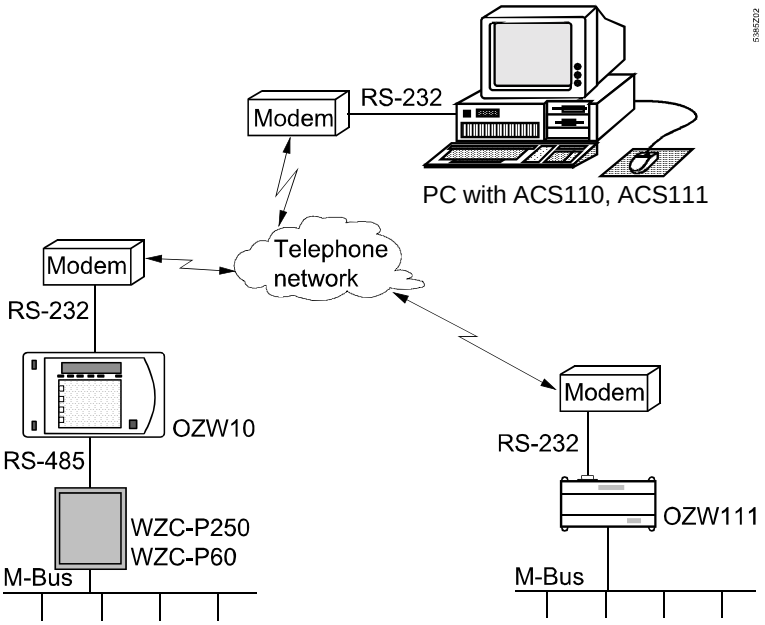
Direct connection

The direct connection necessitates a null modem between central unit and PC.



Telephone connection

With the connection via the telephone network, a Hayes-compatible modem is required at each end.



For detailed information about the RS-232 cables, the null modem, modems, M-bus and RS-485, refer to the Basic documentation CE1P5361en.

General information about the operating software

The operating software includes applications that offer the following features:

- Each application can be started several times and can be operated in parallel
- Several applications can be used simultaneously
- Active applications (e.g. Trend) can run in the background
- User-defined adaptations can be made in the “Popcards“ and “Plant Diagram“ applications

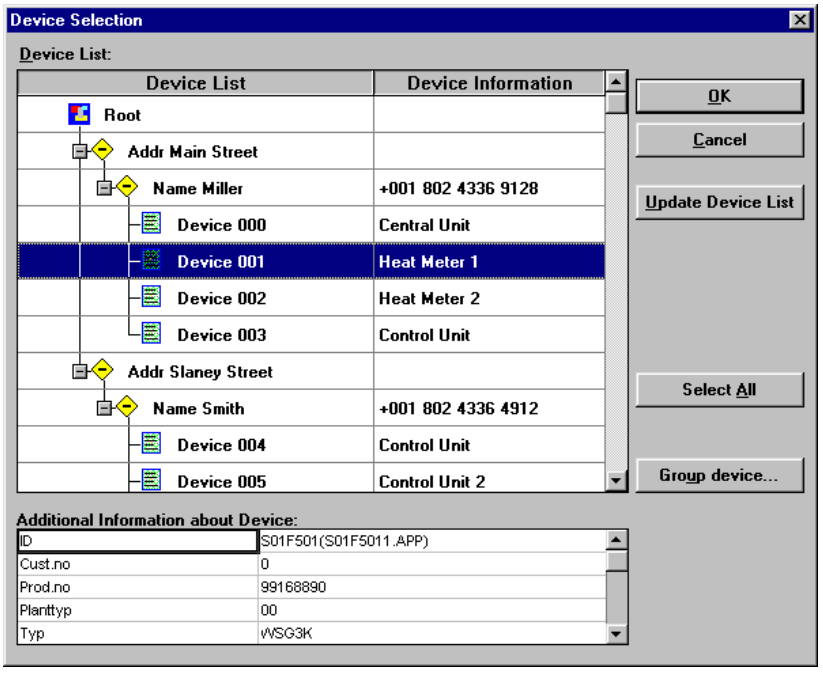
Applications

For each supported device, the ACS11... or ACT110 has a device description which the software program can access. In the device descriptions,

- the datapoints with the associated characteristics are defined
- the links to the applications are established

Plant Overview

The plant is presented in the form of a tree structure. The devices can be grouped.



