SIEMENS

3261


Climatix™

Room units with 2-wire interface

POL822.40/XXX
POL822.60/XXX

For use with: Climatix POL6XX

- **Measurement of the room temperature**
- **Keys for adjustment of the room temperature set point, the energy mode, fan control, time settings and etc.**
- **LCD display of room temperature, operating modes, energy modes, time, fan steps and weekday**
- **2-wire interface to the controller by using Climatix process bus (KNX)**
- **Adjustable commissioning and control parameters**
- **Semi-flush mounted on all European recessed installation boxes**
- **Programmable time scheduler function (POL822.60/XXX only)**

Communication Concept
POL6XX
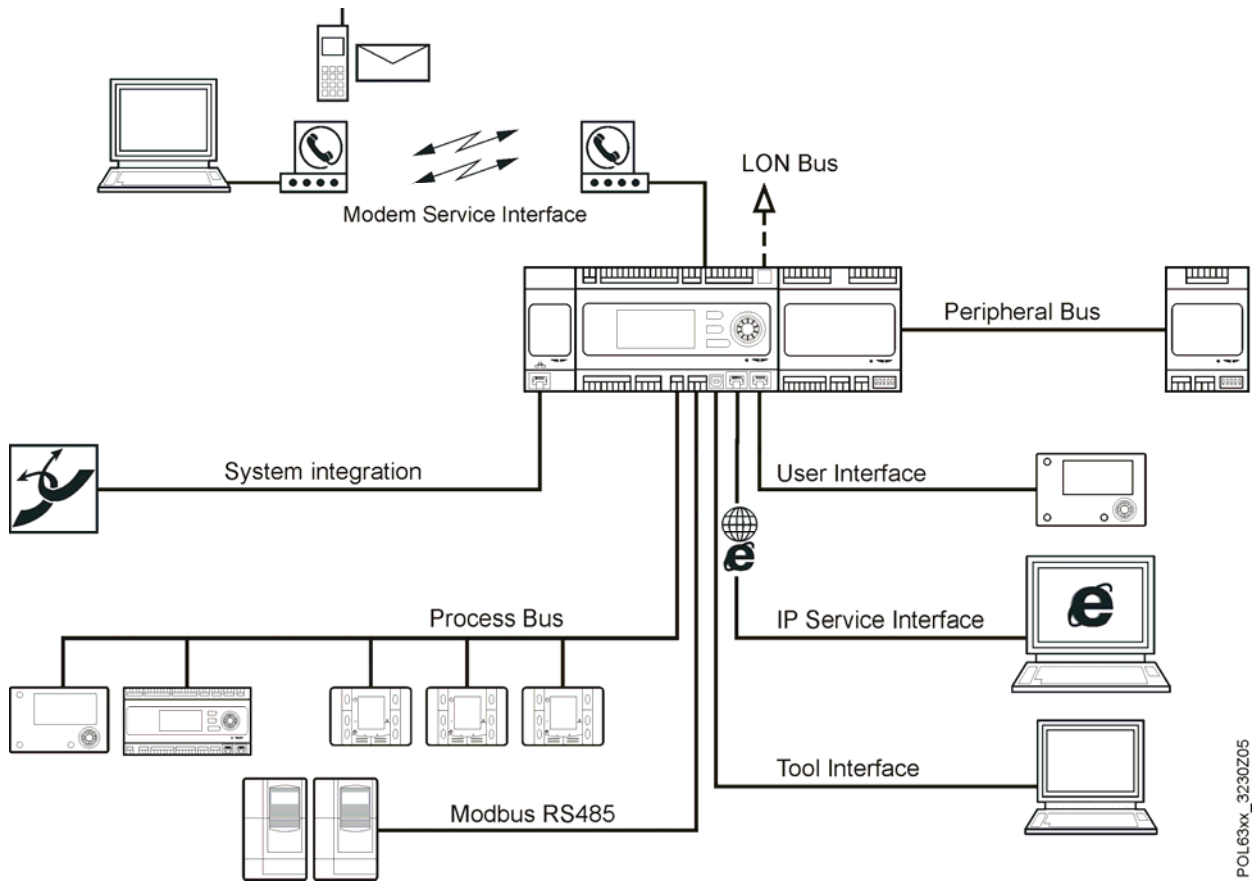
Application

