SIEMENS

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Service Tool

OCI700.1

ACS plant operating software and OCI700 service interface

Service tool for commissioning and the diagnosis of HVAC controllers of the Synco™, RXB…/RXL…, SIGMAGYR® and ALBATROS® ranges

Use

- Commissioning and the diagnosis of the following types of controllers:
  - Synco controllers, room units and communication central units
  - SIGMAGYR / ALBATROS controllers, room units, HMIs, extension modules, BMUs and communication central units
  - Room controllers RXB…/RXL…
  - Synco living central apartment units
- Operation of HVAC plant via Konnex (KNX/TP1), Local Process Bus (LPB) or Boiler System Bus (BSB)

Functions

The service tool consists of the ACS plant operating software and the OCI700 service interface.

- The service interface provides signal conversion between the PC's Universal Serial Bus (USB) interface and the units' service interface
- The ACS plant operating software provides the following programs and functions:

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Service software

Function	Description
Operating Booklet	Visualization and remote operation of all data points transmitted by the connected devices
• Standard	Pages and data points as predefined for each device
• User-defined	Pages and data points as defined by the user
Online Trend	Acquisition and presentation of the dynamic behavior of selected plant data points, with connection to the plant
Parameter Settings	Reading and editing the setting parameters of a device in tabular form
Commissioning Report	Reading the setting values of individual devices, device groups, or of the entire plant
Plant Navigation	Plant view as a tree structure. The makeup of the tree structure corresponds to addressing of the devices.
Connection	Directly via standard USB cable (connector type A to B)

Operating software

Function	Description
Plant Diagram, user-defined	Visualization and remote operation of data points with graphic presentation of plant. Graphic presentation, data points and interconnections as defined by the user
Operating Booklet	Visualization and remote operation of all data points transmitted by the connected devices
• Standard	Pages and data points predefined for each device
• User-defined	Pages and data points as defined by the user
Parameter Settings	Reading and editing the setting parameters of a device in tabular form
Plant Navigation	Plant view as a tree structure. The makeup of the tree structure corresponds to the addressing of the devices
Connection	Directly via standard USB cable (connector type A to B)

Equipment combinations

Devices

The following types of devices can be operated with the service tool:

Synco

- Universal controllers RMU7…, RLU2…
- Heating controllers RMH7…
- Boiler sequence controller RMK770
- Central control unit RMB795
- Switching and monitoring device RMS705
- Signal converters SEZ2…
- Central communication units OZW77…
- Room unit QAW740
- Central apartment unit QAX910 (Synco living)
- Room controller RXB…/RXL… (Desigo)

SIGMAGYR / ALBATROS / AEROGYR

- Heating controllers RVL4…, RVP3…, RVP5…, RVA…, RVS…
- District heating controllers RVD2…
- Ventilation controllers RWI65…*
- Room units QAA…
- HMI AVS3…
- Externsion modules AVS7…
- Boiler management units LMU… (only via LPB)
- Central communication units OCI6…

* no longer available

Minimum PC requirements	The minimum requirements placed on the PC are the following:	

PC component	Minimum requirement
Processor	800 MHz, recommended 1 GHz
RAM	512 MB, recommended 1 GB
Hard disk	2.0 GB free memory for installation Additional free memory for plants required
Screen	SVGA standard driver 800 × 600, 256 colors Recommended: XGA standard driver 1024 × 768
Interfaces	USB 1.1 and higher Serial COM up to 19,200 Baud Network interface card
Operating system	Microsoft® Windows® XP with Service Pack 2 or Windows Vista™ Home Premium, Business, Ultimate, or Enterprise (only for 32-bit editions)
Diskette drive	3½", 1.44 MB, for diskette with log file
CD-ROM or DVD drive	

Type summary

The service tool is supplied as a complete product. It requires no license.

Type reference	Copy protection
OCI700.1	Not required

Ordering and delivery

Ordering

When ordering, please give type reference **OCI700.1**.

Delivery

The service tool is supplied as a set in a service case.
- CD-ROM with:
  – Operating software
  – Service software
  – Documentation
- Installation Instructions
- OCI700 service interface
- USB cable
- Service cable for KNX units
- Service cable for LPB/BSB units

Extra packages

The operating and service software supplied with the OCI700.1 corresponds to that of the ACS700 (refer to Data Sheet N5641).
Extra packages are used to extend the scope of functions of the standard packages.
Based on the ACS700 standard package, a dongle CMD.02 is required.
For more detailed information, refer to Data Sheet N5640 (ACS7…).