Plant Diagram

This application provides schematic plant diagrams (individual devices or groups of devices).

Each type of device is assigned a library of standard plant diagrams. For all supported plant diagrams, the library contains

- graphic presentations
- data points for display
- text

In the case of controllers with pre-programmed plant types, the plant diagrams agree with the standard plant diagrams. The application recognises the selected plant type, assigns the relevant plant diagram and displays the current values.

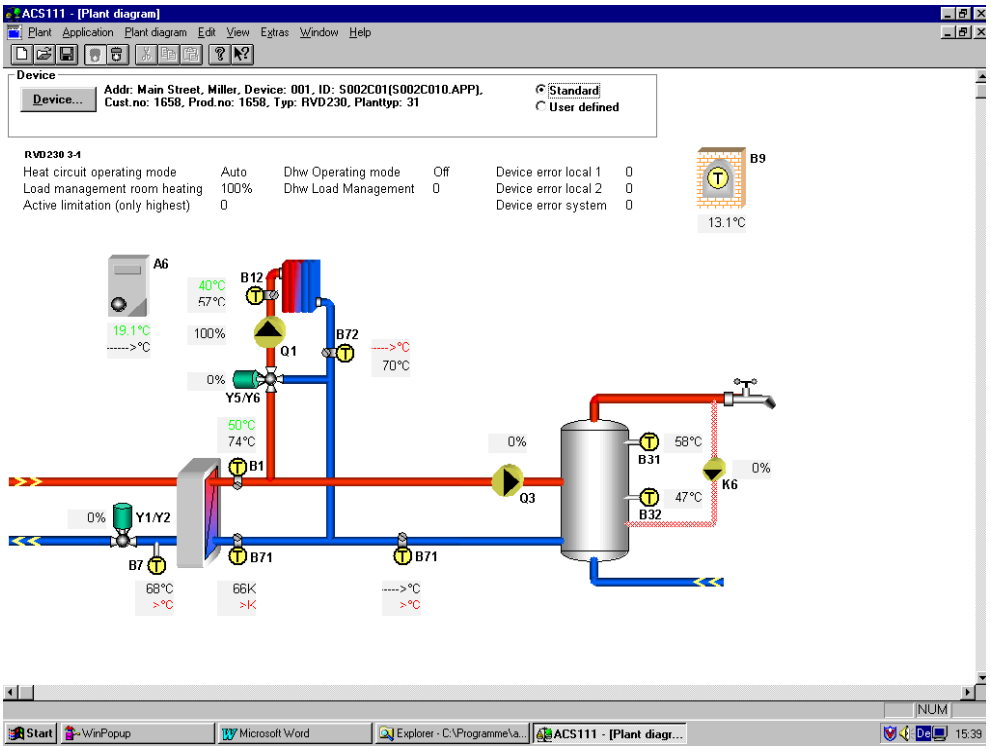
For each device, a user-defined presentation can be generated:

- By adopting and matching the standard plant diagram from the library
- By making a new presentation

The graphic presentation and the data points displayed are edited separately:

- The graphs must be produced with the help of an external graphics software (e.g. Micrografx Picture Publisher). All graphs in Bitmap format can be adopted
- The data points are added with the integrated Editor

The newly generated user-defined presentation is stored in a separate library. The selection of “standard” and “user-defined” is available at any time.