As a room unit   The room unit is used in rooms controlled by an individual room control system, to measure the room temperature and operate a room controller.
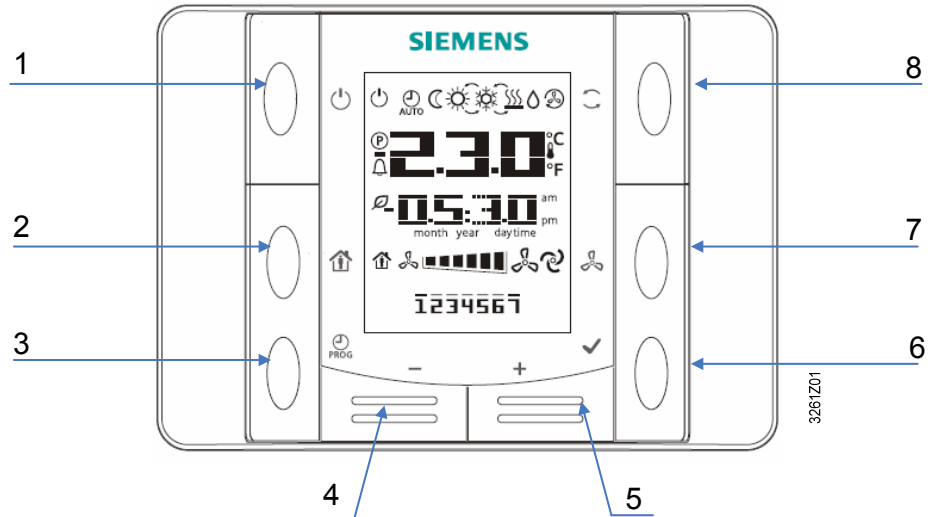
Mechanical design

The room unit is designed for semi-flush surface mounting with a recessed conduit box. The cable entry is through the rear of the unit. The unit comprises front housing and rear housing. These can be locked together and released by a snap-mechanism. Both the housings are plastic.

The housing accommodates a printed circuit board, room temperature sensor element, key buttons for mode selection, set-point adjustment, timer setting, fan speed selection and the LCD panel. The mounting plate accommodates the screw terminals for local bus connection.

Opening the housing Please refer to Mounting Instruction CB2M3261.

