

Series B

Central Communication Unit OC1611...

for LPB/BSB plants

Central communication unit for the remote operation and supervision of LPB plants with a maximum of 16 LPB/BSB units

Use

Plant

The central communication unit is used in heating plants with LPB/BSB-compatible units that are parameterized and supervised from a central operating station. The operating station is a PC with the plant operating software ACS7... Alarm messages can also be delivered to SMS receivers, fax machines, pagers or e-mail receivers.

Buildings

Typical applications:

- School buildings
- Multifamily houses
- Municipal buildings
- Administrative buildings

Operators

Such plants are operated by:

- Municipal administrations
- Installation companies
- School administrations
- Real estate companies

Functions

The central communication unit

- detects the connected units through its automatic search run
- makes possible the direct access to the units via an operating station, connected either directly or via modem
- monitors the units and 2 potential-free digital inputs
- delivers alarms to a PC, either directly or via modem
- delivers alarms via modem to SMS receivers, fax machines*, pagers and e-mail receivers* (software version 2.0 or higher)
- has a time switch function for alarms

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

Type summary

<i>Type of unit</i>	<i>Type reference or part no.</i>
Central communication unit for 1 unit	OCI611.01
Central communication unit for 5 units	OCI611.05
Central communication unit for 16 units	OCI611.16
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 both the mains and low voltage side and the associated cable ties.

Equipment combinations

LPB/BSB units

Either LPB or BSB devices may be connected to the LPB/BSB interface for the central communication unit. Mixing the two is not allowed.

The following devices with LPB- or BSB connection are supported:

- Heating controllers RVL4..., RVP3..., RVP5..., RVA..., RVS...
- District heating controllers RVD2...
- Ventilation controllers RWI65...*
- Room units QAA...
- HMI AVS3...
- Extension modules AVS7...
- Boiler Management Units LMU... (only via LPB)

* no longer available

Software

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

- Directly or via modem to the RS-232 port
- Via service interface OCI700 to the LPB/BSB interface

LPB

The following pieces of documentation contain detailed information about the LPB:

<i>Type of document</i>	<i>Classification number</i>
Data Sheet "Basic System Data"	N2030
Data Sheet "Basic Engineering Data"	N2032
Basic Documentation "System Engineering" (OEM)	P2370

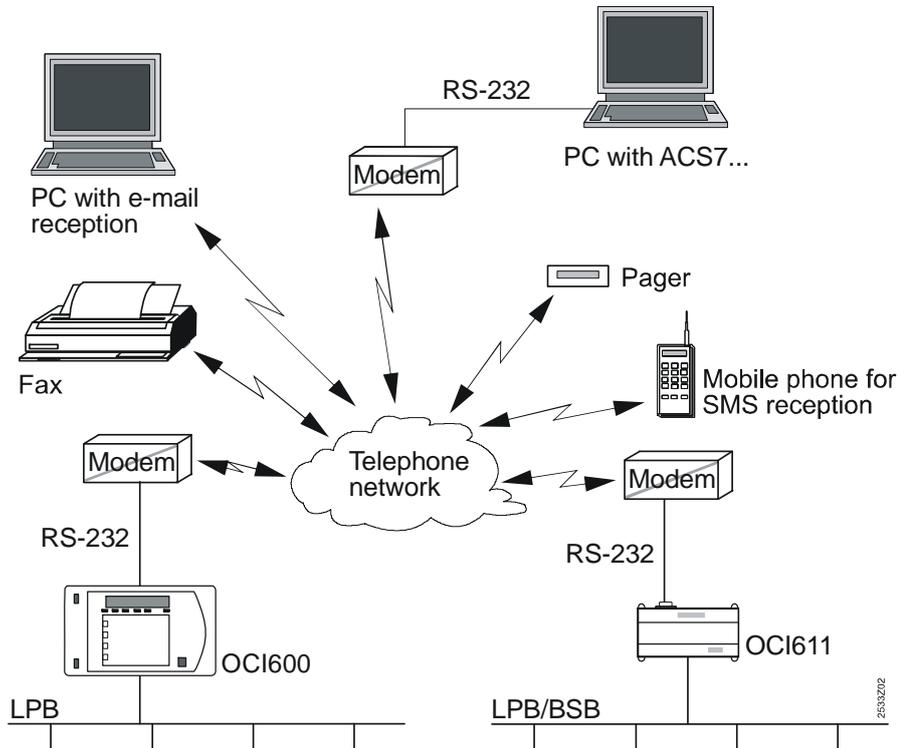
BSB

The user's guides for BSB devices contain more detailed information.

Communication

Telephone connection

In the case of a connection via the telephone network, the combinations permitted according to the table below must be considered.