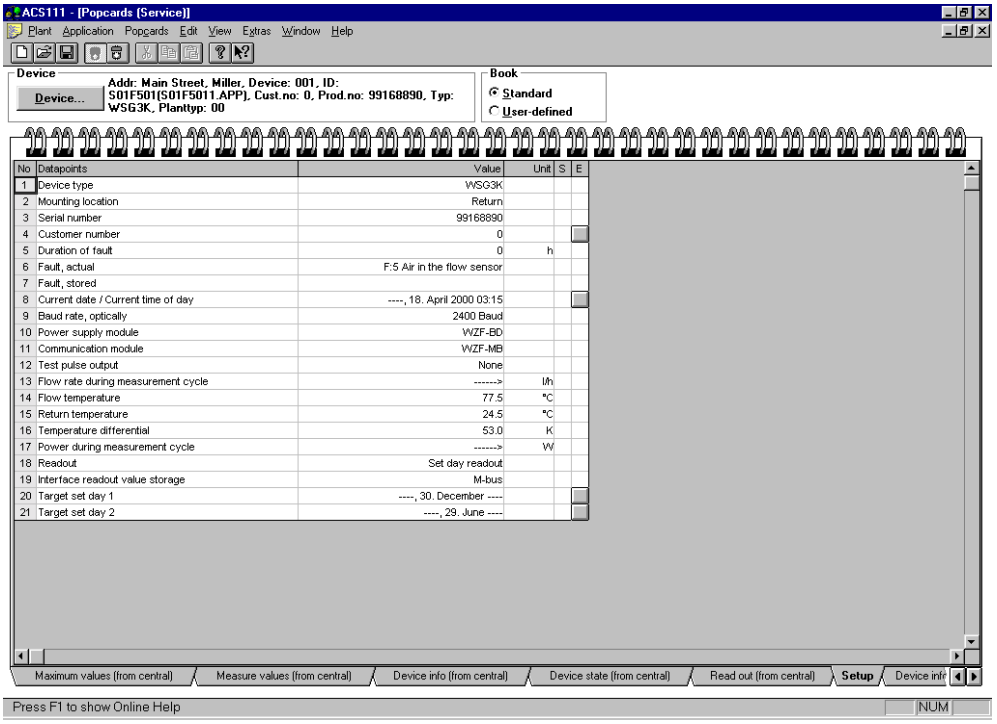
Popcards

This application makes it possible to visualise all data points of a device that have been transmitted.

Each type of device uses a standard Popcard whose makeup, contents and access to the data points are defined. The data points are assigned to various pages:

- By allocation (e.g. heat converter, heating circuit 1, d.h.w.)
- By properties (e.g. status and errors, IO)
- By operating sequences (e.g. overview, connection conditions)

The selected page will automatically be updated. Different colours are used for the updating process.



For each type of device, a user-defined Popcard can be created. For this purpose, a menu is available that offers free selection of

- the number of pages
- the assignment of name
- the data points to be presented

The selection of “standard” and “user-defined” is available at any time.

