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Central Communication Unit

OZW771...

for Synco™ 700 and Synco™ RXB...

Central communication unit for the remote operation and supervision of Synco™ plants.

Use

Types of plant

The OZW771... central communication unit is a component of the Synco system. It is used in mixed heating/ventilation plants which are parameterized and monitored from a central operator station. Such a central station is a PC that has the ACS7... plant operating software installed. Messages can also be delivered to SMS receivers, fax machines, pagers or e-mail receivers.

Types of building

Typical applications:

- Administrative buildings
- Public buildings
- School buildings
- Smaller industrial buildings
- Multifamily houses

Operators

These types of plant are operated by:

- Service companies
- Community administrations
- Installation companies
- School administrations
- Real estate companies

Functions

The OZW771... central communication unit

- identifies connected Synco devices via its automated search run
- makes possible the direct access to Synco devices via an operator station which is connected either directly or via modem
- monitors Synco devices and 2 fault inputs for potential-free contacts
- reports faults to a PC, either directly or via modem
- reports faults via modem to SMS receivers, fax machines*, pagers, or e-mail receivers*
- has a clock function for reporting faults
- supports the function of a system clock and a clock time master

* Only possible with GSM modem, depending on the telephone provider

Type summary

<i>Type of device</i>	<i>Type reference</i>
Central communication unit for 4 Synco devices	OZW771.04
Central communication unit for 10 Synco devices	OZW771.10
Central communication unit for 64 Synco devices	OZW771.64
Terminal covers	74 111 0028 0

Ordering and delivery

When ordering, please give the type reference. Terminal covers must be ordered as separate items. Delivery of the terminal covers includes the covers for the mains and low-voltage side and the cable ties for securing the covers.

Equipment combinations

Synco devices

The following types of Synco devices with Konnex bus connection facility can be connected to the central communication unit:

- RMH7... heating controllers
- RMU7... universal controllers
- QAW7... room units
- RXB... individual room controllers (only with Konnex-Logo)

PC software

A PC with the ACS7... which has the plant operating software installed can be connected as follows:

- To RS-232 port, either directly or via modem
- To the Konnex bus port via the OCI700 service interface

Konnex (Konnex bus)

For detailed information about the Konnex bus, refer to the following pieces of documentation:

<i>Document</i>	<i>Name</i>	<i>Document no.</i>
Data Sheet	Konnex bus	N3127
Basic Documentation	Communication via Konnex bus	P3127

