

pyrexix<sup>®</sup>



**PX-iP**

Operating Manual

Gateway

The original version of this instruction has been prepared in German in accordance with DIN EN 82079-1.

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# I Notes on the operating manual

We are glad that you have chosen our product and we would like to thank you for your trust!

This operating manual contains information and instructions for safe installation, commissioning, setup and maintenance, as well as proper operation of the PX-iP gateway. The operating manual is intended to increase the reliability and life cycle, and to help avoid hazards and downtime, or a loss of warranty claims. It is absolutely necessary that the operating manual is read and understood.

For a better readability, the PX-iP gateway is hereinafter referred to as "gateway" or "device" and the smoke alarm device with radio link is referred to as "smoke alarm device".

## I.1 Validity of this operating manual

The operating manual only applies for the gateway.

## I.2 Applicable documents

The gateway is used in combination with the manufacturer's smoke alarm devices with radio link (e.g., PX-1C). In addition to this operating manual, also observe:

- The Quick Reference Guide provided with the device
- The operating manual for the smoke alarm device
- FAQ for the web app under the menu item "[Help/FAQ](#)"
- New features of the web app under the menu item "[Help/Features](#)"

The operating manual of the PX-iP gateway is not provided in printed form with the device. The current version of this manual is available at:

[pyrexx.com/de/support/downloads](http://pyrexx.com/de/support/downloads)



- ▶ If you have questions about the product or require help with the installation, please contact our product support department by telephone at +49 30 8871 606 641. You can reach our product support department on working days during normal business hours.

### 1.3 Name plate and identification

The name plate of the gateway can be found on the underside of the device.



Fig. 1 Name plate (sample, information can deviate)

### 1.4 CE conformity

Pyrex GmbH declares that the PX-iP gateway is compliant with the fundamental requirements and other relevant provisions of the following directives:

- RED-Directive 2014/53/EU
- Regulation (EC) No 1907/2006 (REACH)
- Waste Electrical and Electronic Equipment Directive (disposal) 2012/19/EU
- Restriction on the use of certain hazardous substances in electrical and electronic equipment 2011/65/EU

The CE Declaration of Conformity is available from the manufacturer under the following reference number: k\_91659

## 1.5 Symbols used

Various markings and symbols are used in the text in the operating manual. These are explained below.

 Warning symbol in warning labels

 Additional information and guidelines

**(1)** Numbered action steps

▶ Symbol for an instruction or a required action

Result of an action

Problem associated with an action

• Symbol for a list

 Light signal of the signal LED

 Length of the signal tone or interval

 Alarm volume of a signal tone

## Symbols from the current web app

 Edit

 Main menu

## 1.6 Copyright

All rights are reserved, particularly the rights of duplication, distribution and translation. No part of this operating manual may be reproduced in any form, or processed, duplicated, or disseminated using electronic systems without written permission of Pyrex GmbH.

## 1.7 Limited warranty

When used and serviced as intended, Pyrex GmbH warrants a defect-free device only for the original purchaser of this product that was purchased either from Pyrex GmbH directly, or through an authorized reseller, for a period of 2 years from the date of purchase. The limited warranty is not transferable and does not apply to buyers who have purchased the device from a reseller who is not authorized by Pyrex GmbH. This also applies for online auctions, but is not limited thereto. Rights arising from statutory regulations remain unaffected by the limited warranty.

- ▶ Please keep your receipt as proof that the device has been purchased from Pyrex GmbH or from an authorized dealer; and as a proof of purchase date.

This receipt is mandatory for any warranty claims! The limited warranty will be granted only if the device is used in accordance with the operating manual. The limited warranty does not cover claims resulting from accidents, misuse, application errors, negligence, or the warranty exclusion criteria described below.

## 1.8 Warranty exclusion criteria

### Physical / mechanical damage

If the device has been damaged, e.g., the housing has been broken or the device has been opened, any warranty claim shall be forfeited. The same shall apply to subjecting the device to any form of force, which does not cause physical damage to the device, but does cause damage inside the housing (e.g., the electronics).

## **Contamination**

If the device is externally and / or internally contaminated by adhering substances (excessively contaminated), any warranty claim shall be forfeited. Paint and similar substances on the surface of the device and within the housing of the device shall be considered as contamination.

## **Moisture damage / corrosion**

If the device, and in particular its electronics, are damaged by moisture of any kind, any warranty claim shall be forfeited. Thus moisture is not only the exposure to fluid, but also regular, above-average exposure of the device to humidity (> 70%). Liquids and high humidity can damage the electronics of the device by causing corrosion.

## **Thermal damage**

If the device has been exposed temporarily or continuously to a temperature below 0° C or above 70° C, any warranty claim shall be forfeited.

## **Excessive rechargeable battery load**

The device's rechargeable battery is used for emergency power supply (e.g., during a power failure) and it can be recharged a limited number of times. Excessive device operation via this rechargeable battery and premature consumption of the limited number of charge cycles can cause any warranty claim to be forfeited.

Observe with the following before submitting a warranty claim:

- ▶ Check if at least one of the aforementioned warranty exclusion reasons is present.
- ▶ Bear in mind also that there are sufficient technical capabilities to determine, when submitting a warranty claim, whether the device has really been used as intended, and therefore if the warranty claim is justified or unjustified.

Pyrex GmbH expressly reserves the right to charge a person who makes a warranty claim although at least one of the aforementioned warranty exclusion reasons is present, for the costs associated with the necessary technical examination of the facts.

### **1.9 Disclaimer**

Except for the limited warranty described herein, Pyrex GmbH assumes no additional explicit or implicit liability under the applicable statutory provisions. This shall also extend to any liability in relation to tradeability and / or suitability for a particular purpose under any implied liability which nevertheless exists under the law; the after-sales services shall be limited to the duration of this warranty.

### **1.10 Limitation of liability**

Your rights are limited to the repair or replacement of this device as shipped. Pyrex GmbH shall accept no liability for any special, incidental or consequential damages, including, but not limited to, resulting loss of revenue, loss of profits, restrictions of the use of software /hardware, loss or recovery of data, cost of substitute equipment, downtime, damage to property and claims by third parties as a result of contractual, statutory or tort recovery claims arising out of warranty, regardless of any other warranty, limited or implied by the law, or in the event that the limited warranty shall not apply, the liability of Pyrex GmbH shall be limited to the purchase price of the device.