Documentation

Software

Type reference	Document and reference number
ACS7…	Installation Instructions G5640 User Manual U5640 (ACS Operation, ACS Service) User Manual U5641 (ACS Alarm) User Manual U5642 (ACS Batchjob)
ACS700	Data Sheet N5641
ACS712	Data Sheet N5643
ACS713	Data Sheet N5644

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| Type reference	Document and reference number
ACS715	Data Sheet N5645
ACS741	Data Sheet N5647
ACS785	Data Sheet N5648

Systems

System	Type of documentation and number
Synco 700 / Synco RXB HVAC Controls with Konnex Interface	Range Description S3110
Konnex bus	Data Sheet N3127
Konnex bus, system description	Basic Documentation P3127
LPB, System Engineering	Basic Documentation P2370
LPB, Basic Engineering Data	Data Sheet N2032
LPB, Basic System Data (OEM)	Data Sheet N2030

Technical design

Communication

The service or operating software facilitates direct data exchange with the above mentioned devices via the PC's USB interface and the service interface:
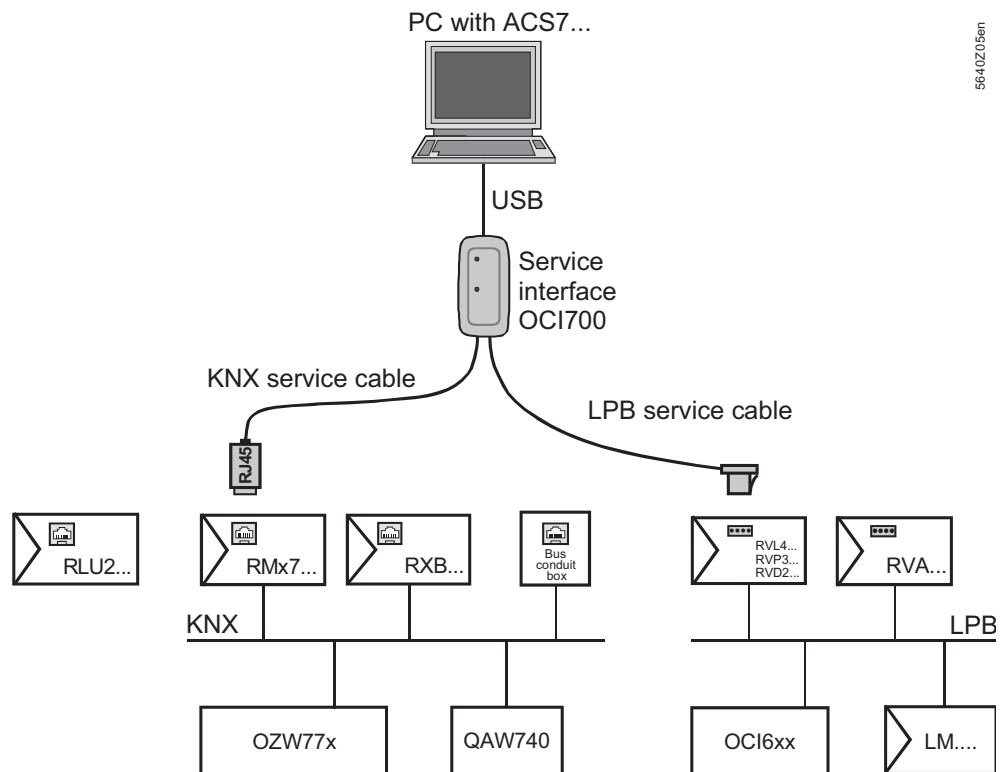
- The service interface can communicate via the LPB/BSB or the KNX service cable
- Only 1 service interface can be connected to the PC's USB interface at a time
- Connection to the devices can be made as follows:
    - Via the service interface
    - Via the bus (for that, the cable must be appropriately prepared; for details, refer to "Connections")
    - Via the KNX bus conduit box

Interfaces

The service interface has the following ports:
- For USB cable, socket type B
- For KNX service cable, socket RJ45
- For LPB/BSB service cable, socket RJ12