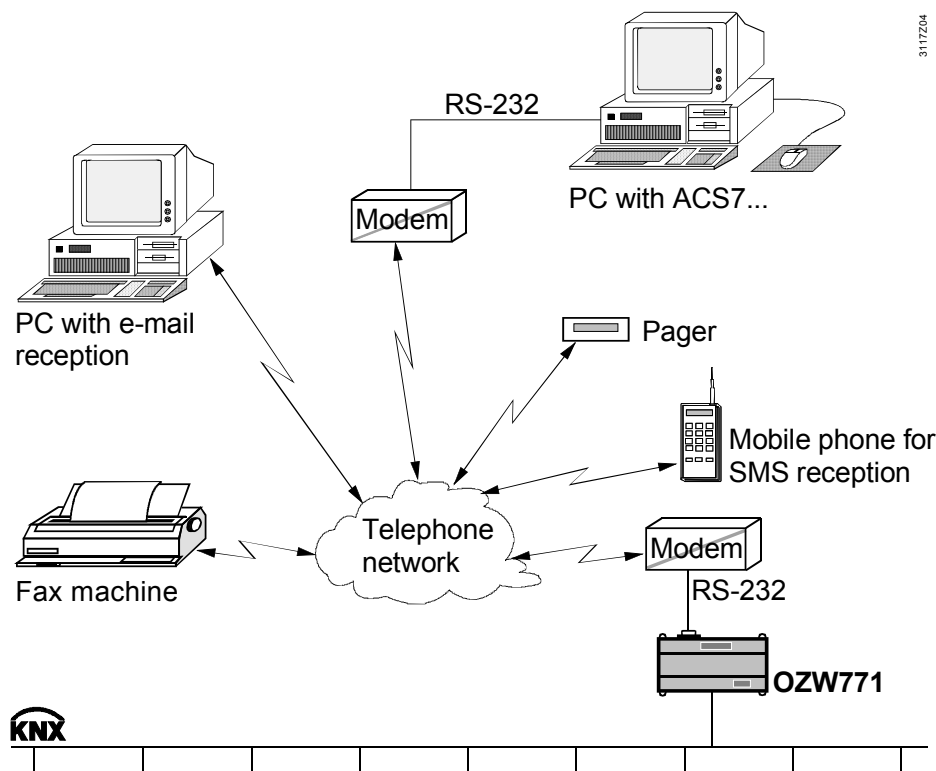
Product documentation

<i>Document</i>	<i>Document no.</i>
Installation Instructions	G3117
Basic Documentation	P3117

Communication

Telephone connection

In the case of a connection via the telephone network, the permissible combinations listed in the table below must be taken into consideration.

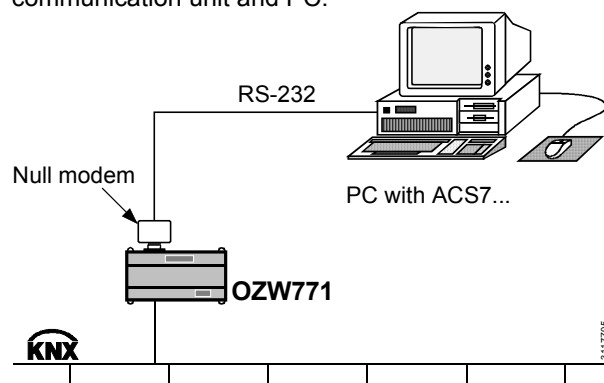


Modem and protocol support

<i>Message receiver</i>	<i>Protocol support</i>	<i>Type of modem required for OZW771...</i>
PC with ACS7...	No special requirements	Hayes-compatible analogue, ISDN or GSM modem
SMS receiver	Fixed network provider which supports the UCP or TAP protocol	
Pager	Fixed network provider which supports the TAP protocol	
SMS receiver	GSM telephone	GSM modem (e.g. Siemens TC35)
Fax machine	GSM telephone provider which supports the routing of short messages to fax machines	
Pager	GSM telephone provider which supports the routing of short messages to pagers	
E-Mail receivers	GSM telephone provider which supports the routing of short messages to e-mail receivers	

Direct connection

When using a direct connection, a standard null modem is required between central communication unit and PC.



Standard null modem

Standard null modem cable				Link cable			
9 pins				9 pins			
Female		Female		Female		Female	
Terminal 1		Terminal 2		Terminal 1		Terminal 2	
TD	③	③	TD	TD	③	③	TD
RD	②	②	RD	RD	②	②	RD
RTS	⑦	⑦	RTS	RTS	⑦	⑦	RTS
CTS	⑧	⑧	CTS	CTS	⑧	⑧	CTS
DSR	⑥	⑥	DSR	DSR	⑥	⑥	DSR
GND	⑤	⑤	GND	GND	⑤	⑤	GND
DCD	①	①	DCD	DCD	①	①	DCD
DTR	④	④	DTR	DTR	④	④	DTR

Parameter settings

The OZW771... central communication unit is to be parameterized with the ACS7... plant operating software using a PC locally connected via the RS-232 port or via the OCI700 communication interface and the Konnex bus.

Ports

The central communication unit has 2 ports:

- 9-pin RS-232 connector (male)
- 2 terminals for connecting the Konnex bus

Synco devices

From the operator station, the following parameters (among others) of the connected Synco devices can be changed or displayed via the central communication unit:

- Temperatures
- Setpoints
- Limitations
- Operating modes
- 7-day and holiday programs

If requested, the central communication unit searches for the Synco devices used by the system.

Fault inputs

The OZW771... has 2 fault inputs for the connection of potential-free contacts. The normal position (fault/no fault) and the fault priority can be parameterized.

Typical input signals are the following:

- Common messages from external plant (e.g. expansion equipment or burner lock-out)
- Fault status messages from pumps
- Thermal switches
- Level switches (e.g. oil level)

Fault status messages

The central communication unit identifies the following types of faults:

- Faults at the fault inputs
- Faults of Synco devices
- Internal faults of the central communication unit

For each fault source (central communication unit, fault inputs, Synco devices), it is possible to select whether the faults shall be signaled only when they occur, or when they occur and disappear.