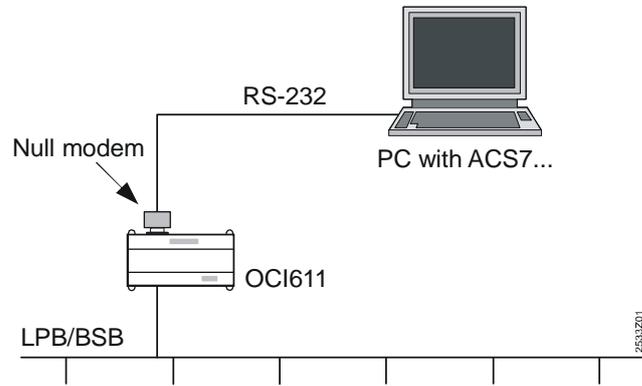


Modem and protocol support

<i>Alarm receiver</i>	<i>Protocol support of telephone provider</i>	<i>Type of modem required for the OCI611</i>
PC with ACS Alarm	No special requirements	Hayes-compatible fixed network, ISDN or GSM modem
SMS receiver	Fixed network provider that supports the UCP or TAP protocol	
SMS receiver	GSM telephone provider	GSM-compatible (e.g. Siemens TC35)
Fax machine	GSM telephone provider that supports the transfer of short messages to fax machines	
Pager	GSM telephone provider that supports the transfer of short messages to pagers	
E-mail receiver	GSM telephone provider that supports the transfer of short messages to e-mail receivers	

Telephone connection

In the case of a connection via the telephone network, a Hayes-compatible modem is required on both sides.



Null modem

9-pin null modem cable				9-pin link cable			
Female Terminal 1		Female Terminal 2		Female Terminal 1		Female 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 parameters of the central communication unit are set with the help of the ACS7... plant operating software in a PC locally connected to the RS-232 port or via the OCI700 service interface and the LPB/BSB.

Ports

The central communication unit has 2 ports:

- 9-pin RS-232 port (m)
- 2 terminals for the LPB/BSB connection

LPB/BSB Units

From the operating station, the following parameters of the connected units can be changed or displayed via the central communication unit:

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

On demand, the central communication unit searches for the units used by the system.

Digital inputs

The central communication unit has 2 digital inputs for the connection of potential-free contacts. The polarity of the contacts (normal/inverted) can be parameterized.

Typical input signals can be:

- Fault status signals from pumps
- Signals from thermal cutouts
- Signals from level switches for monitoring the oil level

Alarms

The central communication unit is able to detect the following types of fault:

- Status signals at the digital inputs
- Failures of connected units
- Fault status messages delivered by connected units
- Internal device faults

For each alarm source (central communication unit, digital inputs, LPB/BSB), it is possible to select whether its alarms shall be delivered only when they occur, or when they occur and disappear.

To indicate the plant status at regular intervals, a system report can be generated. Fault status messages can be delivered to a maximum of 2 alarm receivers. The different types of alarm receivers can be combined randomly.

The central communication unit offers the parameter setting choices required to pass short messages to fax machines, pagers or e-mail receivers (only with GSM modem). The precise settings depend on the relevant telephone provider and are prescribed by the provider.

When identified, the central communication unit delivers the alarms immediately to the alarm receivers.

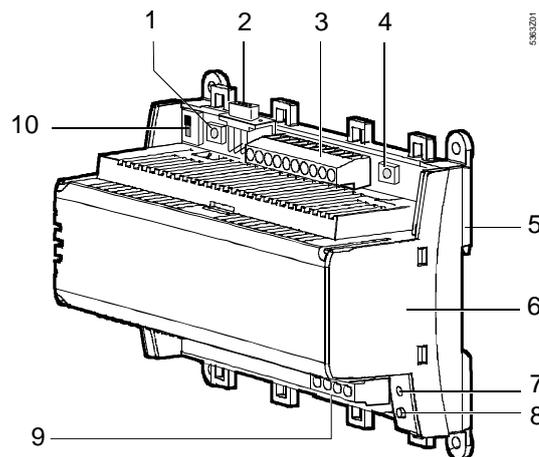
However, after communication via the telephone network, the central communication unit considers a call restriction of at least one minute which can be parameterized.

If the central communication unit cannot deliver an alarm, it repeats the alarm at the parameterized interval until it is successfully delivered.

Mechanical design

Makeup

The central communication unit consists of base, housing and printed circuit board with the lateral connection terminals (top: LPB/BSB and digital inputs; bottom: mains connection). The unit also features 2 LEDs, 2 buttons, one RS-232 selector and one RS-232 socket.