Parameterization of service tool

- The service interface need not be parameterized
- With the service or operating software, the relevant type of server (OCI700-KNX or OCI700-LPB) must be selected in order to be able to make a connection to the devices

Diagnosing and commissioning the units

The service or operating software can be used to change or display the following values and parameters of the connected units (examples):

- Temperature
- Setpoints
- Limitations
- Operating modes
- Weekly and holiday programs

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Operating software and service software

General

The operating software and the service software include applications with the following choices:

- Following applications can be started several times and operated in parallel:
  - Plant Diagram
  - Operating Booklet
  - Parameter Settings
  - Online Trend
  - Commissioning Report
- Several applications can be run simultaneously (e.g. Plant Diagram and Operating Booklet)
- Active applications (e.g. Parameter Settings) can operate in the background
- User-defined adjustments can be made on the following applications:
  - Plant Diagram
  - Operating Booklet
- The software contains a device description of every supported device. The device descriptions define:
  - The data points with the associated properties
  - The interconnections between applications

Plant Diagram

This application permits the graphic presentation of plant (individual devices or groups of devices) with the following choices:

- Automatic updating of process values in the diagram
- Changing setpoints in the diagram
- Links to other diagrams can be established

A user-defined plant diagram can be defined for every device. The procedure is the following:

- Use external graphic software (e.g. Micrografx Picture Publisher™) for the graphic presentation
- For the inclusion of data points and links, the application has an Editor integrated

All plant diagrams are stored in a library. They can also be created without having a connection to the plant (offline).

The plant diagrams can be printed out.
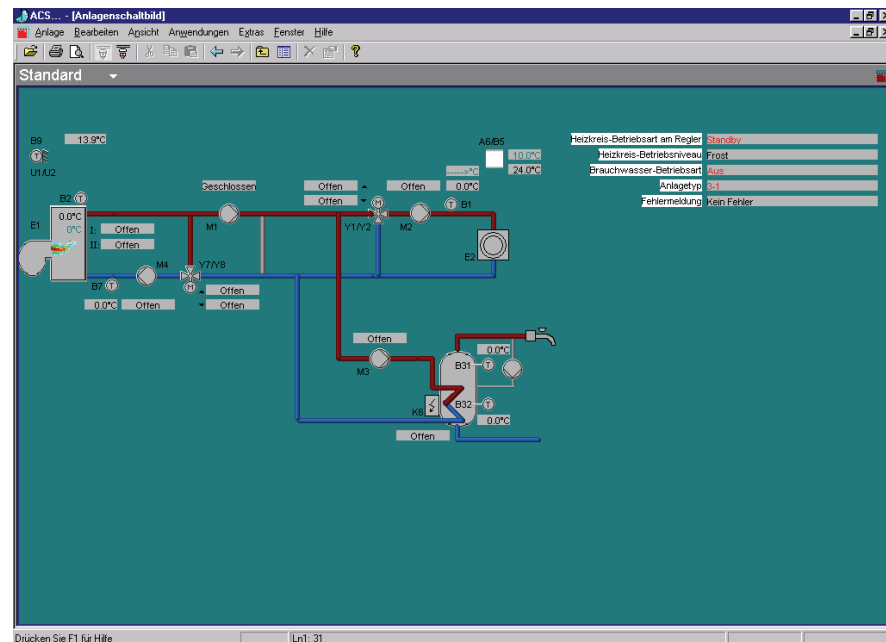
Operating Booklet

This application is used to visualize the transmitted data points of each device, and their values.

Each type of device uses a standard Operating Booklet; makeup and contents of the operating pages are predefined.

User-defined Operating Booklets can be created for each device and each node. Data points of all subordinate devices can be added to an Operating Booklet that is assigned to a node. Standard and user-defined Operating Booklets can be copied to devices of the same type or to superposed nodes.

The user-defined Operating Booklet offers the following features:

- It can consist of several user-defined pages
- Every page can be subdivided into several user-defined sections
- Freely selectable data points and separators can be assigned to the Operating Booklet, the pages and sections

Switching between the standard and the user-defined Operating Booklet is possible at any time.

Every selected page is automatically updated. The updating process is visualized.

The operating pages can be printed out and exported as an ASCII file.