Fault status messages can be delivered to a maximum of 2 message receivers. The types of message receivers can be combined as required.

The central communication unit supports PCs with ACS7..., SMS receivers and pagers as message receivers and also offers the required parameter setting choices to route short messages to fax machines, pagers or e-mail receivers (only with a GSM modem). The exact settings depend on the telephone provider which also prescribes them.

When faults are detected, the central communication unit immediately delivers the fault status messages to the message receivers. However, after communication via the telephone network, the central communication unit observes a message interval of at least 1 minute which can be parameterized.

If the central communication unit is not able to deliver a fault status message, it repeats the message within the parameterized message interval until successfully delivered, or until the number of parameterized repetitions is reached.

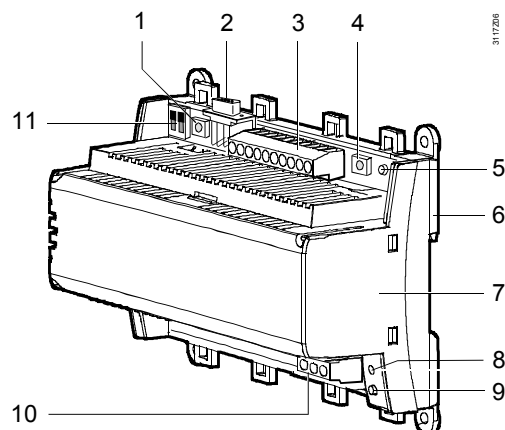
A system report can be generated, which periodically signals the plant's correct functioning.

Mechanical design

Makeup

The OZW771... central communication unit consists of base, upper housing section and printed circuit board with lateral connection terminals (top: Konnex, bus and fault inputs; bottom: mains connection).

The unit also has 3 LEDs, 2 buttons, 2 selectors and 1 RS-232 socket.



- 1 Modem reset button
- 2 RS-232 socket
- 3 Connection terminals for low-voltage (Konnex bus and fault inputs)
- 4 Konnex bus button
- 5 LED for programming
- 6 Base
- 7 Upper housing section
- 8 LED for operation
- 9 LED for faults
- 10 Connection terminals for mains voltage AC 230 V
- 11 RS-232 selector and signal selector

Terminal covers



Terminal covers are available as accessory items. They provide protection against electrical shock hazard and dirt. The terminal covers are mandatory when the unit is mounted outside the control panel or cabinet. In that case, the terminal cover on the mains voltage side must be secured with the 2 cable ties provided. The 3 LEDs are also visible when the terminal cover is fitted.

Connection terminals

The connection terminals are ready mounted. To prevent false wiring, the terminals for the mains voltage connection (AC 230 V) are clearly segregated from the other terminals. The terminals are arranged such that, in normal situations, all incoming and outgoing wires can be connected without crossing.

LED for operation

The green LED indicates the operating state of the central communication unit:

- LED lit: Mains voltage present
- LED flashes: Communication via RS-232

LED for faults

The red LED next to the mains terminals indicates the fault status of the central communication unit:

- LED dark: No fault in the system present
- LED lit: Fault of one or several Synco devices
- LED flashes: Internal fault of the central communication unit or fault at the fault inputs

LED for programming

- The red LED next to the Konnex bus terminals indicates whether the central communication unit is in addressing mode:
- LED dark: Normal mode
- LED lit: Addressing mode
- The LED extinguishes automatically after adopting the device address from the ETS (EIB tool software)

RS-232 selector

This selector is used to select whether the central communication unit is connected to the RS-232 port via modem or directly to the PC.

Signal selector

This selector is used to select whether pending faults or system reports shall be sent to the message receiver.

Konnex bus button

The Konnex bus button is used for creating the device list and for switching between normal and addressing mode for adopting the device address from the ETS.

Modem reset button

The modem reset button is used for reinitializing the modem. Then, the central communication unit will open a connection to the parameterized message receivers and delivers a system report.