- | | | | |
|---|---------------------------------------------------|----|------------------------------|
| 1 | Modem reset button | 6 | Housing |
| 2 | RS-232 socket | 7 | LED for operation |
| 3 | Connection terminals (LPB/BSB and digital inputs) | 8 | LED for alarms |
| 4 | LPB/BSB button | 9 | Connection terminals (mains) |
| 5 | Base | 10 | RS-232 selector |

Terminal covers



Terminal covers are available as an accessory item. They protect the terminals against physical contact and dirt. The terminal covers are mandatory when the unit is mounted outside the control panel or cabinet. In addition, the terminal cover on the mains voltage side must be secured with the 2 cable ties provided. They are supplied together with the terminal covers.

The 2 LEDs are also visible when the terminal cover is fitted.

Connection terminals

The connection terminals are ready mounted. To avoid false wiring, the terminals for the mains voltage connection (AC 230 V) are clearly separated from the other terminals. All terminals are arranged such that, in normal situations, incoming and outgoing wires can be connected with no crossings.

LED for operation	The green LED indicates the operating state of the unit: <ul style="list-style-type: none"> • LED lit: mains voltage present • LED flashes: communication via LPB and/or RS-232, indication of the number of units
LED for alarms	The red LED shows the alarm status of the unit: <ul style="list-style-type: none"> • LED dark: no fault and no alarm present • LED lit: fault of one or several LPB units present • LED flashes: internal fault of the central communication unit or signal at the digital inputs
RS-232 selector	This selector is used to select whether the central communication unit is to be connected to the RS-232 via modem or directly to the PC.
LPB/BSB button	The LPB/BSB button serves for generating the device list and for indicating the number of units contained on the list.
Modem reset button	The modem reset button is used for reinitializing the modem. Then, the central communication unit establishes a connection to the parameterized alarm receivers and delivers a status 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 no protection against electric shock hazard is provided (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 may 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
- Good accessibility for service staff must be ensured
- The local regulations for installations must be complied with

Mounting instructions are printed on the unit's packaging.

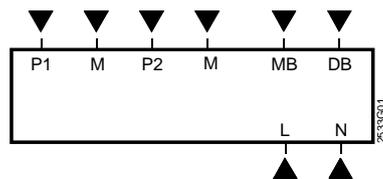
Commissioning notes

- The central communication unit must be commissioned by authorized staff
- The installation instructions supplied with the unit contain detailed information on commissioning
- The parameters of the central communication unit are set with the ACS7... plant operating software and a PC locally connected to the RS-232 port or via the OCI700 service interface and the LPB/BSB.
The parameters can be set either beforehand or on site
- The telephone provider and the modem must be selected prior to commissioning, depending on the type of alarm receiver in use
- If a GSM modem is used, it must be ensured that the SIM card
 - permits data communication
 - is not protected by a PIN code

Technical data

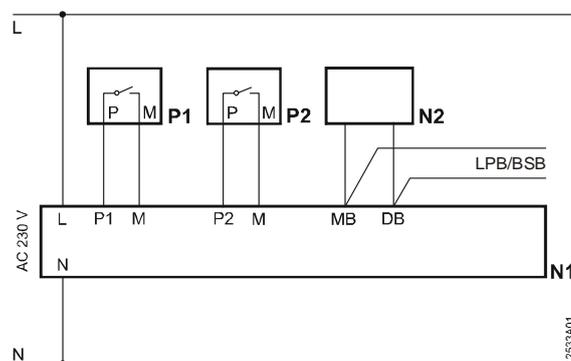
General unit data	Operating voltage	AC 230 V +/- 10 %	
	Nominal frequency	50/60 Hz	
	Power consumption	5 VA	
	Digital inputs (P1, P2)	for potential-free contacts	
	Perm. ambient temperature		
	Transport and storage	-25...+70 °C	
	Operation	0...50 °C	
	Perm. ambient humidity	class F to IEC 721	
	Weight	0.32 kg	
	Bus loading number E	50	
	Reserve of clock	12 h	
	Norms and standards	CE conformity to	
		EMC directives	2004/108/EC
		Low voltage directive	2006/95/EC
Product standard		EN 60950-1	
Electromagnetic compatibility			
Immunity		EN 61000-6-2	
Emissions	EN 61000-6-3		
Degrees of protection	Without terminal covers	IP 20 to EN 60 529	
	With terminal covers	IP 30 to EN 60 529	
	Safety class	II to EN 60 950-1	
LPB/BSB	Type	2-wire connection, not interchangeable, no bus power supply by the OCI611...	
	Baud rate	4800 Baud	
Protocols for the delivery of short messages (SMS)	Connection via fixed network provider	UCP (Universal Computer Protocol)	
	Connection via GSM telephone provider	AT+ (extended AT command set)	
RS-232 port	Norm	V.24/EIA 232D	
	Baud rate	max. 9600 Baud	
	Cable length	max. 15 m	
	Connector	9-pin, D-sub, male	