Operator controls

Legend

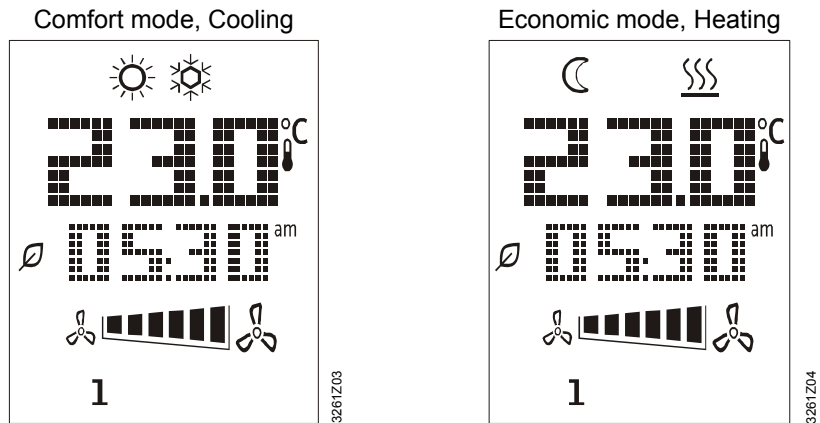| No.	Icon	Name	Functions
1	⏻	**ON/OFF**	Button for power on or power off
2	🏠	**Presence**	Button for entering/exiting a present mode which is programmed.
3	PROG	**Program**	Button for Time Scheduler, pressing this button allows date/time setting, while holding it allows schedule pro-gramming (*for POL822.60/XXX only*).
4	–	**Minus**	Button for set-point adjustment, each operation of the **Minus (–)** button reduces the set point by 0.1 °C/0.5 °F or 0.5 °C/1.0 °F which is defined in controller's setting.
5	+	**Plus**	Button for set-point adjustment, each operation of the **Plus (+)** button increases the set point by 0.1 °C/0.5 °F or 0.5 °C/1.0 °F which is defined in controller's setting.
6	✓	**OK**	Button for confirmation of date/time and scheduler set-tings (*for POL822.60/XXX only*).
7	🌀	**Fan**	Button for fan speed, the fan speed is set up in grades by controller. By pressing **Fan** button, the grades can be selected clockwise in a cyclic way. The current grade selected manually is indicated by the lit bar on the screen.
8	↻	**Mode**	Button for 3 energy modes: Auto, Comfort and Econ-omy. By pressing **Mode** button, the user can switch HMI-SG between the 3 modes in a cyclic way. The current mode manually selected is indicated by relevant symbol on the screen.

Display Panel

The display panel shows actual room temperature, set point, energy mode, fan speed, time, weekday and etc. The graph below is an overview of contents that may show on the display panel.
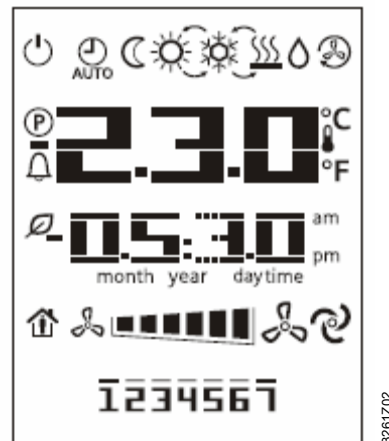
The following table lists the meanings each icon on the display panel represents:

No.	Contents	Meanings
1	**2.3.0** °C °F	Temperature area, it shows room temperature and set point in °C and °F, The temperature unit can be selected in service mode of room unit if relevant option was created by the controller. Please see examples as follows.
	23.5 °C	Room temperature in °C (resolution 0.1 °C)
	69.0 °F	Room temperature in °F (resolution 0.5 °F)
	03.5 °C	Set point, it can be adjusted and displayed in Centigrade or Fahrenheit; resolutin is 0.1°C/0.5°F or 0.5°C/1.0 °F.
2	05:30 am	Time
3	🌀 ▪■■■■■ 🌀	Fan speed
4	1234567	Weekday indicator (*for POL822.60/xxx only*)
5	⏻	ON/OFF
6	⏱ AUTO	Auto mode active
7	☾	Economy mode active
8	☼	Comfort mode active
9	❄	Cooling
10	♨	Heating
11	◊	Dry (free cool) sequence is active
12	🌀	Recirculation (fan only) sequence
13	↻	Automatic fan control
14	⌂	Present mode
15	⌀	Energy recovery
16	🔔	Alarm indicator
17	Ⓟ	Service mode

For example, the following contents will be displayed on LCD:

Comfort mode, Cooling   Economic mode, Heating

Setting date and time

By pressing **PROG** button, user will enter time and date setting. Pressing button **Plus** or **Minus** can change the variables those are blinking on the screen, while pressing **OK** button will confirm the changes and the cursor will move to the next variable automatically.

