SIEMENS

5649

As of V9.00

Engineering and service software

ACS790

For KNX and LPB plants

The engineering and service software ACS790 is for KNX and LPB plants equipped with the appropriate bus devices. The software is installed on a PC or laptop and consists of the following programs:

- **ACS Tool** **to engineer, commission, and operate plants**
- **ACS Alarm** **to receive, list, and report faults**

Use

Technical applications of ACS790 include:

- Engineering and commissioning KNX and LPB plants (see also OCI700.1 service tool).
- Plant operation and monitoring of Synco™ plants with KNX bus devices (primary controllers, individual room controllers, room units, central apartment units).
- Plant operation and monitoring of heating plants with LPB bus devices (controllers, pulse adapters, temperature sensors/adapters, digital input modules, relay modules).
- Alarming (optical, acoustic) plant and device faults.

ACS Tool

The program "ACS Tool" is designed to engineer, commission and operate KNX and LPB plants with the appropriate bus devices.

Plant engineering	
Topology	Plant topologies can be created offline with the aid of device libraries for KNX and LPB plants.
Engineering	Parameterize device configurations and setting values.
Commissioning	
Commissioning	• Create the device list • Write parameter file of the plant • Do the Wiring test • Start the plant • Read plant configuration and setting values (backup and commissioning report)
Trend	
Online trend	Record and display of the dynamic curve for selected data points. Connection between plant and ACS is required while trending.
Offline trend	Record and display the dynamic curve of selected data points. No connection required between plant and ACS while trending data. The data is read from the central communication unit for display in ACS.
File transfer	
Transfer	File transfers from a central communication unit to ACS (and vice-versa).
Plant operation	
Popcard	Plant and device operation via popcard pages
Plant diagram	Plant and device operation via plant diagrams
Plant view	
Bus topology	Plant navigation using topology tree (structured by area, line, and device addresses).
Site topology	Freely definable tree structures allow for site-specific views.
User view	
Operation	Only the application "Plant operation" is enabled. The data points relevant to operating the plant are displayed in ACS.
Maintenance	The applications "Plant operation", "Online trend", "Offline trend" and "File transfer" are enabled. All applications and data points relevant to plant operation and servicing are displayed.
Administration	All applications and data points are available. This view is used for plant engineering and commissioning.

ACS Alarm

The program "ACS Alarm" allows for receiving, listing and alarming of plant and device faults.

Alarm	
Plant and device faults	Plant and device faults are received and saved by "ACS Alarm", and displayed as alarm messages as well as forwarded to a printer.
System report	
Information on the system	System information, i.e. on the plant, central communication unit and devices, is received by "ACS Alarm" and saved and displayed as a system report. Reports can be printed periodically.

Central communication units and service interface

Executable applications depend on the central units connected or the service interface (SI).

ACS application	*WEB server, central comm. unit*						*SI*
	OZW775	*OZW772 6)*	*OZW771*	*OZW672*	*OCI600*	*OCI611*	*OCI700*
Plant operation	●	●	●	●	●	●	●
Topology (offline)	●	●	●	●	●	●	
Engineering (offline)	●	●	●	●	●	●	
Commissioning	●	●	●	●	●	●	●
Online trend	●	●	●	●	●	●	●
Offline trend	●	●		●	●		
File transfer	●	●		●	●		
Alarm	●		●		●	●	
System report	●		●		●	●	
Direct connection	● 2)	● 3)	● 1)	● 3)	● 1)	● 1)	● 2)
Dial-up connection	●		●		●	●	
IP connection	● 5)	●		●			

1) Using standard zero-modem cable
2) Using standard USB cable (plug type A to type B)
3) Using standard USB cable (plug tape A to type Mini-B)
5) OZW775 as of version V2.0
6) OZW772 as of version V2.0

Documentation

Device type	*Data sheet number*
Synco web server OZW775	N5663
Synco web server OZW772	N5701
Synco communication unit OZW771	N3117
LPB web server OZW672	N5712
LPB communication unit OCI600	N2529
LPB communication unit OCI611	N2533

Service tool with interface OCI700	N5655

Ordering and delivery

Ordering

Please provide the type reference when ordering the software.