## 2 Safety instructions

### 2.1 Representation and structure of warning labels

The warning labels are action-oriented; they are structured and graded as follows:

 <b>CAUTION</b>
<b>Type and source of the risk!</b> Explanation about the type and source. ▶ Measures to avert the risk.
 <b>CAUTION</b>
Potential minor injuries, material or environmental damage.

### 2.2 Intended use

The gateway is designed for the following purposes:

- Communication with the manufacturer's smoke alarm devices (e.g., PX-1C) and relaying information (e.g., smoke alarm) to the user via the Internet
- Use for smoke alarm devices in private households and small, commercially used areas with typically occurring frequency of smoke alarms

Note the following when using the gateway:

- ▶ Only use the device with the power unit and power cable provided.
- ▶ Use the device only as intended and in a technically perfect condition.

## 2.3 Unintended use

The device must not be used for the following purposes:

- Communication with smoke alarm devices from another manufacturer
- Fire alarm system as specified in EN 54 and DIN 14675
- Testing of the alarm function by intentionally triggering alarms in excess of the afore-mentioned frequencies. If there are more than 3 smoke alarms per year, this can block the notification function of the gateway
- Monitoring rooms with foreseeable regular / frequently occurring smoke development
- Any use that is not expressly described as permitted in this operating manual



Exceptions to the above require a written agreement with the manufacturer.

## 2.4 General safety information

The general safety information describes all measures to ensure safety thematically and applies at all times.

### General information

Neither the gateway nor the smoke alarm devices connected to it directly transmit an alarm to an official entity that can provide help (fire brigade). The gateway is subject to strict quality controls during production. In addition, a function test is performed before delivery. Nevertheless, unexpected malfunctions can occur. The manufacturer is not responsible for timely forwarding of an alarm and accordingly accepts no liability if an alarm is not or forwarded or not promptly forwarded to the user (e.g., failure of the Internet connection).

## Data security

The device can communicate with smoke alarm devices and report information (e.g., smoke alarm) to the user via the Internet. Relative to data security, the manufacturer warrants the following:

- Your gateway sends data via the Internet with strong encryption and an individual key
- Personal data is treated with strict confidentiality by Pyrex Data GmbH
- All information concerning residential addresses, as well as positions of smoke alarm devices, is optional
- Forwarding of alarms to systems of third party providers is only possible if you make these settings yourself
- The web app does not process any data concerning the position of your smartphone, the gateway or the smoke alarm device
- On request, Pyrex product support will delete your data from its IT system

## Replacing the rechargeable battery

Under some circumstances you must replace the rechargeable battery, e.g., if the provided rechargeable battery is defective or if the charge cycles have been used up.

### CAUTION

#### **Injuries due to use of non-authorized rechargeable batteries!**

Rechargeable batteries that are not authorised by the manufacturer can explode or ignite. This can result in chemical burns and other burn injuries. It can lead to limitations in the functionality and total failure of the gateway. Guarantee and warranty claims can no longer be accepted.

- ▶ Only use the rechargeable batteries specified by the manufacturer (3.6 V, NiMH, AA-LSD-NTC).
- ▶ Please observe chapter 9.3 "Replacing the rechargeable battery" on page 47.

## External influences

External influences can cause malfunctions and damage to the device as well as the rechargeable battery.

Protect the device from:

- Moisture
- Cold
- Direct sunlight and excessive heat (damage to the rechargeable battery)
- Dust and fine dust
- Spiders and insect infestation
- Grease
- Nicotine and paint fumes
- Paint finishes (e.g., wall paint)
- Adhesives
- Contamination of any kind

## Immersion in water

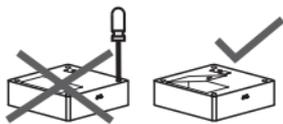
Immersion in water can damage the device.



- ▶ Do not immerse the device in water.

## Opening the device

The device is a closed system. Any tampering with the device, in addition to the loss of the limited warranty and statutory warranties, also means that the device cannot and must not be used as intended.



- ▶ Do not open the device.

Exception:

- ▶ See chapter 9.3 "Replacing the rechargeable battery" on page 47.

## Sensitive components

The device consists of sensitive components.



- ▶ Do not throw the device.
- ▶ Do not let the device fall.
- ▶ Do not exert any pressure on the device.

# 3 Overview

## 3.1 Function

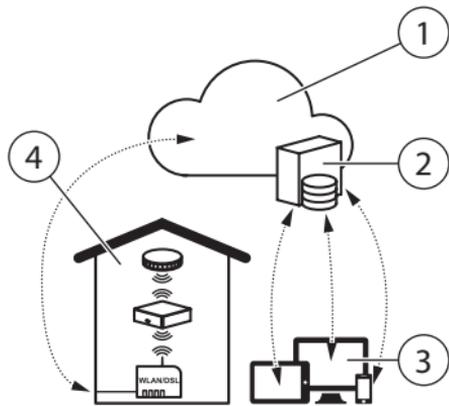


Fig. 2 Mode of operation

- 1 Internet
- 2 Server
- 3 Web app
- 4 "Apartment" with gateway, smoke alarm device and router

## Basic functions

The basic functions of the device are:

- Sending warnings (e.g., smoke alarm) of the connected smoke alarm devices, to the user via SMS or email
- Read-out and analysis of measured data of the connected smoke alarm devices

## Notification

In the event of a fire alarm, the gateway can relay a notification via SMS or email. As an option, you can order the call-on-alarm function in addition.

In the web app you can specify who receives the alarm (see chapter 4.13 "Notification" on page 22).

The gateway itself does not generate any alarm signal.

## 3.2 Controls

The gateway is controlled using buttons with signal LEDs. You must be able to see the light signal, even when the buttons are pressed.



### **IMPORTANT:**

Only press the buttons to the point that you feel a resistance, and keep them pressed in that position.

