

# Operating Manual



Smoke Alarm Device with Radio Link

# PX-1C

[www.pyrexXsmokealarms.co.uk](http://www.pyrexXsmokealarms.co.uk)



## 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 assembly, commissioning, installation and maintenance, as well as proper operation of the smoke alarm device with radio link.

The instruction 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-IC smoke alarm device with radio link is hereinafter referred to as "smoke alarm device" or "device".

### I.1 Scope of operating manual

The operating manual apply only to the smoke alarm device with radio link of the PX-IC type.

### I.2 Name plate and identification

The name plate of the smoke alarm device is located below the testing / stop button (smoke alarm device cover).



Fig. 1 Name plate (example, specifications may differ)

### I.3 Conformity

The smoke alarm device of the PX-IC type is certified according to:

- vfdB guideline I4/01 (Q)
- 1999/5/EC (R&TTE Directive)
- Regulation (EU) No 305/2011 according to EN 14604:2005/AC:2008



14  
1772-CPR-140141  
Variant:V3-Q

### Conformity according to 1999/5/EC (R&TTE Directive)

The Pyrex Technologies GmbH declares that the smoke alarm device is compliant with the fundamental requirements and other relevant provisions of the 1999/5/EC Directive. The Declaration of Conformity is available at the following address: [pyrex.com/de/support/download](http://pyrex.com/de/support/download)

### Conformity in accordance with EN 14604:2005/AC:2008 (CE)

The smoke alarm device is certified as a construction product in accordance with Construction Products Regulation (EU) No 305/2011 according to EN 14604:2005/AC:2008 (CE). The production is monitored for unchanged compliance with legal and normative requirements by periodic and independent checks. The declaration of performance is available at the following reference number at the manufacturer: k\_76680

### 1.4 Safekeeping of the instruction manual

The instruction manual is an important component of the smoke alarm device, and must always be kept at hand near the installation location.

### 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

### (3) Numbered action steps

- ▶ Symbol for an instruction or a required act
- ☑ Result of an action
- Symbol for a list

### 1.6 Copyright

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

### 1.7 Limited warranty

Pyrex Technologies GmbH warrants a defect-free device only for the original purchaser of this product that was purchased either at Pyrex Technologies GmbH directly, or through an authorized reseller, for a period of 12 years from the date of purchase, when used and serviced as intended. Thereby the limited warranty covers the entire device for 10 years. For the remaining two years, the limited warranty shall not extend to the reserve / power supply to the electronics of the device, whereas the material / workmanship errors are exempt from this restriction.

The limited warranty is not transferable and does not apply to buyers who have purchased the product from a reseller who is not authorized by Pyrex Technologies GmbH. This also applies to online auctions, but is not limited thereto. Rights arising from legislation remain unaffected by the limited warranty.

- ▶ Please keep your receipt as a proof that the device has been purchased from an authorized reseller, 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

### Soiling

Dust deposits and insect infestation in the measuring system of the device are not covered under warranty. Also smoke alarms or warning signals associated with such forms of soiling do not indicate a malfunction of the device, but only show a lack of care, cleaning and maintenance thereof.

### 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 brute force, which does not cause a physical damage to the device, but causes a damage inside the housing (e.g. of electronics).

### Contamination

If the device is externally and / or internally contaminated by deposits (excessively

contaminated), any warranty claim shall be forfeited. Paint and similar substances on the surface of the device and within the housing / measurement system of the device shall be deemed contamination. Decoration / painting limited to the release testing / stop button (smoke alarm device cover) shall be excluded from a warranty exclusion!

In addition, build-up of fire residues (e.g. soot), as well as nicotine and grease deposits, which have caused a readily detectable discolouration of the device, are categorized as contamination, which means the loss of any warranty claims. Especially nicotine and grease condensates do not only gather on the outer surface of the device, but also accumulate on the surfaces of the optical measuring components. Particularly there, the adhesion of condensates leads to premature deterioration of the optical properties of the measurement components, which the device can compensate through autonomous recalibration only within its physical limits.

### Moisture damage / corrosion

If the device, and in particular its electronics, are damaged by moisture of any kind, any warranty claim shall be forfeited. Moisture thus is not only the exposure to fluid, but also regular, above-average exposure of the device to humidity (> 70%). Due to the effect of excessive humidity (e.g. steam / roasting fumes), the battery of the device is discharged above average, and the battery life is shortened considerably. Also, liquids and high humidity can damage the electronics of the device by causing corrosion.

### Thermal damage

If the device has been exposed temporarily or permanently to a temperature below 0° C or above 70° C, any warranty claim shall be forfeited. In particular, no warranty shall be given for devices that were exposed to high temperatures and fumes in a fire. Damage to the device as a result of frost / cold, as well as heat damage, shall not be covered by the warranty.

### Excessive load on the battery

If the smoke alarm device is operated in the vicinity of other electronic, radio-based devices, while the minimum distance between such devices and the smoke alarm device named in this manual is exceeded regularly or permanently, this can lead to premature battery consumption. Such improper use of the device shall forfeit any warranty claim.

Excessive load on the battery capacity through frequent triggering of alarm tones (more than once a month), or repeated changing / setting up of a radio group more than four times in 12 years, and repeated triggering of a radio group alarm signal more than four times in 12 years, for more than 15 minutes each time, may lead to premature consumption of the battery capacity due to the related battery consumption and to the loss of any warranty claims

- ▶ Check if at least one of the aforementioned warranty exclusion reasons is present before making a warranty claim.
- ▶ Keep 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 Technologies 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 with the costs associated with the necessary technical examination of the facts!