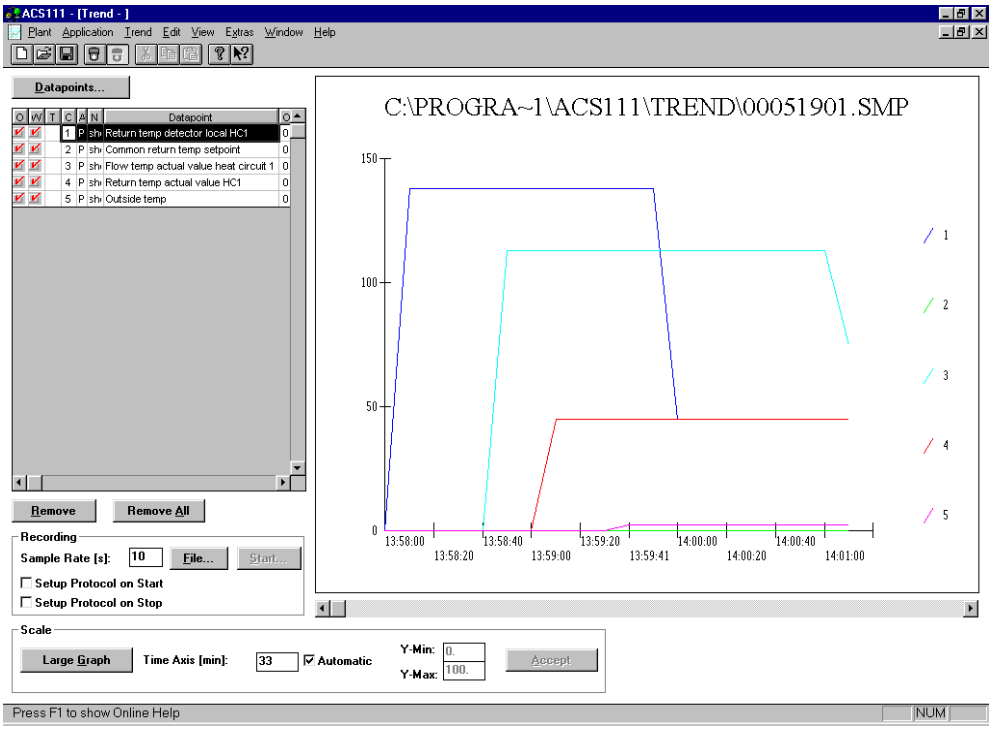
Trend

This application allows logging of any data points in the plant.

The selected data points are interrogated in accordance with the set scanning interval. The relevant data are continuously stored and displayed online.

The selected data points can be stored (trend file) and retrieved for relogging at a later point in time. The stored data (scanning file) can be graphically displayed again later. The scanning file can be exported as an ACSII file.

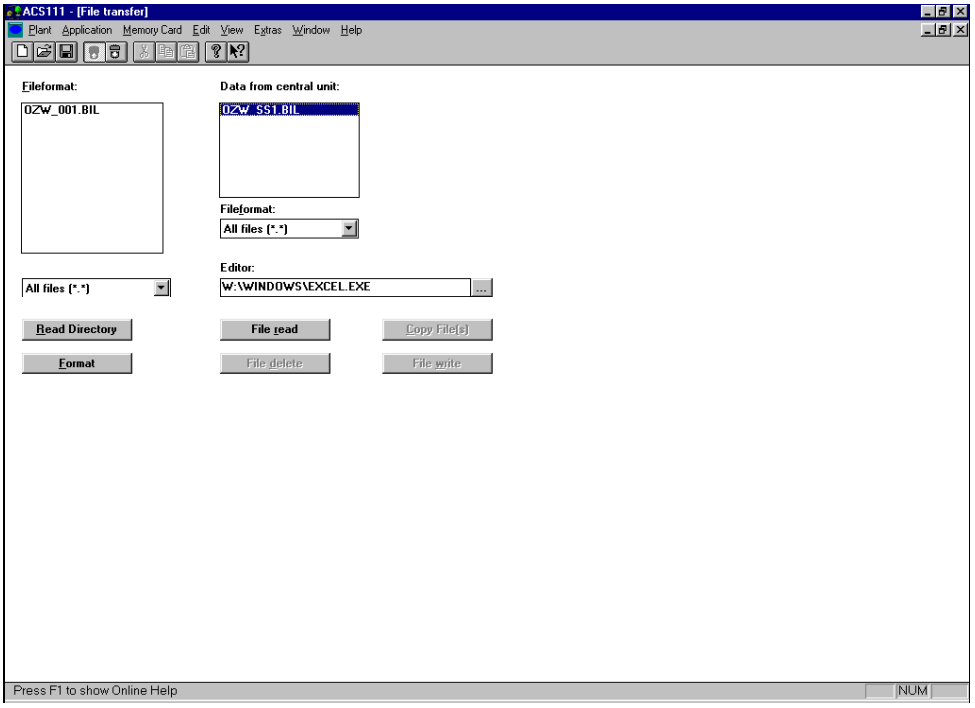
To document optimisation measures, the current Setup Protocol of a device can also be stored when starting and / or stopping the logging process.