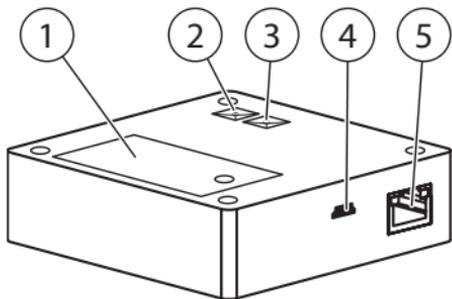


Fig. 3 Gateway controls

- 1 Battery compartment
- 2 Radio button (A) with signal LED
- 3 Gateway button (B) with signal LED
- 4 Port for power unit
- 5 LAN port

### **Battery compartment**

The installed energy reserve (rechargeable battery) is used as to protect the gateway from failure during an interruption of the power supply (e.g., power outage). In this case the energy supply is assured over a period of at least 2 hours.

When power supply via the grid connection is restored, the rechargeable battery will be recharged.

### **Radio button (A)**

The radio button (A) is used to set up and delete radio connections between gateway and smoke alarm devices.

### **Gateway button (B)**

The gateway button (B) has 3 functions:

- Mute in battery mode
- Switch-off after unplugging the power cable on the device
- Resetting the connection settings to the router

## Signal LEDs

The signal LEDs in the radio button (A) and gateway button (B) show status messages (e.g., at commissioning and set-up).

## Connection for the power unit

The mains connection is used for the energy supply of the gateway via power unit and power cable. By plugging in and unplugging the power cable on the device, you switch the gateway on or off (see chapter 4.1.6 "Switching off the gateway" on page 24).

**i** By unplugging the power unit from electrical outlet, you bring the gateway into battery operation.

## LAN port

The LAN port connects the gateway to the router via the LAN cable. It is strictly required for the installation.

# 4 Commissioning and setting up

The operating manual describes initial installation of the gateway in combination with smoke alarm devices when using the web app.

- ▶ **It is essential that you follow the action steps in the specified order for successful installation.**
- ▶ For other types of installation, e.g. installing the gateway in an existing radio group, see chapter 6 "Installation variants" on page 26.
- ▶ Observe the notes in the web app.
- ▶ Only use the power unit and power cable supplied with the device.
- ▶ Remove the protective film from the power unit and the gateway.

## 4.1 Requirements for commissioning

Prior to commissioning, ensure the following at the installation location:

- Internet connection
- Router with LAN port
- LAN or WI-FI connection

- For WI-FI: WLAN-SSID (WI-FI name), password and encryption type must be known
- At least one PX-IC smoke alarm device
- Gateway in default state (see chapter 5.1 “Gateway reset” on page 25)
- End device for web app operation: smartphone, tablet or PC with Internet browser

## 4.2 Open the web app

- ▶ Open the web app in the browser at [pyrex.com/app](http://pyrex.com/app).

## 4.3 Register as a user

If you do not already have access to the web app, set up your user account first:

- (1)** In the web app’s start-up screen, click “Register”.
- (2)** Enter your email address and choose a password.

 The email address will be your user name.

- (3)** Check the “I accept the Terms and Conditions” check box.

- (4)** Click “Complete registration”.

Registration successful.

## 4.4 Log-in

- (1)** On the start-up screen, enter your user name (email) and password.

- (2)** Click “Log in”.

Web app log-in successful.

Empty device list appears.

## 4.5 Adding a gateway (web app)

- (1)** Click on “add a device”.

- (2)** Assign the gateway to a room.

- (3)** Enter the serial number on the name plate of your gateway.

“Gateway” is shown as the type and “Pyrex” as the manufacturer.

- (4)** Enter the verification code on the name plate of your gateway.

**(5)** Click "Save".

- Gateway appears in the list of devices.

#### 4.6 Set up the gateway (web app)

**(1)** Click the gateway.

**(2)** Click "Radio group" title, then click the "Gateway functions" button.

- You are now in the "Gateway functions" menu.

**(3)** Set up the gateway.

- ▶ Click "Set up the gateway" and observe notes.
- ▶ Click "Continue".

**(4)** Even if you want to establish a WI-FI connection, connect the gateway to the router using a LAN cable.

**(5)** Select LAN or WI-FI connection.

**i** For a more stable installation, we recommend the LAN connection.

- ▶ For a WI-FI connection, enter the WI-FI parameters and click "Save".

#### 4.7 Connecting the gateway

**(1)** Connect plug with power cable and plug into power outlet.

**(2)** Connect power cable to gateway.



**(3)** As soon as the signal LED of the gateway button (B) starts flashing, click "Establish connection".

- Message: "The connection attempt is running. This can take up to 3 minutes."

**i** While the gateway is starting up the LEDs of the gateway button (B) and the radio button (A) become active in that order:

Gateway starts:



Gateway parameter query:



Normal operation:



- ✓ The gateway is connected to the server.

Radio group query:



- ✓ No radio group found in learning mode.
- ✓ Message: "The connection attempt was successful"
- (4)** Click "Installation complete".
- ✓ You are now in the room sketch.
- (5)** For a Wi-Fi connection, now remove the LAN cable and bring the gateway to the planned installation site.

## 4.8 Setting up the radio group and integrating the gateway

- i** The connection between smoke alarm devices and the gateway is set up directly on the devices (learning mode).

### Switch off the gateway

- (1)** Remove the USB cable from the gateway and disconnect the power supply from the gateway.
- ✓ The gateway sends a warning signal.
- (2)** Press the gateway button (B).
- ✓ Gateway is switched off.

### Activating the smoke alarm device

- i** **IMPORTANT:**
  - Do not activate any smoke alarm device until it is at the intended installation location.
  - Ensure a minimum distance of 3 m to the other smoke alarm devices and the gateway.

**(1)** Remove splint pin on the red activation button of the smoke alarm device.

**(2)** Push activation button flush.



Radio group query:



**(3)** Press the radio button on the smoke alarm device with the splint pin (activation backup) until the signal LED begins to light up, then release it.

Starting the learning mode on the smoke alarm device:



Radio group is in learning mode for 10 minutes.