Designation	*Type reference*	*Article number*
Engineering und Service software	ACS790	S55800-Y100

Delivery

Software is delivered as a CD box which contains 2 CD-ROM with different program versions for different Microsoft® Windows® operating systems:

Software	*CD 1 V8.25*	*CD 2 V9.00*
• ACS Tool • ACS Alarm • USB driver (RNDIS driver for web server)	Windows® XP Windows® Vista Windows® 7	Windows® 7 Windows® 8

ACS Tool

Applications

The "ACS Tool" application program includes the applications:

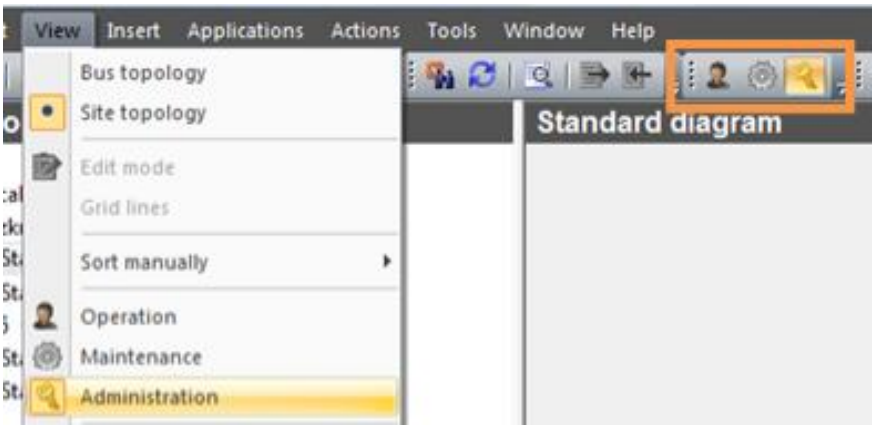
- Topology
- Plant engineering
- Plant commissioning
- Online trend
- Offline trend
- File transfer
- Plant operation

The applications can be operated in parallel.

User view

Available user views include:

- Operation
- Maintenance
- Administration



- Available applications and data points are dependent on the user view
- An individual password can be defined for each user view.

Plant view

The plants can be displayed using user-defined tree structures in the site topology or in the bus topology

Bus topology view

The devices are displayed sorted by bus address.

Example: In KNX plants, the devices are displayed structured by area, line, and device addresses

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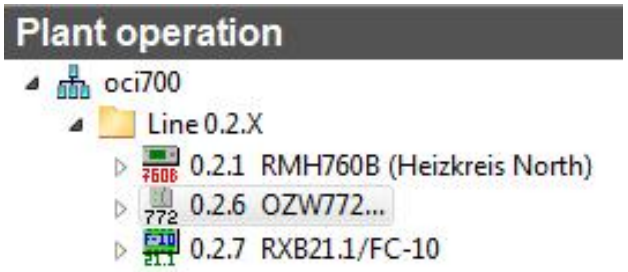
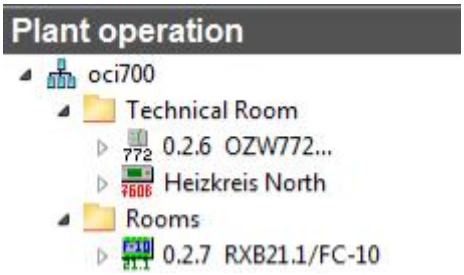


Site topology view

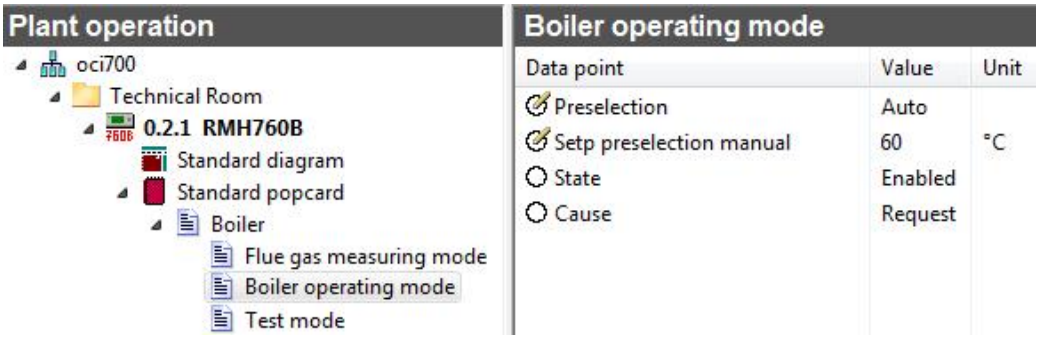
Freely definable tree structures allow for displaying plants specific to a building.