Mounting notes



The central communication unit can be fitted in any position, either on a wall mounting rail or directly on the wall:

Please observe:

- If there is no protection against electric shock hazard (e.g. in heating rooms, false ceilings or false floors), the use of terminal covers is **mandatory**.
The terminal cover on the mains voltage side must be secured with cable ties
- If protection against electric shock hazard is ensured (e.g. in control panels or cabinets), the unit can be mounted **without** terminal covers
- The heat generated by the unit during operation must be allowed to escape. Adequate circulation of air must therefore be ensured
- Easy access for service staff must be ensured
- Local regulations for electrical installations must be complied with

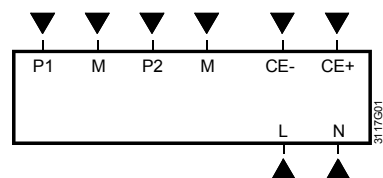
Commissioning notes

- The central communication unit must be commissioned by authorized staff
- The Installation Instructions supplied with the unit contain detailed information on commissioning
- The central communication unit is to be parameterized with the ACS7... plant operating software and a PC connected locally via the RS-232 port or via the OCI700 communication interface and the Konnex bus
- The parameters can be set either in advance or on site
- The telephone provider and the modem must be selected prior to commissioning, depending on the type of message receiver
- If a GSM modem is used, it must be made certain that the SIM card
 - permits data communication
 - is not protected by a PIN code

Technical data

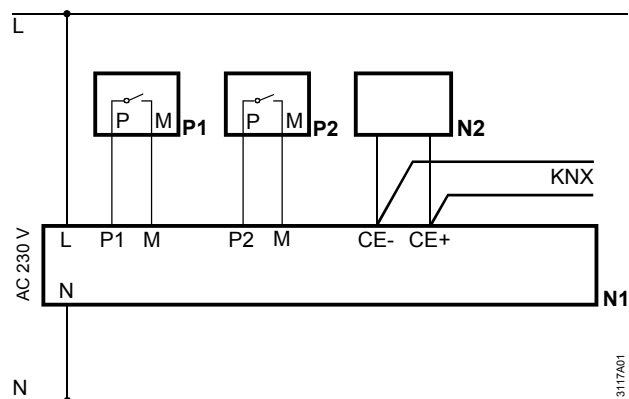
General unit data	Rated voltage	AC 230 V ± 10 %
	Nominal frequency	50/60 Hz
	Power consumption	5 VA
	Fault inputs (P1, P2)	for potential-free contacts
	Perm. ambient temperature	
	Transport and storage	–25...+70 °C
	Operation	0...50 °C
	Perm. ambient humidity	class F to IEC 721
	Weight	0.32 kg
	Bus loading number E	0.6
Terminal wiring	Reserve of clock	12 h
	Connection terminals for power supply and low-voltage	per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5 mm ² ...2.5 mm ² 2 cores: 0.5 mm ² ...1.5 mm ² 3 cores: not permitted
Norms and standards	CE conformity to	
	EMC directive	89/336/EEC
	Low-voltage directive	73/23/EEC
	Electromagnetic compatibility	
Degrees of protection	Immunity	EN 61 000-6-2
	Emissions	EN 61 000-6-3
	Without terminal cover	IP20 to EN 60 529
	With terminal cover	IP30 to EN 60 529
Konnex bus	Safety class	II to EN 60 950
	Execution	2-wire connection, not interchangeable, no bus power supply via OZW771...
	Baud rate	9600
Protocols for delivery of short messages (SMS)	Connection via fixed network provider	UCP (Universal Computer Protocol) TAP (Telocator Alphanumeric Protocol)
	Connection via GSM telephone provider	AT+ (extended AT command set)
RS-232 port	Standard	V.24/EIA 232D
	Cable length	max. 15 m
	Connector	D-Sub, male, 9 pins

Connection terminals



CE+ Data Konnex bus
 CE- Ground Konnex bus
 L, N Operating voltage AC 230 V
 M Ground for P1 and P2
 P1, P2 Fault inputs