**(4)** Add further smoke alarm devices one after another to the radio group. To do this, press in the activation buttons on the respective smoke alarm devices so that they are flush.

**i** With every newly added device to the radio group, the learning mode duration resets to a further 10 minutes.

### Integrating the gateway

After you have activated the desired number of smoke alarm devices (max. 14), you need to integrate the gateway into the radio group:

**(1)** Connect the USB cable to the gateway and restore the power supply to the gateway.

**i** While the gateway is starting up the LEDs of the gateway button (B) and the radio button (A) become active in that order:

Gateway starts:



Gateway parameter query:



Normal operation:



- ✓ The gateway is connected to the server.

- ✓ The gateway's learning mode starts automatically.

Starting learning mode on the gateway:



- i** After the gateway has been automatically integrated into the radio group, the radio button (A) on the gateway flashes intermittently indicating the already integrated radio group participants.

- ✓ The gateway has been successfully integrated into the radio group.
- (2)** Press the radio button (A) briefly to exit the learning mode.
- ✓ Radio group is in operation.

#### 4.9 Network scan

- (1)** Click the gateway icon.
- (2)** Click the "Radio group" title, then click the "Gateway functions" button.
- (3)** Click "Scan network".
- ✓ Message: "Network scan in progress"
- (4)** Wait until the network scan is complete.
- (5)** Click "Continue".
- ✓ You are now in the "Radio group" menu.
- ✓ Network scan complete.

#### 4.10 Assigning smoke alarm devices to rooms

- ▶ In the drop-down menu of each smoke alarm device, assign it to the corresponding room.

#### **i** IMPORTANT:

The 13-digit serial number of the device can be found under the cover of the smoke alarm device.

- The smoke alarm devices have been assigned to the rooms.

#### 4.11 Test signal

- (1)** Click the "Radio group" title, then click the "Gateway functions" button.
  - (2)** Click "Trigger test signal".
- Message: "Test signal in progress"



Short acoustic signal from all installed smoke alarm devices

#### 4.12 Measured data

- (1)** To view the measured data of a smoke alarm device, click the smoke alarm device in the "Radio group" menu.
  - (2)** Click the "Maintenance" title, then click the "Measured data" button.
- Measured data of the smoke alarm device is displayed.

#### 4.13 Notification

For the following events the web app sends notifications to the user via email or SMS:

- Smoke alarm:  
In addition to the email, an SMS can also be sent
- Malfunction (see chapter 8 "Troubleshooting" on page 34)
- Test requirement for smoke alarm devices and maintenance reminder

All notifications are always sent to the user who created the apartment in the web app. The email address and mobile telephone number can be changed in the web app.

To do so, proceed as follows:

- (1)** Click .
- (2)** Select "Settings".
- (3)** Click "User information" and in the drop-down menu, select either "Alerting (Telephone)" or "Alerting (E-Mail)".
- (4)** Click "Add mobile phone number" or "Add email address" and enter the desired email addresses or mobile phone numbers.

 Please note that mobile phone numbers must begin with an international area code (e.g. 0049).

- All of the stored recipients will be informed in case of an alarm.

#### 4.14 GSM alarming

 If there is a connection fault to the router, the gateway can send a smoke alarm, as long as GSM reception is available. This is established through a permanently installed SIM card from the manufacturer.

Check GSM reception at the gateway location, to ensure relay of notifications even if the WI-FI or LAN connection is interrupted. Proceed as follows:

- (1)** With a smartphone, check whether GSM reception exists at the installation site of the gateway.
- (2)** Change the location of the gateway if necessary.

## 4.15 Call-on-alarm

If there is a smoke alarm, the first mobile telephone number specified will be called and the participant informed with an automatic announcement.

To book the "Call-on-alarm" function, proceed as follows:

- (1)** Open the web app in the browser at [pyrexx.com/app](http://pyrexx.com/app).
  - (2)** Click on the "Shop" menu item and select "Call-on-alarm".
  - (3)** Book the "Call-on-alarm" function for 12 or 24 months.
- The call will be forwarded in case of an alarm.

## 4.16 Switching off the gateway

To switch off the gateway without resetting the gateway or the radio settings, proceed as follows:

- (1)** Remove the power cable from the gateway.



Cyclic acoustic signal on the gateway for 30 seconds

- (2)** Wait 30 seconds.  
or
- (3)** Briefly press gateway button (B).

- Gateway is switched off.
- With a delay of 10 minutes you will get the message "Connection to PX-iP lost".

**i** When it is switched off, no alarms will be forwarded, not even via GSM.

**i** When you reconnect the power cable, the gateway is placed in service again. You will receive an email stating "Gateway is again reachable".

## 5 Reset

In some situations you must execute a reset to restore the default state, e.g., for new installation of the radio group after a move.

### 5.1 Gateway reset

Prior to the reset, the gateway must be connected to the power supply.

#### (1) Start reset.

- ▶ Remove the power cable **from the gateway**.

 Cyclic acoustic signal on the gateway for 30 seconds



During this time, perform the following steps in the sequence specified:

#### (2) Reset radio module.

- ▶ Press radio button (A) on the gateway until it flashes, then release.



 Signal LED of radio button (A) "Off"

#### (3) Reset network.

- ▶ Press gateway button (B) until a long acoustic signal is emitted, then release.



- Gateway is switched off.

### 5.2 Smoke alarm device reset

In order to re-create the radio group after the gateway reset, also reset the smoke alarm devices.

#### (1) Pull out activation button.

- (2) Press and hold Testing / stop button for 2 to 3 seconds.

 Soft ticking for about 2 seconds

- (3) Press radio button with splint pin until it flashes, then release.



- The device is in its default state.

## 6 Installation variants

### 6.1 New installation

- ▶ Perform a new installation in accordance with chapter 4.8 "Setting up the radio group and integrating the gateway" on page 19.

### 6.2 Adding a smoke alarm device to a radio group

- (I)** Press the radio button (A) on the gateway or on any of the PX-IC devices until the signal LED lights up and hold until it goes out, and then release.