Connection terminals



DB	Data LPB/BSB
MB	Ground LPB/BSB
L, N	Operating voltage AC 230 V
M	Ground for P1, P2
P1, P2	Digital inputs

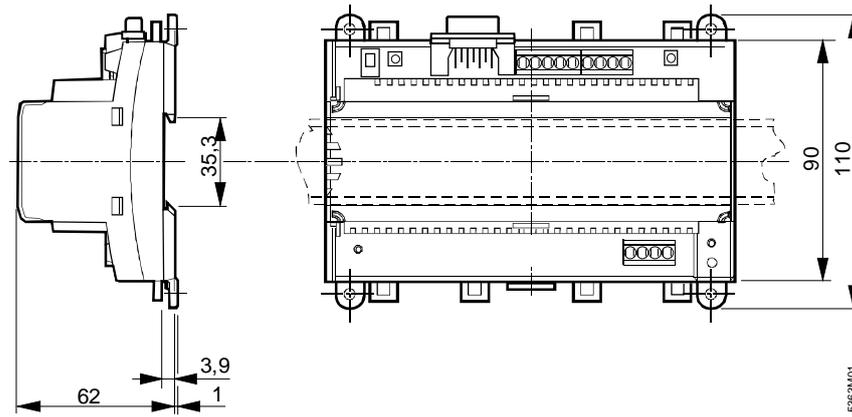
Connection diagram



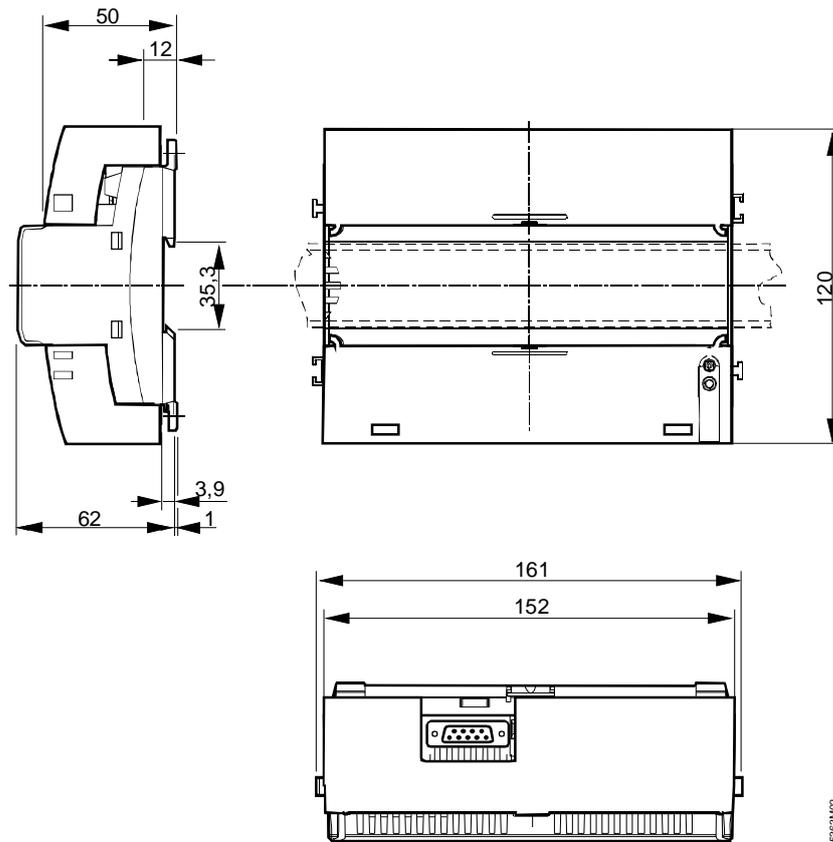
N1	Central communication unit OCI611...
N2	LPB/BSB unit (maximum 16, depending on the type of central communication unit used)
P1, P2	Devices with a potential-free contact output for delivering alarms

Dimensions

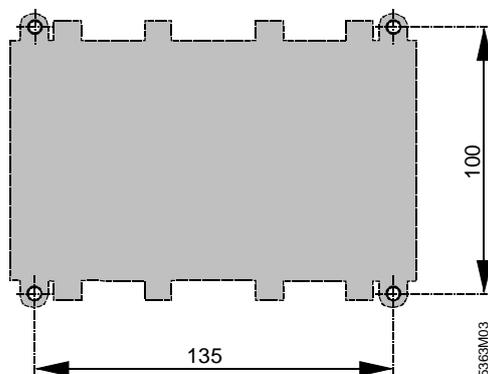
Without terminal covers



With terminal covers



Drilling template



Dimensions in mm