File Transfer

This application facilitates readout and storage of files stored on the M-bus central unit or on the memory card of the M-bus central unit.
To visualise the data, an editor suited for ACSII files can be started.
After reading the files, the memory card can be formatted again.

These processes can be automated by using the ACS910 batchjob software.



Parameter Settings

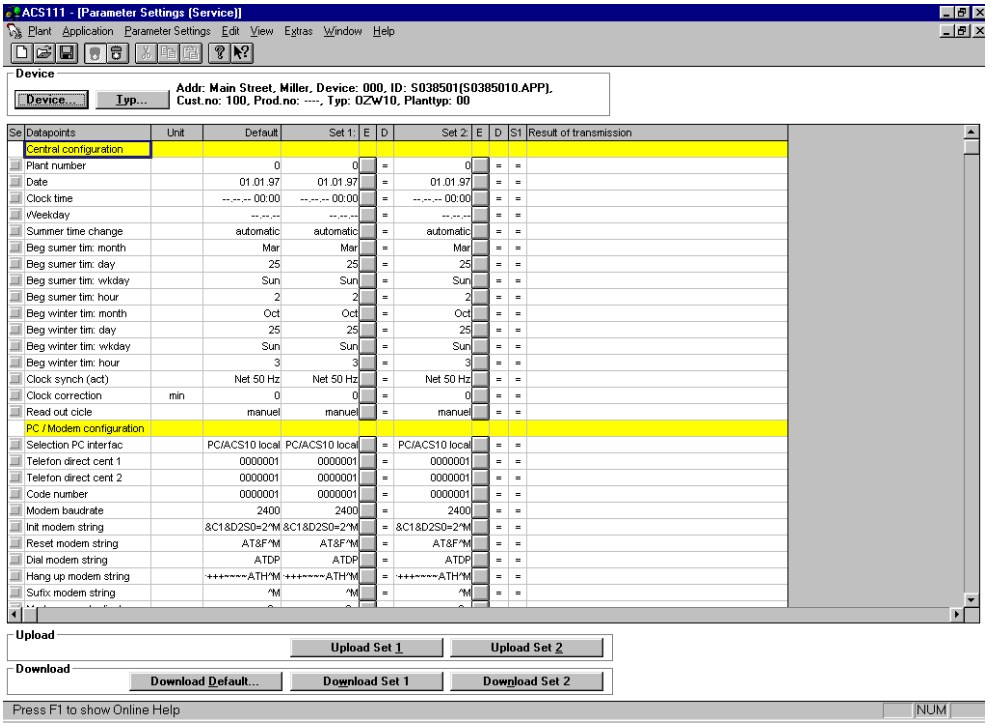
This application allows the settings of the connected devices to be altered, archived and compared with one another.

All settings can be

- made offline and written to the device at a later point in time
- copied from one device to another

Data points can be selected individually. These will then be considered for editing.

The reading and writing of the parameter sets as well as the transmission result will be displayed online for each data point. The parameter sets can be stored, opened, edited, deleted and exported as an ASCII file.