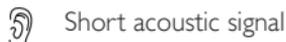
Starting the learning mode on the gateway or on one of the smoke alarm devices:



- The learning mode is active for 10 minutes, the signal LEDs on all installed members of the radio group are flashing.

**(2)** Adding additional smoke alarm devices.

- ▶ Remove splint pin on the red activation button of the smoke alarm device.
- ▶ Press the activation button so that it is flush.



Short acoustic signal

Radio group query:



- ▶ Add further smoke alarm devices one after another to the radio group. To do this, press in the activation buttons on the respective smoke alarm devices so that they are flush.

-  With every newly added device to the radio group, the learning mode duration resets to a further 10 minutes.
- ▶ To terminate the learning mode, briefly press the radio button on the gateway or smoke alarm device.
  - ☑ The smoke alarm device has been successfully integrated into the radio group.
  - ☑ The changes get visible when you perform a network scan in the web app.

### 6.3 Gateway-to-gateway switch / alarm forwarding

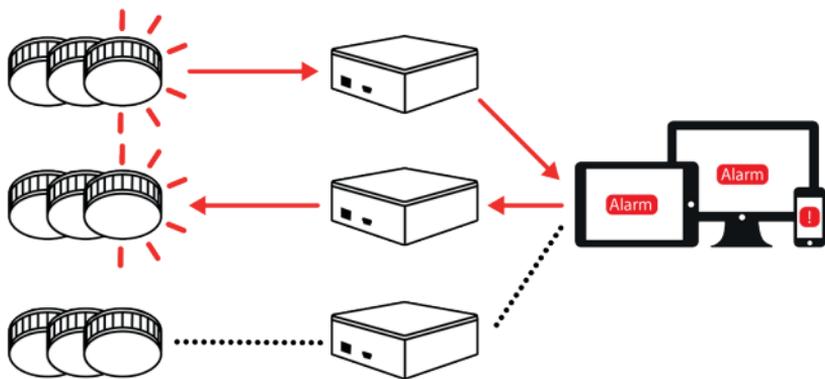


Fig. 4 Gateway-to-gateway switch / alarm forwarding

A gateway-to-gateway switch enables the forwarding of alarms to other gateways. A gateway that receives an alarm sends the alarm to the smoke alarm device in its radio group and triggers them.



Gateways can be connected with one another in one user account. It is not possible to have overarching alarm forwarding to other user accounts.

The settings for the gateway-to-gateway switch are made directly in the web app, so that it is not necessary to perform any manual actions on the device.

There are several options for gateway-to-gateway switching in the web app. Selected functions always refer to the gateway on which the functions are activated.

### **Incoming alarms**

Alarms are received by the gateway and only trigger the smoke alarm devices of the (shared) radio group.

### **Outgoing alarms**

Alarms are sent to other gateways, these react differently according to their settings.

## **Residential buildings**

In residential buildings, the alarms are only forwarded within an apartment that has been created.

You can choose from the following options:

- No forwarding
- Outgoing and incoming
- Only outgoing
- Only incoming
- Outgoing / incoming in the residential building
- Incoming in the residential building

## **6.4 Large dwelling units**

The web app creates 6 typical living areas for each new apartment. For large dwelling units (e.g., kindergartens, dormitories) we recommend adding all rooms in the web app beforehand.

## 6.5 Shared radio groups and subgroups

The gateway supports radio networks with shared radio groups and subgroups (see operating manual of the smoke alarm devices). It is always installed as a member of the main group so that it is connected with all smoke alarm devices.

## 6.6 Changing the connection to the router

After installation you can also select between LAN connection to the router and WI-FI connection to the router.



### **IMPORTANT:**

To ensure that the radio group remains intact, DO NOT execute radio module reset.

- (1)** Remove the power cable from the gateway.
- (2)** Only execute the network reset (see chapter 5.1 “Gateway reset” on page 25).

- (3)** Set up the gateway (see chapter 4.6 “Set up the gateway (web app)” on page 18).

Router connection is changed.



A network scan (see chapter 4.9 “Network scan” on page 21) is not required, however to be certain, it should be executed.

# 7 Notifications

## 7.1 Smoke alarm

A smoke alarm is sent via email, and SMS if desired. In the web app it is possible to flexibly specify who will be notified (see chapter 4.13 "Notification" on page 22). While a smoke alarm is active, the web app shows the development of the temperature values in the dwelling unit.

- ▶ In every case, clarify and eliminate the cause of the smoke alarm.

## 7.2 Smoke alarm has ended

You get this message if the conditions for a smoke alarm are no longer present.

## 7.3 Connection to gateway lost

You will receive this fault message as soon as the Internet connection of the gateway is interrupted for more than 10 minutes. Possible causes are described in chapter 8.6 "The gateway is no longer connected to the server" on page 40.

## 7.4 Connection to gateway restored

You get this notification if, after the connection has been lost (see chapter 7.3 "Connection to gateway lost" on page 31), normal operation is restored.

## 7.5 Gateway in battery operation

You get this fault message if the power supply to the power unit is interrupted. In this case there is an emergency supply via the rechargeable battery for a period of approx. 2 hours.

All functions of the gateway remain available in battery operation.

- ☒ Gateway goes into battery operation.



Regular signal over  
1 minute on the gateway

- ☒ Gateway button (B) flashes as long as battery operation continues.



 (B)

Possible causes:

- Gateway power plug unplugged
- Power outage
- Power unit or cable defective

Remedy:

- ▶ Restore the power supply within 2 hours or replace the rechargeable battery (see chapter 9.3 “Replacing the rechargeable battery” on page 47).
- ▶ Replace power unit or cable if necessary.

## 7.6 Gateway in network operation again

You receive this notification if, after battery operation (see chapter 7.5 “Gateway in battery operation” on page 31) of the gateway, the power supply is restored.

## 7.7 Connection to smoke alarm device lost



Connection problems to smoke alarm devices are detected with the aid of a network scan (see chapter 4.9 “Network scan” on page 21).



If the connection to a smoke alarm device is interrupted, you will get an email within the automatic test interval.