1. The first view is time setting, user can change 3 items: hour, minute and time format. The view is showed as follows:
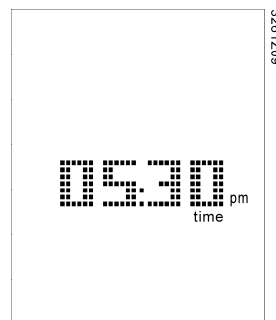
2. Firstly the hour area will be blinking; pressing button **Plus** or **Minus** can change the number of hour, pressing **OK** will confirm the changes and the cursor will move to the minute area automatically.

3. After the number of minute is confirmed, the whole time area will blink. Pressing button **Plus** or **Minus** will switch time format between 12-hour with AM/PM and 24-hour. It will shows as follows in 24-hour time format:
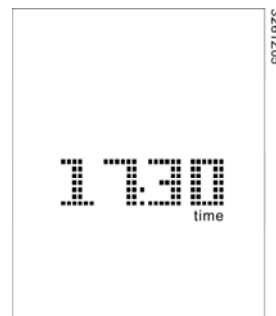
4. After the time format is confirmed, HMI-SG will jump to the view of year. It will shows as follows:

year

5. After the year is confirmed, it will jump to the view of month and day. The view is showed as follows:

month   day

6. After the month and day is confirmed, HMI-SG will return to the view of time. Press button **PROG** or there is no any operation for 1 minute, it will exit the setting.

Notes: There is no real clock in HMI-SG. Controller sends the exact time periodically to HMI-SG for synchronization.

Setting time scheduler (for 822.60 only)

HMI-SG is integrated with time scheduler function. The scheduler is working with 7 weekdays and 6 switches can be set up for each day. By setting up the switch, the user can set a time point and select one operation in **Auto** mode. The contents of operation are defined in controllers, and maximum 10 operations can be defined. After setting up the switch, the selected operation will be performed automatically at the time point.

The below is the process for setting up the time scheduler:

1. Holding **PROG** button, user enters time scheduler setting. In time scheduler, **PROG** button is used to cancel while **OK** to confirm.
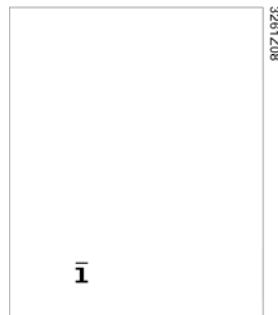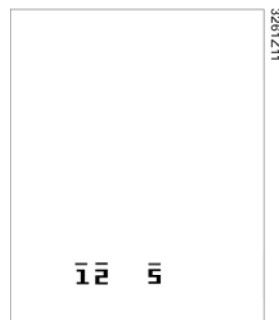

2. Pressing button **Plus** or **Minus**, the number of corresponding weekday will blink on screen. Holding button **Plus** or **Minus**, cursor will keep on moving on the weekdays in a cyclic way.

3. When cursor moves onto one weekday, pressing **OK** button will select this number or deselect it. When one weekday is selected, the day will be displayed on screen constantly. More than one weekday can be selected.
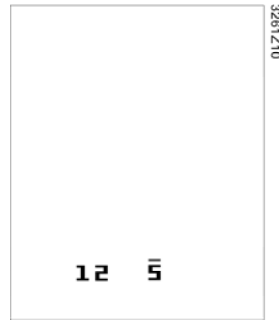
4. When cursor reaches the end of the week (i.e. 7) by pressing button **Plus** or the beginning of the week (i.e. 1) by pressing button **Minus**, all the selected weekdays will be displayed on screen with their indicators blinking. Pressing **OK** once will confirm them all.

5. After the confirmation of weekdays, pressing **Plus** or **Minus** again will jump to the following view. The first line is number of operation; the second line is time setting, the invalid time "--:--" is used to add a switch.