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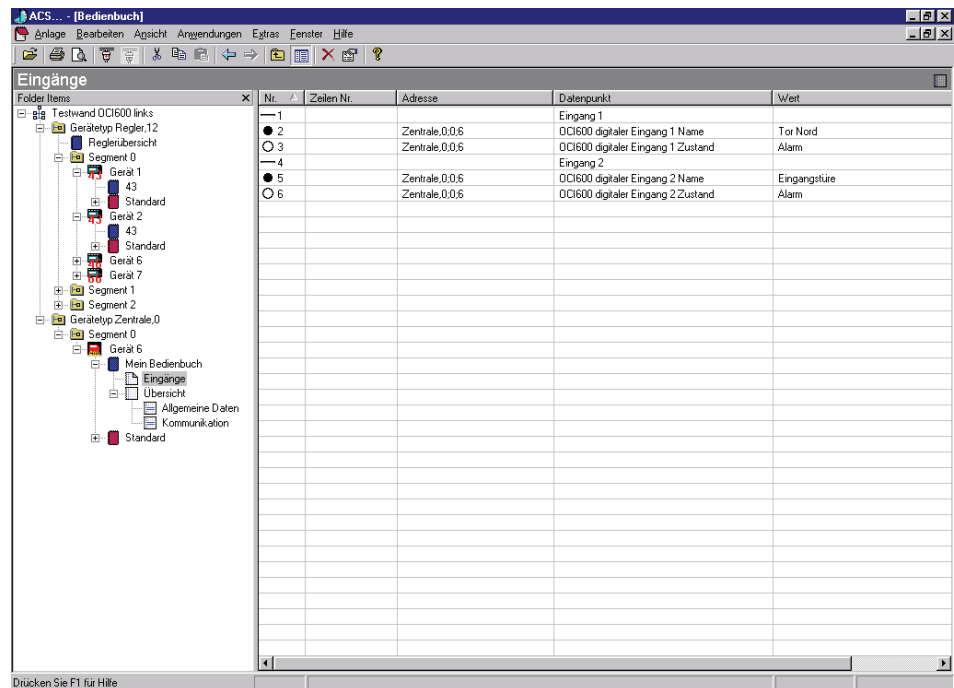
Online Trend

This application allows any data points of a plant to be logged. The connection between plant and PC is established. All acquired data are stored directly on the PC. The graphic presentation of trend logging takes place online.

The description, the selected data points of all devices of the plant and the sample interval are defined in the trend definition.

In trend logging, the cyclically queried data are stored and graphically presented. Earlier trend logging can be graphically shown again at any time.

Trend logging can be printed out and exported as an ASCII file.
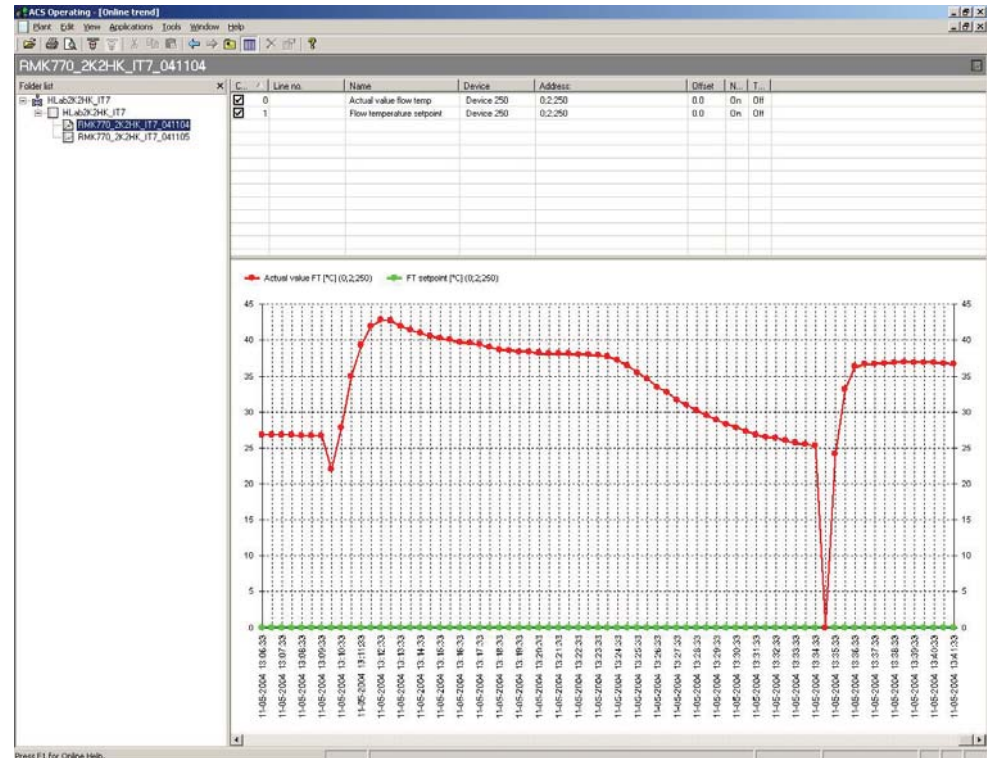
Parameter Settings