Possible causes:

- Installation location of an existing smoke alarm device has been changed
- Smoke alarm devices that have been added have been mounted too far away from, or too close to existing smoke alarm devices
- The initial installation was faulty, this is particularly possible for installations without a gateway

- Other sources of radio interference impair the radio communication
- Smoke alarm devices are defective or switched off

Remedy:

- ▶ See chapter 8.7 "Error in the radio connection (smoke alarm device reachability)" on page 43.

## 7.8 Maintenance reminder

When the last maintenance of the smoke alarm device of an apartment is 11 months in the past, a reminder is sent to the person who created the dwelling unit. This message will be repeated monthly until the executed maintenance has been documented in the web app.

## 7.9 Status of the smoke alarm devices

Within the automatic test interval the gateway reads out the status of the smoke alarm devices. The result is sent per email to the user of the web app.

This status message alerts the user when at least one of the smoke alarm devices provides measured data that soon thereafter will result in acoustic fault messages (battery status, contamination).

Regardless of the above, the reminder message concerning the maintenance occurs in accordance with DIN 14676.

## 8 Troubleshooting

Problems during commissioning and set-up are indicated by error messages in the web app and LED signals on the devices.

Faults during operation are communicated through appropriate messages (see chapter 7 “Notifications” on page 31).

### 8.1 Commissioning in the wrong sequence

- Gateway cannot connect to the Internet.
- Network scan cannot be executed.
- Maintenance data cannot be read out.

Possible causes:

- Gateway was not added first in the web app
- The prerequisite for network scan is that the gateway must be correctly connected
- Maintenance data will only be read out if a network scan was executed beforehand

Remedy:

- ▶ Place the gateway in service again and pay attention to the sequence of installation steps (see chapter 4 “Commissioning and setting up” on page 16).

### 8.2 Error when adding the gateway

- Gateway cannot be created in the web app.

Possible causes:

#### **Invalid serial number or verification code**

- Serial number or verification code entered incorrectly

Remedy:

- ▶ Check entry and correct if necessary.

#### **Gateway of another manufacturer**

- Serial number belongs to a gateway from another manufacturer

Remedy:

- ▶ Install the gateway with the app of the third-party manufacturer.

### Gateway not in default state

- Gateway has already been put into operation once before

Remedy:

- (1)** Return gateway to default state (see chapter 5 "Reset" on page 25).
- (2)** Contact product support if necessary (see chapter 11.2 "Product support" on page 48).

### 8.3 Error when connecting the gateway

- Gateway button (B) flashes at regular intervals.



- A connection cannot be established.
- An error message appears in the web app.

Possible causes:

- No LAN connection or faulty LAN connection
- Router has no connection to the Internet
- WI-FI settings are not correct or complete

Remedy:

- (1)** Return gateway to default state (see chapter 5.1 "Gateway reset" on page 25).
- (2)** Establish LAN connection between gateway and router. (Also for WI-FI installation!)
- (3)** Check whether the router actually has a connection to the Internet.
  - ▶ Use a smart phone or PC to call up a website via the router.
- (4)** For a WI-FI connection, ensure that WLAN-SSID, password and encryption type are correct.

- (5) Set up the gateway again (see chapter 4.7 “Connecting the gateway” on page 18).
- (6) After establishing a WI-FI connection the LAN cable can be removed.

#### 8.4 Smoke alarm device cannot be integrated in the radio group

- No connection between smoke alarm device and a radio group.
- Radio LED on the smoke alarm device lights up red.



Possible causes:

##### Smoke alarm device incorrectly positioned

- Smoke alarm device is installed too close or too far away from other smoke alarm devices

Remedy:

- (1) Return smoke alarm device to default state (see chapter 5.2 “Smoke alarm device reset” on page 25).
- (2) Correct the position of the smoke alarm device.
- (3) Activating the smoke alarm device.
- Smoke alarm device in learning mode.



##### Radio group no longer in learning mode

- Learning mode will be switched off after 10 minutes

Remedy:

- ▶ Return the radio group to learning mode.
- ▶ Use the splint pin (activation backup) to press the radio button on the smoke alarm device or the radio button (A) on the gateway until the signal LED lights up and then goes off again, and then release.

- ☑ Smoke alarm device in learning mode.



- ☑ Gateway in learning mode.



### Maximum number of smoke alarm devices

- Radio group already contains the maximum number of smoke alarm devices (max. 15)

Remedy:

- ▶ Reinstall radio group with a lower number of smoke alarm devices.

### Smoke alarm device not in default state

- A reset was not executed on the smoke alarm device prior to activation
- ☒ Radio LED on the smoke alarm device briefly lights up green.



Remedy:

- (1) Reset of the smoke alarm device in question (see chapter 5.2 "Smoke alarm device reset" on page 25).
- (2) Reactive smoke alarm device.

### Smoke alarm device from another manufacturer

- Smoke alarm device is an identical type from a different manufacturer

Remedy:

- ▶ Ensure that the manufacturer on the name plate is identical for all devices of the radio group.

### Smoke alarm device is defective

Remedy:

- (1) Check whether a different smoke alarm device in the same position changes to learning mode.
- (2) Replace defective smoke alarm device.

- (3)** Install a new smoke alarm device (see chapter 6.2 “Adding a smoke alarm device to a radio group” on page 26).

**i** Please also notice the detailed steps in the operating manual for the smoke alarm device.

### 8.5 Gateway cannot be integrated in the radio group

- No connection between gateway and an existing radio group.
- Radio button (A) is illuminated red.



Possible causes:

#### Gateway is incorrectly positioned

- Gateway is installed too close or too far away from other smoke alarm devices

Remedy:

- (I)** Reset the radio module on the gateway (see chapter 5.1 “Gateway reset” on page 25, step 2).

- (2)** Correct the position of the gateway.  
**(3)** Reconnect the gateway, with power.

#### Radio group no longer in learning mode

- Learning mode will be switched off after 10 minutes

Remedy:

- ▶ Return the radio group to learning mode.
- ▶ Use the splint pin (activation backup) to press the radio button on the smoke alarm device or the radio button (A) on the gateway until the signal LED lights up and then goes off again, and then release.