6. Press button **Plus** and **Minus** to set up time point and select an operation, and press **OK** to confirm the input. In any parts of time area, press **OK** when the cursor is located on "--" without a number is selected, the switch will be deleted, and HMI-SG will go back to viewing switch.
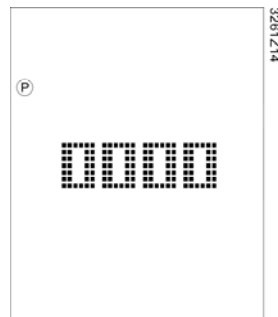
7. In scheduler setting, pressing **PROG** button will go back to the previous page. User can press this button to exit the setting step by step. HMI-SG will also exit time scheduler setting automatically if no operation was performed for 1 minute, and all changes made after pressing **OK** button will not be saved.
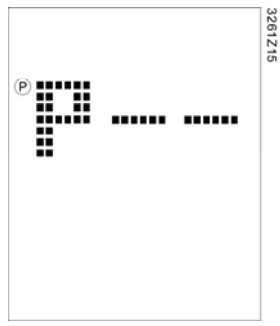
Parameters

Parameter initialization

After the HMI-SG is connected to the controller and the communication is set up, it will start parameter initialization. Parameter indicator **(P--)** will be displayed on screen for a while. After parameter initialization is completed, it will be in normal view. The parameter can be edited in service mode.

Access level

In service mode, there are 3 access level of parameter identified from C1 to C3:

- C1 Service engineers
- C2 OEM
- C3 Reserve

Notes: For each access level, a password can be assigned. The password consists of 4 digits and each with the range of 0 to 9.

Parameter privilege

There are also 2 parameter privilege settings:

- Read Only (RO) -- The parameter can be read but user cannot change the value.
- Read/Write (RW) -- The parameter is readable and changeable.

Group and plain list

Parameters are represented either in groups or as plain list.

The format of grouped parameter is: "Xnn". "X" is a letter as the leading group name and "nn" is the sequence number within the group. There are totally 10 groups in HMI-SG. For each group there are max 100 parameters.

The format of plain list is: "nnn". The "nnn" represents the sequence of parameters. In total, 1000 parameters (000~999) can be represented.

Edit parameter

1. By holding **Plus**, **Minus** and **MODE** button at the same time, HMI-SG will enter service mode, and the page of inputting password will be displayed. In service mode, **Power** button is used to cancel and **MODE** button to confirm.

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2. Press **Plus** or **Minus** to input password, press **Mode** to confirm it. If the password is correct, HMI-SG will show a new view for user to select group name.

Note: If no group exists for some reason or the password is wrong, "---" will be displayed again.

3. Press **Plus** or **Minus** to select a group name, press **Mode** to confirm it, and then the following view will show. The numbers of the first line represent parameter ID, and the number of the second line represent its value.
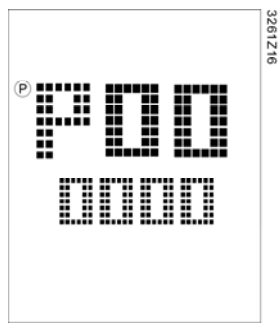

4. Press **Plus** or **Minus** to choose parameter ID, and press **Mode** to edit its value.

5. If the current access level have privilege RW, the value of parameter will blink and user can edit it; otherwise the parameter ID will keep blinking.

6. Press **Plus** or **Minus** to change the value. After confirming the value with **Mode** button, it will go back to viewing parameter ID.

Note: Pressing **Power** button will jump to the previous page, and no operation for 1 minute will exit service mode.

Diagnostic mode

By holding button **Power**, **MODE**, **Plus** and **Minus**, the HMI-SG will enter into diagnostic mode. This mode is used to view and edit local parameters. HMI-SG software version and build number will be shown when coming to diagnostic mode. The software version includes 3 digits and the build number 4 digits.
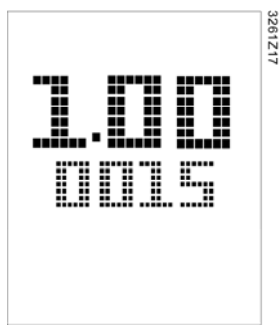
In diagnostic mode, **Power** button is used to cancel and **MODE** button to confirm. Press button **Power** will jump to the previous page, and no operation for 1 minute, it will exit the mode.