Se	Datapoints	Unit	Default	Set 1:	E	D	Set 2:	E	D	S1	Result of transmission
	Central configuration										
	Plant number		0	0		=	0		=	=	
	Date		01.01.97	01.01.97		=	01.01.97		=	=	
	Clock time		--.--.-- 00:00	--.--.-- 00:00		=	--.--.-- 00:00		=	=	
	Weekday		--.--.--	--.--.--		=	--.--.--		=	=	
	Summer time change		automatic	automatic		=	automatic		=	=	
	Beg sumer tim: month		Mar	Mar		=	Mar		=	=	
	Beg sumer tim: day		25	25		=	25		=	=	
	Beg sumer tim: wkday		Sun	Sun		=	Sun		=	=	
	Beg sumer tim: hour		2	2		=	2		=	=	
	Beg winter tim: month		Oct	Oct		=	Oct		=	=	
	Beg winter tim: day		25	25		=	25		=	=	
	Beg winter tim: wkday		Sun	Sun		=	Sun		=	=	
	Beg winter tim: hour		3	3		=	3		=	=	
	Clock synch (act)		Net 50 Hz	Net 50 Hz		=	Net 50 Hz		=	=	
	Clock correction	min	0	0		=	0		=	=	
	Read out cicle		manuel	manuel		=	manuel		=	=	
	PC / Modem configuration										
	Selection PC interfac		PC/ACS10 local	PC/ACS10 local		=	PC/ACS10 local		=	=	
	Telefon direct cent 1		0000001	0000001		=	0000001		=	=	
	Telefon direct cent 2		0000001	0000001		=	0000001		=	=	
	Code number		0000001	0000001		=	0000001		=	=	
	Modem baudrate		2400	2400		=	2400		=	=	
	Init modem string		&C1&D2S0=2^M	&C1&D2S0=2^M		=	&C1&D2S0=2^M		=	=	
	Reset modem string		AT&F^M	AT&F^M		=	AT&F^M		=	=	
	Dial modem string		ATDP	ATDP		=	ATDP		=	=	
	Hang up modem string		+++~~~~ATH^M	+++~~~~ATH^M		=	+++~~~~ATH^M		=	=	
	Sufix modem string		^M	^M		=	^M		=	=	