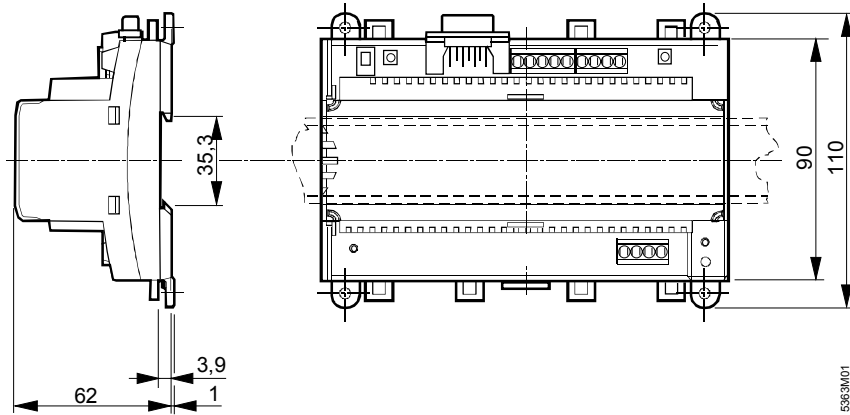
Connection diagram



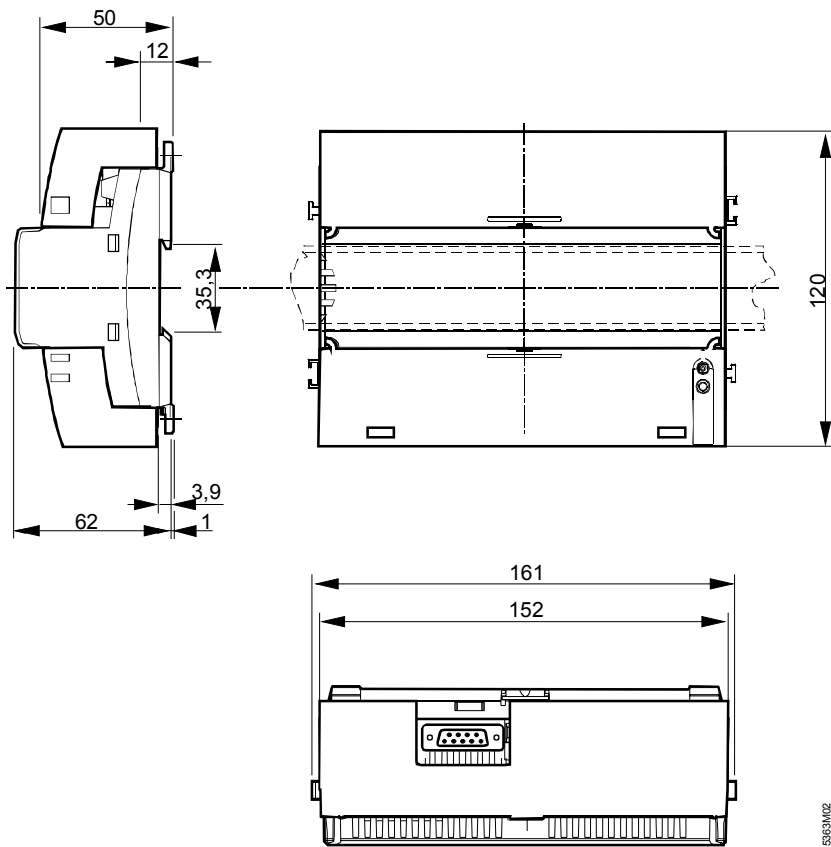
N1 OZW771... central communication unit
 N2 Synco device
 P1, P2 Devices with potential-free contact output for signaling faults

Dimensions

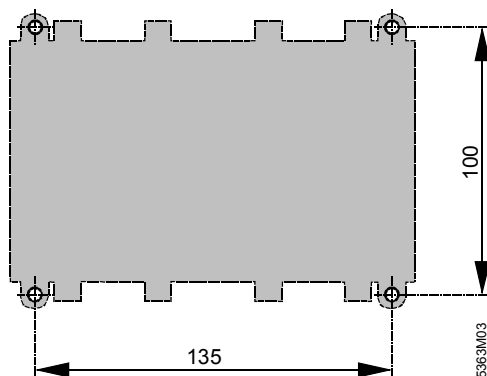
Without terminal covers



With terminal covers



Drilling template



Dimensions in mm