Edit local parameter

In diagnostic mode, pressing **Mode** button can view the following 9 local parameters. Some local parameters are read-only (RO), and others are read-writable (RW), the local parameter view will show as follows:
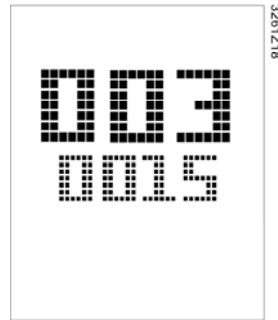
Notes:

The individual address of different HMI-SG on one network should not be identical. The viewing and editing process of parameter is the same as "**edit parameter**" in service mode.

No.	Local Parameters and Descriptions
001	**KNX connectivity (RO)** In KNX connectivity page, if there is any KNX frames received in the last 70 seconds, "**OK**" will be shown to indicate KNX bus is activated, otherwise, "**NG**" will be shown.
002	**KNX individual address – line address (RW) - (X.1.1)** The range of the address value is 0 to 15.
003	**KNX individual address – area address (RW) - (1.X.1)** The range of the address value is 0 to 15.
004	**KNX individual address – device address (RW) - (1.1.X)** The range of the address value is 1 to 252.
005	**KNX geographic address apartment (RW) (X.1.1)** The range of apartment number is from 1 to 126.
006	**KNX geographic address Room (RW)(1.X.1)** The range of room number is from 1 to 14.
007	**KNX geographic address Sub-zone (RW)(1.1.X)** The range of subzone number is from 1 to 15.
008	**Network failure detection Enable (RW)** This parameter enables or disables the function of network failure detection. If it is enabled and there is no any KNX frames received for 70 seconds, **"NET"** will display and blink on screen. Note: The net failure detect timeout is 30 seconds during parameter initialization.
009	**Auto individual address assigned enable (RW)** If the parameter is 0, HMI-SG will use the device address as fixed individual address. Otherwise, HMI-SG may change the device with DAA mechanism if the device address conflicts with other existing device on the KNX bus.

Display alarms

When controller sends an alarm to HMI-SG, alarm indicator (🔔) will be on and the alarm number should be displayed blinking on screen. When HMI-SG is informed by controller that the alarm is disappeared or the alarm is confirmed by user with pressing any button, it will return to the previous status.

Ordering

Example:

When ordering, please specify the quantity, product name and the type code and consider the minimum order quantity.

24   Room units   *POL822.40/XXX* or *POL822.60/XXX*

Engineering notes

The room unit receives its power from the connected controller via the 2-wire interface (low voltage, SELV). The room unit must be connected to the POL6XX controller with a unscreened two-core twisted pair cable.

Mounting instructions

- The device is suitable for semi-flush mounting with a recessed conduit box.
- The unit should not be mounted in recesses, shelving, behind curtains or doors or above or near direct heat sources.
- Avoid direct sun and draught.
- The conduit must be sealed on the device side, as currents of air in the conduit can affect the sensor reading.
- The admissible ambient conditions must be observed.
- Mounting instructions are enclosed with the device.

Installation

Local installation regulations must be observed.

Warning

The equipment is not protected against accidental connection to AC 230 V.