- Smoke alarm device in learning mode.



- Gateway in learning mode.



## Maximum number of smoke alarm devices

- Radio group already contains the maximum number of smoke alarm devices

Remedy:

- ▶ Reinstall radio group with a lower number of smoke alarm devices.

## Gateway not in default state

- Radio module in gateway was not in default state
- Radio button (A) is briefly illuminated green.



Remedy:

- (1) Execute reset of the radio module in the gateway.
- (2) Reset the radio module on the gateway (see chapter 5.1 "Gateway reset" on page 25, step 2).
- (3) Connect the USB cable to the gateway and restore the power supply to the gateway.

- When the gateway starts up, the LEDs for the gateway button (B) and the radio button (A) become consecutively active:

Gateway starts:



Gateway parameter query:



Normal operation:



- The gateway is connected to the server.
- The gateway's learning mode starts automatically.

## Gateway is defective

Remedy:

- (1) If the previously mentioned measures do not work, contact product support (see chapter 11.2 "Product support" on page 48).

- (2)** Replace defective gateway (see chapter 4 “Commissioning and setting up” on page 16).
- (3)** Dispose of old device (see chapter 10.1 “Disposal” on page 48).

## 8.6 The gateway is no longer connected to the server

- An error message appears in the web app.
- Procedure (network scan, test signal, firmware update, read maintenance data) cannot be successfully concluded, because the gateway does not respond.

Possible causes:

### Gateway is switched off

- Gateway is switched off.  
 Signal LED gateway button (B) "Off"

Remedy:

- ▶ Connect the USB cable to the gateway and restore the power supply to the gateway.
- Power supply to the gateway has been re-established.

### Gateway damaged

- Gateway shows possible external damage (see chapter 2.4 “General safety information” on page 10)

Remedy:

- (1)** Replace damaged gateway.
- (2)** Reinstall the chapter 4.8 “Setting up the radio group and integrating the gateway” on page 19 replacement device accordingly.
- (3)** Dispose of old device (see chapter 10.1 “Disposal” on page 48).

## Gateway without grid power

- ☒ Gateway is switched off.
  -  Signal LED gateway button (B) "Off"
- Power outage
- Network power plug is unplugged and no emergency reserve (rechargeable battery of the gateway is dead or defective)

Remedy:

- ▶ Connect the USB cable to the gateway and restore the power supply to the gateway.
  - ▶ Replace rechargeable battery if necessary (see chapter 9.3 "Replacing the rechargeable battery" on page 47).
- ☒ Power supply to the gateway has been re-established.

## Connection failure in the gateway network

- ☒ Gateway button (B) flashes at regular intervals.



- Internet outage
- Router defective or without grid power

Remedy:

- (1)** With other devices, check whether an Internet connection exists.
  - ▶ Inform Internet provider if necessary.
- (2)** Check Internet connection of the router.
- (3)** Restore power supply.
- (4)** Restart router.
  - ▶ Replace router if necessary.

## WI-FI connection to the router is faulty

- WI-FI error, e.g., after a power outage or due to changed WI-FI settings

Remedy:

- (1) Check configuration of the router.
- (2) Set up gateway connection again (see chapter 4.6 "Set up the gateway (web app)" on page 18).

## LAN connection to the router is faulty

- ☒ Gateway button (B) flashes at regular intervals.



- LAN cable not plugged in correctly or defective

Remedy:

- (1) Check plug connection of the LAN cable.
- (2) Check LAN cable and replace if necessary.
- (3) Set up gateway connection again (see chapter 4.6 "Set up the gateway (web app)" on page 18).

## Gateway malfunction

- ☒ Gateway malfunction, in spite of excluding the possibility of interruption of communication or energy supply.

- Network function fault
- Gateway is defective

Remedy:

- (1) Switch off gateway (see chapter 4.16 "Switching off the gateway" on page 24) and reconnect.
- (2) If the error persists, reset the network.
  - ▶ Remove the power cable from the gateway.

 Cyclic acoustic signal on the gateway for 30 seconds



- ▶ Press gateway button (B) until a longer acoustic signal is emitted, then release.



- ☑ Network reset has been performed.

**i** If the long tone does not sound, see chapter 8.8 “Error at gateway reset” on page 45.

- ▶ Reconnect gateway (see chapter 4.7 “Connecting the gateway” on page 18).
- (3)** If the error persists, reset and re-initialize all smoke alarm devices and the gateway (see chapter 5 “Reset” on page 25).
- (4)** If the previously mentioned measures do not work, contact product support (see chapter 11.2 “Product support” on page 48).

## 8.7 Error in the radio connection (smoke alarm device reachability)

- ☒ Procedure (network scan, test signal, firmware update, read maintenance data) is concluded with an error message.
- ☒ A wrong response or no response from specific smoke alarm devices or radio groups.

Possible causes:

### Temporary radio fault

- Interference due to other radio-based devices

Remedy:

- ▶ Repeat network scan (see chapter 4.9 “Network scan” on page 21).

### **Smoke alarm device switched off**

Remedy:

- (1)** Switch on the smoke alarm device (see operating manual for the smoke alarm devices).
- (2)** Repeat network scan (see chapter 4.9 "Network scan" on page 21).

### **Smoke alarm device is defective**

Remedy:

- (1)** Procure a replacement device.
- (2)** Bring the radio group into learning mode and add replacement device (see chapter 6.2 "Adding a smoke alarm device to a radio group" on page 26).

or

- (1)** Reset and set-up the radio group again with replacement device.
- (2)** Repeat network scan (see chapter 4.9 "Network scan" on page 21).

- (3)** Dispose of old device (see chapter 10.1 "Disposal" on page 48).

### **Not with the smoke alarm device connected to the radio group**

- A smoke alarm device has indeed been installed but not integrated in the radio group

Remedy:

- (1)** Put the radio group into learning mode and add smoke alarm devices (see chapter 6.2 "Adding a smoke alarm device to a radio group" on page 26).
- (2)** Repeat network scan (see chapter 4.9 "Network scan" on page 21).