This application is used to download, upload or compare the settings of the connected devices.

The settings can be

- stored as a parameter set
- compared with a parameter set
- compared with the standard parameter set
- overwritten with a stored parameter set
- overwritten with the standard parameter set

The parameter sets can be edited either online or offline. The data points of a parameter set can be individually selected. The transmitted result of uploading, downloading or comparing is displayed online.

The parameter set can be printed out or exported as an ASCII file.

Commissioning Report

This application is used to log the setting values of individual devices, groups of devices, or entire plants.

The data points of the selected devices are stored with data point designation, value, unit and status.

The commissioning report can be printed out and exported as an ASCII file.

Plant Navigation	For plant navigation, the plant is presented in the form of a tree structure, in accordance with device addressing. The following applications support this mode of presentation:

- Plant Diagram
- Operating Booklet
- Online Trend
- Parameter Settings
- Commissioning Report
- The plant view as a tree structure can be displayed or hidden.
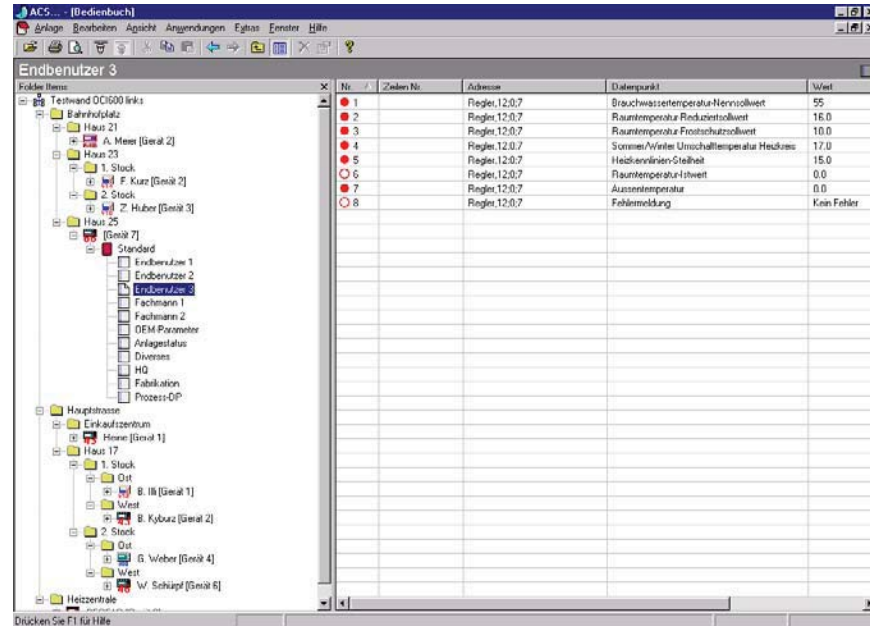
Mechanical design of service interface

Basic design
The service interface is accommodated in a compact plastic housing. 2 LEDs indicate the correct functioning of the device. The interfaces of the service interface are galvanically separated.

USB indication
LED lit: Operating voltage present at the service interface
LED flashes: Data exchange between service interface and PC

Bus indication
LED lit: Connection to the service interface is established
LED flashes: Data exchange via the service interface

Power supply
The service interface is powered via the USB interface and the units' service interfaces. If used, it shortens the operating time of a laptop's storage battery only to a small extent.

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Installation   The service interface is not designed for fixed mounting.

Commissioning   The software should be installed according to the Installation Instructions supplied with
                          the CD.

Operation   The ACS plant operating software offers a standard Windows Help function. This means
                          that a description of the commands and menus is available at any time.