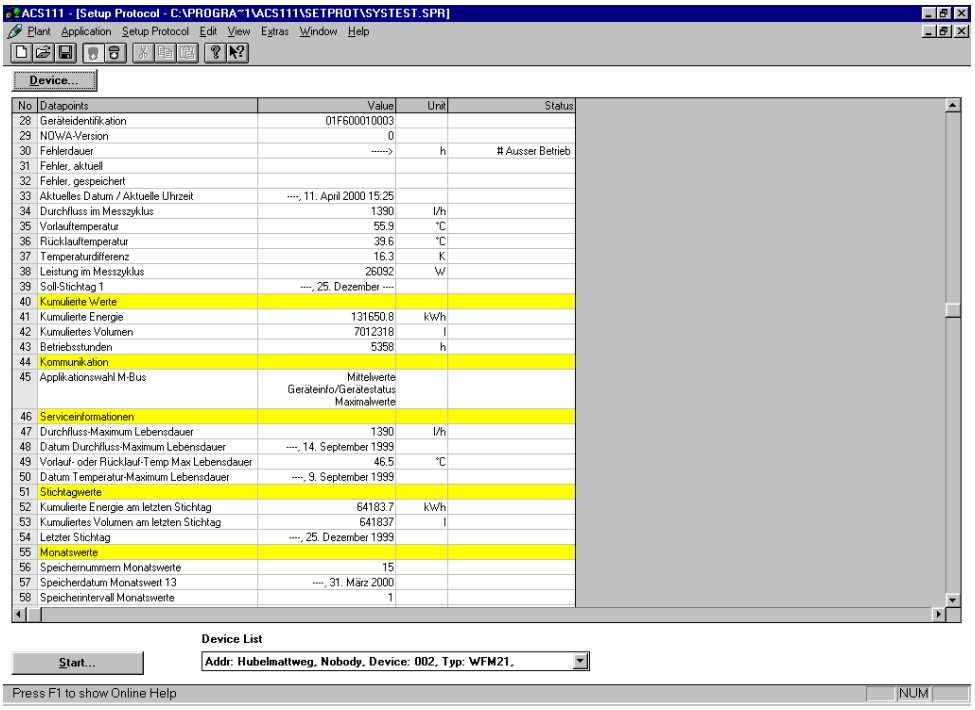
Setup Protocol

This application makes it possible to record the setting values of

- individual devices
- groups of selected devices
- the entire plant

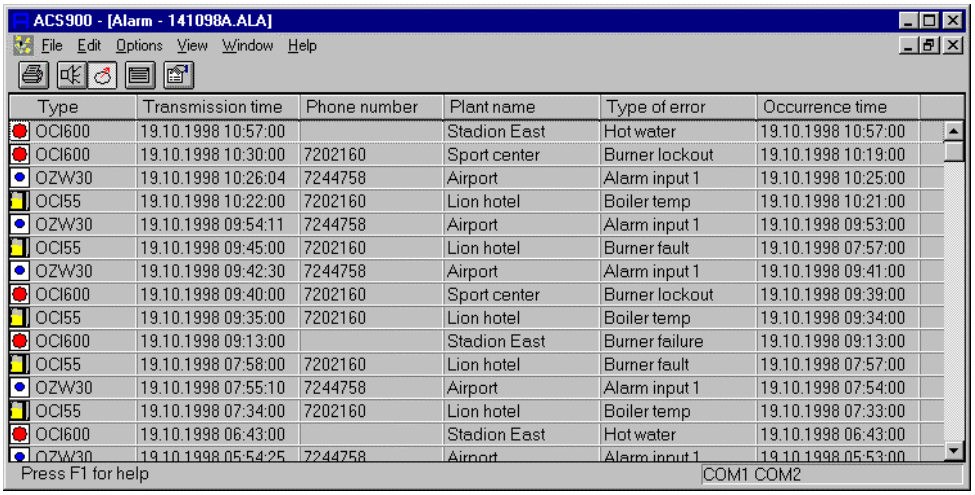
The data points of the selected devices are stored in a file in which the data point designation, value, unit and status are defined.

The Setup Protocols can be stored, opened, deleted and exported as an ASCII file.



Alarms

The reception and further handling of alarms are accomplished with the ACS900 alarm software, which is part of the operating software. For a description of the alarm software, refer to data sheet CE1N2531E.



Type	Transmission time	Phone number	Plant name	Type of error	Occurrence time
OCI600	19.10.1998 10:57:00		Stadion East	Hot water	19.10.1998 10:57:00
OCI600	19.10.1998 10:30:00	7202160	Sport center	Burner lockout	19.10.1998 10:19:00
OZW30	19.10.1998 10:26:04	7244758	Airport	Alarm input 1	19.10.1998 10:25:00
OCI55	19.10.1998 10:22:00	7202160	Lion hotel	Boiler temp	19.10.1998 10:21:00
OZW30	19.10.1998 09:54:11	7244758	Airport	Alarm input 1	19.10.1998 09:53:00
OCI55	19.10.1998 09:45:00	7202160	Lion hotel	Burner fault	19.10.1998 07:57:00
OZW30	19.10.1998 09:42:30	7244758	Airport	Alarm input 1	19.10.1998 09:41:00
OCI600	19.10.1998 09:40:00	7202160	Sport center	Burner lockout	19.10.1998 09:39:00
OCI55	19.10.1998 09:35:00	7202160	Lion hotel	Boiler temp	19.10.1998 09:34:00
OCI600	19.10.1998 09:13:00		Stadion East	Burner failure	19.10.1998 09:13:00
OCI55	19.10.1998 07:58:00	7202160	Lion hotel	Burner fault	19.10.1998 07:57:00
OZW30	19.10.1998 07:55:10	7244758	Airport	Alarm input 1	19.10.1998 07:54:00
OCI55	19.10.1998 07:34:00	7202160	Lion hotel	Boiler temp	19.10.1998 07:33:00
OCI600	19.10.1998 06:43:00		Stadion East	Hot water	19.10.1998 06:43:00
OZW30	19.10.1998 05:54:25	7244758	Airport	Alarm input 1	19.10.1998 05:53:00

Commissioning notes

The operating software must be installed according to the installation instructions given on the CD.

Operating notes

The ACS11... and ACT110 offer the common Windows help functions. This means that descriptions of the commands and menus are available at any time.