Popcard

Standard popcard

A standard popcard with predefined tree structure and content for the operating pages exists for each device type.



Each selected operating page is updated automatically. The circle in red (not updated) changes to black (updated) to visualize the update.

User-defined popcard

The administrator creates a user-defined popcard.

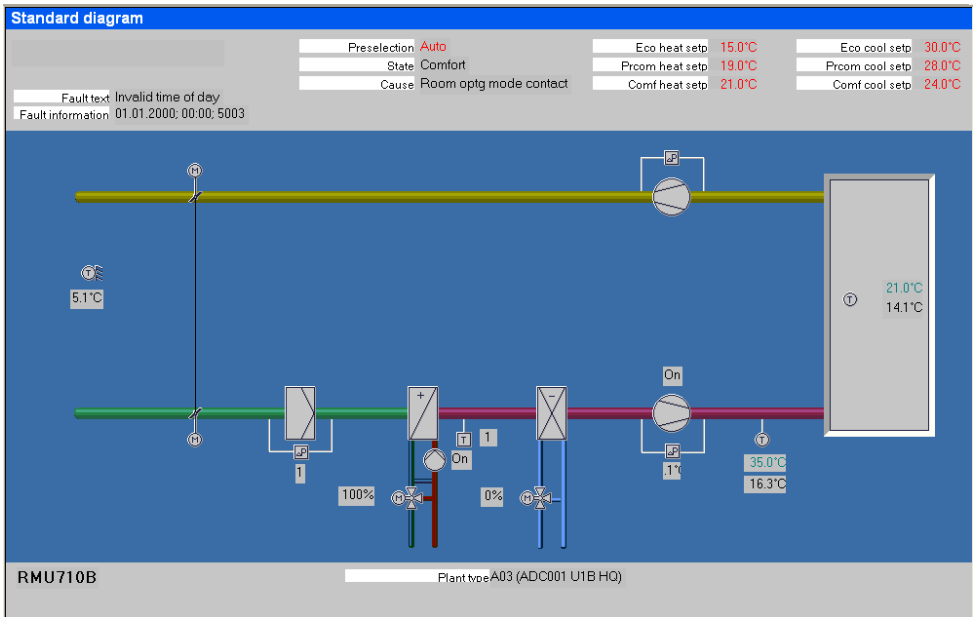
- User-defined popcards can contain data points of individual or multiple devices.
- Structure and content of the freely definable popcards can be customized.
- Standard and customized popcard can serve as the basis for creating new popcards.

Plant diagram

A plant diagram corresponds to the graphical display, e.g. of a ventilation plant and may include a device or device groups. The plant can be operated and monitored with the help of data points depicted on plant diagrams.

Standard diagram

The software includes a library with standard diagrams (standard plant diagrams). The ACS displays the appropriate standard diagram based on device configuration (plant type).



User-defined plant diagram

A user-designed plant diagram can be created in the "Administration" user view:

- Standard and customized plant diagrams can serve as the basis for creating new plant diagrams. Data points, texts, and links can be added, deleted and edited in edit mode. An external graphics software is required for graphical displays.
- ACS is compatible with the following formats: BMP, GIF, TIF, JPG or PNG.

Plant engineering

Topology

Corresponding plant topologies can be created offline with the help of device libraries for KNX and LPB plants.

Engineering

Engineering plant topologies created online and offline.

- Define parameter and settings for device configuration
- Communication settings (cross-device settings)
- Assignment of devices for monitoring

Commissioning

Plant commissioning

- Online device scan and (if available) synchronization with device list created offline
- Write plant file
- Run wiring test
- Start the plant and optimize settings
- Create a backup and the commissioning report (protocol as handover document)

Commissioning report
Export as xls file

	A	B	C	D	E	F
1	**Parameter set "Inbetriebnahmeprotokoll2011-09-23 15:08:00 (0.2.1)" from:**	RMU730B 0.2.1				
2	**Created on:**	27.09.2011 17:46				
3						
4						
5						
6	Commissioning / Basic configuration					
7	**Line no.**	**Data point**	**Address:**	**Value**	**Unit**	**State**
8		Plant type	0.2.1	Basic type A vent controller		OK
9		Position 1	0.2.1	----		OK
10		Position 2	0.2.1	----		OK
11		Position 3	0.2.1	----		OK
12		Position 4	0.2.1	----		OK
13						
14	Commissioning / Extra configuration / Input identifier					
15	**Line no.**	**Data point**	**Address:**	**Value**	**Unit**	**State**
16		N.X1	0.2.1	Supply air temperature		OK
17		N.X2	0.2.1	Digital		OK

Trend

The applications "Online trend" and "Offline trend" records the value curve of data points and displays them graphically. The desired data points for a plant are entered in the trend definition and the sample interval is set.