## Smoke alarm device incorrectly positioned

- Excessive or insufficient distance between smoke alarm devices

Remedy:

- (1)** Return all of the smoke alarm devices to the default state and reset the radio module on the gateway (see chapter 5.1 “Gateway reset” on page 25, step 2).
- (2)** Mount smoke alarm devices with the prescribed relative distance.
- (3)** Reconnect gateway (see chapter 4.7 “Connecting the gateway” on page 18).
- (4)** Set up radio group again (see chapter 4.8 “Setting up the radio group and integrating the gateway” on page 19).
- (5)** After finishing the new installation, perform a network scan (see chapter 4.9 “Network scan” on page 21).

## 8.8 Error at gateway reset

- ☒ There is no long acoustic signal at network reset.

Remedy:

- (1)** Reconnect power cable.
  - (2)** If necessary repeat gateway reset several times.
-  Ensure that you maintain the pressure point of the gateway button (B).

# 9 Maintenance

## 9.1 Service

You must perform visual and function tests at regular intervals.

### Firmware update

When a new version of the firmware is available, a pop-up will automatically appear when starting the web app.

- ▶ To perform an update, click "Firmware update" in the "Gateway functions" menu.

### Visual inspection and function check

Perform a visual inspection once a month. Ensure that:

- The power cable and the power unit are undamaged and connected
- The router is undamaged and connected
- The radio button (A) on the gateway is illuminated green
- The gateway button (B) on the gateway is illuminated green and flashes every 10 seconds

### CAUTION

#### **Reduced battery life due to network scans being triggered too frequently!**

Radio functions of the gateway, such as network scan or test signal, reduce the battery service life of the smoke alarm devices.

- ▶ Only perform a network scan when necessary or after changing the installation.

## 9.2 Cleaning

Observe the following when cleaning:

- ▶ Clean with care, e.g., with a damp cloth.
- ▶ Do not press the radio button (A) or the gateway button (B) by mistake.

### 9.3 Replacing the rechargeable battery

#### CAUTION

##### **Injuries due to use of non-authorized rechargeable batteries!**

Rechargeable batteries that are not authorised by the manufacturer can explode or ignite. This can result in chemical burns and other burn injuries. It can lead to limitations in the functionality and total failure of the gateway. Guarantee and warranty claims can no longer be accepted.

- ▶ Only use the rechargeable batteries specified by the manufacturer (3.6 V, NiMH, AA-LSD-NTC).

 The replacement batteries prescribed by the manufacturer can be ordered from the manufacturer (see chapter 11 "Accessories, spare parts and service" on page 48).

To change the rechargeable battery in the gateway, proceed as follows:

- (1)** Open the battery compartment with a suitable screwdriver.
  - (2)** Take note of how the rechargeable battery is positioned in the battery compartment.
  - (3)** First disconnect the plug connection to the gateway by pulling it gently.
  - (4)** Carefully lift the rechargeable battery out of the battery compartment.
  - (5)** Carefully insert the new rechargeable battery into the battery compartment in the same position as before.
    - ▶ Ensure that the connection cable is not stretched or pinched.
  - (6)** Connect the rechargeable battery connection cable to the gateway using the plug connector.
  - (7)** Put the battery compartment lid back on and screw it tight.
- The rechargeable battery has been successfully replaced.

# 10 Decommissioning

## 10.1 Disposal

This product should never be placed in domestic waste according to the German Electrical and Electronic Devices Act (ElektroG).

- ▶ Return the device to be disposed of to the manufacturer for further utilization, or hand it over to your local waste disposal company.
- ▶ Note that improper disposal can harm the environment.



# 11 Accessories, spare parts and service

## 11.1 Accessories and spare parts

- Power cable
- Power unit
- Spare rechargeable battery for gateway (can be purchased from the manufacturer)
- Smoke alarm device with radio link PX-1C

## 11.2 Product support

Pyrex GmbH  
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Germany

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To reach our product support please contact [support@pyrex.com](mailto:support@pyrex.com) or use the contact form in the web app.

You can find explanatory videos about our products at [pyrex.com/en/support/media](http://pyrex.com/en/support/media).

# 12 Glossary

## **Radio network**

The total number of shared radio groups and subgroups in the connection with a gateway.

## **Learning mode**

The learning mode is the state in which it is possible to add new devices into an existing radio group.

## **Network scan**

The network scan scans all members of a radio network and allocates the devices to the gateway. In this process, it queries the measured data of the connected smoke alarm device:

- Temperature
- Contamination
- Battery level
- Signal level

The measured data are regularly and automatically updated after the network scan.

## I3 Technical data

Prerequisite for operation	Internet, WI-FI or LAN
Use	With the manufacturer's smoke alarm device with radio link (e.g., PX-1C).
Emergency power supply / duration	3.6 V NiMH AA-LSD-NTC, interchangeable / at least 2 hours
Power supply	5 V, 1 A USB power unit
32-bit processor	32-bit, SMD technology
Optimum storage temperature	5 to 35° C, <70 % rel. humidity
Protection class	IP 40
Colour	White
Material	ABS
Dimensions (L x W x H)	10 x 10 x 3.6 cm
Weight	210 g net 470 g gross weight (as delivered)
Operation	Browser, web app
Update capability	Via WI-FI and LAN

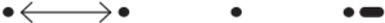
Radio networking	Frequency: 868.3 MHz, ISM-band, WI-FI, GSM
Data encryption	AES256
Maximum number of networked nodes per group:	15 (including PX-iP)
Maximum number of connectable PX-IC Radio Smoke Alarm Devices	14
Radio range	400 m ( $\pm$ 10 %) on open transmission field

# 14 Alarm and alert tones

## Alarm or alert tones

Description	Alarm volume	Interval length	Interval
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## Alert tone – commissioning and setup

Power cable unplugged from gateway	 Moderately loud	30 seconds	 2 seconds, lastly, 1 second continuous tone
Power plug removed or Power outage	 Moderately loud	60 seconds	 1 second, Start can take up to 2 minutes.
Network reset successful	 Moderately loud	No interval	 1 second continuous tone



## Legal notice

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Revision of the brochure 2018-09,  
Subject to change