Commissioning

Start-up characteristics

After an interruption of the connection to the 2-wire interface, parameter initialization will restart. If one parameter can't receive response, the next request will delay for 5 seconds to avoid flood frame on the Bus.
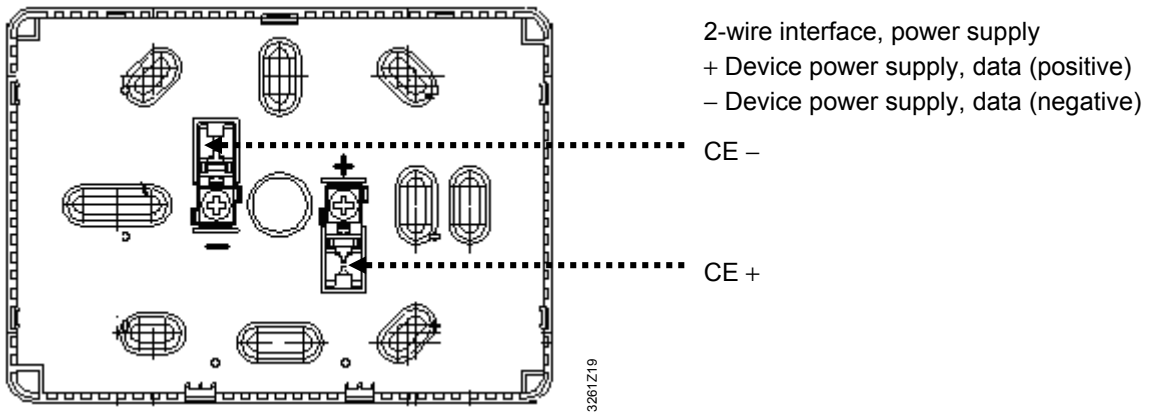
Disposal

**The device includes electrical and electronic components and must not be disposed of as domestic waste.
Current local legislations must be observed!**

Technical data

Supply voltage	Operating voltage	DC 21...30 V	
	The room unit receive its power from the con-nected controller, via the 2-wire interface (SELV, security extra low voltage according to HD384)		
	Power consumption (from controller)	Max. 0.31 VA	
Operating data	Measuring element	NTC resistance sensor	
	Measuring range	0...40 °C	
	Thermal time constant (sensor)	Approx 15 s	
	Measuring accuracy (5…30 °C)	± 1.0 K	
	Measuring accuracy (25 °C)	± 0.5 K	
Display	Type	Segment LCD	
	Functions displayed	Set point adjustment	
		– Operating mode	
		– Manually selected fan speed	
		– Control sequence	
		Time display	
		– Time and weekday setting (*POL822.60* only)	
		Parameter setting (only when selected)	
Interfaces	Type of interface between controller and room unit	2-wire interface KNX	
	Number of HMI-SG connected to a controller without additional power supply	6	
	Baud rate	9.6 kbps	
Cable connections	Connection terminals (screw terminals)	Solid or stranded conductors 0.8…2.5 mm²	
	Cable type	2-core, twisted pair, unscreened	
	Max. distance between 2 units	700 m	
Housing protection	Protection standard to EN 60529	IP 30	
Protection class	Insulation protection class	III	
Ambient conditions	IEC 721-3	Normal operation	Transport
	Ambient air conditions	Class 3K3	Class 2K3
	Temperature	+ 5...40 °C	– 25...70 °C
	Humidity	< 85% r.h.	< 93% r.h.
	Mechanical conditions	Class 3M1	Class 2M2
Industry standards	Electromagnetic compatibility		
	Immunity for residential, commercial and light-industrial environments	EN 61000-6-2:2007	
	Emission standard for residential, commercial and light-industrial environments	EN 61000-6-3:2007	
	CE conformity		
	Meet the requirements for CE marking as defined in EMC directive	2004/108/EC	
	Listings		
		UL916, UL873	
		CSA C22.2M205	
	Product safety		
	Automatic electrical controls	EN60730-1	
Dimensions	See "Dimensions"		
Color	Front housing, rear housing, key buttons	RAL9003 – signal white	
Weight	Excluding packaging	108 g	

Electrical connection

Terminal layout:

2-wire interface, power supply
+ Device power supply, data (positive)
− Device power supply, data (negative)

CE −

CE +

3261Z19

Wiring diagram:

The example below shows the room unit connected to POL6xx controller.

CE+ CE−   R1

CE− CE+   N1

RI: POL room unit
N1: POL controller

⟋ = Twisted pair

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Dimensions (mm)

3261M01

3261M02

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Subject to change

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