Online trend

Plant and ACS must be connected.
Trend data is automatically started after the trend definition and the recorded data is saved in ACS. The graphical display of the trend data is online.

Offline trend

No connection between plant and ACS.
The trend data is saved on the central communication unit. Start and end of trend can be defined. They are read from the central communication unit to graphically display the trend data in ACS. "Offline trend" is only available on some dedicated central communication units, please refer to page 3.

Trend display

The data point values are displayed per the sampling rate in trend (for example, a sampling rate of one minute).

Export as xls file

Trend data can be printed, saved as pdf or rtf and exported as xls file.

	A	B	C
1	**Trend name:**	New Online-Trenddefinition	
2	**Log name:**	New Trend2	
3	**Location:**		
4	**Installer:**		
5	**Description:**		
6			
7	Trend started manually		
8	**Started at:**	14.09.2011 10:05	
9	**Stopped at:**	14.09.2011 10:20	
10			
11	**Interval [s]:**	300	
12			
13			
14	**Time**	**Heat demand air handling [%] (0.2.11)**	
15	14.09.2011 10:05	70	
16	14.09.2011 10:10	72	
17	14.09.2011 10:15	69	
18	14.09.2011 10:20	71	

File transfer

The application "File transfer" exchanges files between a central communication unit and ACS. Transfer functions include:

- Files copied from the central communication units or their storage cards in ACS (or vice-versa as well, depending on central communication unit type).
- Format storage cards for central communication units.

File transfers are only available for specified central communication unit types, see table on page 3.

ACS Alarm

Applications

The "ACS Alarm" application program includes applications to receive and process alarms as well as reporting plant state.

Alarm

Alarms, based on plant and device faults, are entered on the ACS alarm list upon receipt. Configurable alarm functions also include:

- Trigger optical/acoustic signal
- Open popup window
- Print alarm message
- Any combination of the three

System report

A system report provides a general overview on the plant operating state and included the following information:

- Plant name
- Plant state
- Transmission time, date
- Plant phone number
- Central communications type

Even more information, e.g. operating hours or meter values, may be include in the system report depending on the central communication unit type.

Engineering notes

Limitations

ACS Tool

Limitation	*Description*
No continuous operation	**ACS Tool is not suited for 24-hour operation.** We recommend closing and restarting the "ACS Tool" program at least once a day.
Number of devices in popcard and plant diagram	Updating data point values takes longer if a lot of data points are on the same popcard or plant diagram.

Online, offline trend

Online trend Trend file (plx) max. 100 MB	Please note that the ACS project file may not exceed 100 MB. Longer periods of trending result in very large ACS project files. This is prevented by restarting the program every 24 hours. We recommend exporting trend data daily and then deleting. The project must be closed after deletion to compress the file.
Offline trend ACS project file max. 100 MB	Please note that the ACS project file may not exceed 100 MB. The trend data must be exported to Excel as needed and then deleted in the ACS project (see Online trend)

Technical data

Compatibility

Plant files from ACS700 to ASC785 are compatible with ACS790 as of V5.0.

Number of devices per plant

The number of devices per plant depends on the central communication unit used, but the central communication units can only monitor a limited number of devices, please refer to the corresponding datasheets.

Modem driver

The modem driver (TAPI) available on the PC/Laptop operating system is compatible with ACS.

PC/Laptop requirements with ACS

	Minimum requirements
Processor	1 GHz
RAM	1 GB
Hard disk	2.0 GB of available storage for installation Additional storage space required for plant data
Screen	SVGA standard driver 1024 × 768, 256 Colors
Interfaces	• USB 1.1 and higher Serial COM up to 19,200 baud • Network card (Ethernet)
Operating system	• Microsoft® Windows® 7 as of Service Pack 1, 32- und 64-bit versions • Microsoft® Windows® 8, 32- und 64-bit versions • Microsoft® DotNet Framework 4.0 (included on the CD).
Drive	CD-ROM or DVD