Technical data

Power supply	Operating voltage (via USB)	DC 5 V as per USB specification
	Current draw	max. 65 mA

Norms and standards	$C\!\in$ conformity to	
	EMC directive	2004/108/EC
	Low-voltage directive	2006/95/EC
	☑ conformity to	
	Australian EMC Framework	Radio communication act 1992
	Electromagnetic compatibility	
	Immunity	EN 61000-6-2
	Emissions	EN 61000-6-3
	Product standard	
	Home and Building Electronic Systems (HBES)	EN 50090-2-2

Degrees of protection	Degree of protection	IP20 to EN 60529

KNX interface	Connection	(2-wire, **not** interchangeable)
	Length of service cable	3 m
	Baud rate	9,600 Baud
	Bus loading number (E)	dynamic / adaptive
	Physical Layer RM…, RXB…,QAW7…	TP1
	Physical Layer RL…	3V (TTL)
	For more information about the KNX bus, refer to	Basic Documentation P3110

LPB/BSB interface	Norm	Batibus-compatible
	Connection	(2-wire, **not** interchangeable)
	Length of service cable	3 m
	Baud rate	4,800 Baud
	Bus loading number (E)	dynamic / adaptive
	For more information about the LPB, refer to	Data Sheet N2032
		Data Sheet N2030
		Basic Documentation P2370
	For more information about the BSB, refer to	User's guides for BSB devices

USB interface	Norm	USB V1.1
	Length of service cable	0.6 m (max. permissible: 5 m)

|	Baud rate	max. 12 Mb/s (Full Speed)
	Connecting cable	
	Connector on PC	USB type A
	Connector on OCI700	USB type B
Permissible ambient conditions	Transport	
	Temperature	–25…+70 °C
	Humidity	<95 % r.h. (noncondensing)
	Storage	
	Temperature	–5…+55 °C
	Humidity	<95 % r.h. (noncondensing)
	Operation	
	Temperature	0…+50 °C
	Humidity	<85 % r.h. (noncondensing)
Weight	Case, complete with packaging	1.2 kg

Connections

The OCI700 service interface has the following connectors:
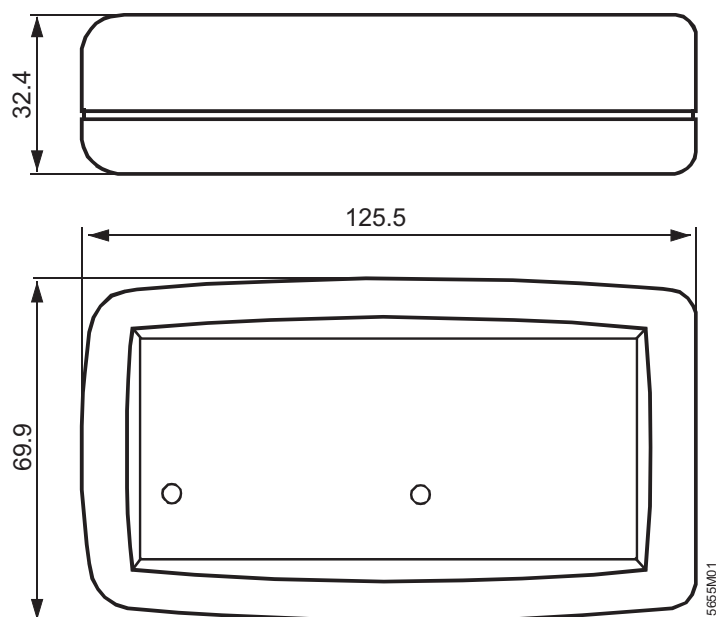
Pin assignment KNX, RJ45
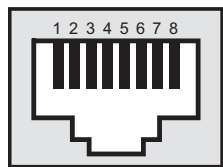
1 CE+, Konnex
2 CE–, Konnex
3 Not used
4 Not used
5 Voltage input 16 V
6 Transmission line to RLU2…
7 Reception line from RLU2…
    PPS RXB…
    Identpin RM…
8 Ground

Pin assignment LPB/BSB, RJ12
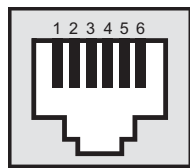
1 Not used
2 Not used
3 DB, LPB/BSB
4 MB, LPB/BSB
5 Identpin
6 Not used

Dimensions

Dimensions in mm