### 1.9 Disclaimer

Except for the limited warranty described herein, Pyrex Technologies GmbH assumes no additional explicit or implicit liability under the applicable statutory provisions. This shall also extend to any liability

in relation to tradability 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 Technologies 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 Technologies GmbH shall be limited to the purchase price of the device.

## 2 Safety instructions

### 2.1 Representation and display of warning labels

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



### 2.2 Intended use

The device may only be used for the following purposes:

- Smoke detection and heat warning in private households and residential real estate including alarm forwarding via radio link
- Smoke alarm device indoors
- Radio-group or shared radio group of smoke alarm devices
- Use in leisure accommodation vehicles (e.g. caravans)

Note the following when using the smoke alarm device:

- ▶ Use the device only as intended and in a technically perfect condition
- ▶ For special settings contact the manufacturer

### 2.3 Unintended use

The device must not be used for the following purposes:

- Heat detection in terms of EN 54-5
- Wireless smoke detection / fire detection in terms of EN 54-25
- Any use that is not expressly described as permitted in this operating manual

### 2.4 Maximum useful life

The smoke alarm device will reach the end of its useful life at the latest after 12 years of usage according to the intended purpose. The 12 years mentioned here are divided into a typical service life of 10 years, and in a service life / power reserve of up to further 2 years.

- ▶ Replace the device at the end of this useful life.

### 2.5 General safety information

The basic safety information describe all measures to ensure safety thematically and apply at any time.

#### General information

Smoke alarm devices provide early warning of smoke or fire, so that the residents of the house and the apartment are able to react on time, in particular, to leave the premises immediately and to alert the fire brigade. Smoke alarm devices do not prevent fires, nor do they fight fires automatically. Smoke alarms do not directly alert the fire brigade or other emergency service. Smoke alarm devices are not used to prevent fire damage and they cannot in fact prevent it, especially when no one is present in case of fire. The smoke alarm devices are subject to strict quality controls during the manufacture. In addition, a functional test is performed before delivery. Nevertheless, unexpected malfunctions may occur.

### What to do if there is a fire?

- (1) Keep calm.
- (2) Warn all co-residents.
- (3) Help children, disabled, elderly and sick people.
- (4) Close all windows and doors behind you.
- (5) Leave the house immediately.
- (6) Do not use lifts.
- (7) Alert the fire brigade.

### Battery replacement

A battery change is not necessary and is technically impossible, as the device must not be opened.



### External influences

External influences can cause malfunction and damage to the device and the battery. Protect the device from:

- Moisture
- Cold
- Direct sunlight or excessive heat (damage to the battery)
- Dust and particulate matter
- Spiders and insect infestation
- Grease
- Nicotine and paint fumes
- Coatings (e.g., wall paint)
- Adhesives
- Dirt of any kind

### Immersion in water

Immersion in water can cause damage to the device.



- ▶ Do not immerse the device in water.

### Open 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 may not and must not be used as intended.



- ▶ Do not open the device.

As an exception, you must remove the testing / stop button (cover of the smoke alarm device) to identify the device or for decorating.

### Decorating

Through covert smoke intake lamella, the smoke detection and heat warning function can be impaired or prevented. No reliable alarm can be triggered.

- ▶ Decorate only the testing / stop button (cover of the smoke alarm device) and keep the smoke intake lamella free.

### Renovation work

During renovation, construction and grinding work, malfunction or damage to the device may occur due to the development of dust.

- ▶ Remove the device prior to renovations, or protect it with a suitable cover.



No reliable alarm can be triggered while the device is covered.

- ▶ Mount the device after completion of the renovation work on the original usage location, or remove the cover.

## 3 Overview

### 3.1 Function

The basic functions of the device are:

- Heat warning function
- Smoke detection
- Connecting up to 15 devices in radio groups
- Connecting up to 14 radio groups in a shared radio group
- Alarm forwarding to all devices in a radio group
- Alarm forwarding from a radio group to shared radio group
- Repeater function



If you need specific, complex and possibly cascading connection functions for the alarm forwarding, please contact the manufacturer (see chapter 10 „Accessories, spare parts and service“ on page 73)

### 3.2 Controls

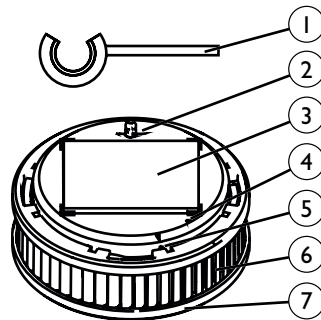


Fig. 2 Controls

- 1 Splint pin (activation backup)
- 2 Activation button
- 3 Magnetic carrier
- 4 Signal LED
- 5 Radio button
- 6 Smoke intake lamella
- 7 Testing / stop button (smoke alarm device cover)

### Splint pin (activation backup)

The splint pin (activation backup) is used during the transport of the device to protect against accidental activation.

After commissioning the device, the splint pin (activation backup) is used as a tool for operating the radio button, and must be kept readily available in the vicinity of the device.

### Activation button

The activation button is used to turn the device on and off.

### Magnetic carrier

The magnetic carrier is used for fastening the device.

### Signal LED

The signal LED displays results and intermediate results during start-up of devices and setting up of radio groups or shared radio groups.

### Radio button

The radio button is used for setting up wireless connections between the devices.

### Testing / stop button (smoke alarm device cover)

The testing / stop button (smoke alarm device cover) is used for self-test, for correct wireless connection between multiple devices, or between devices of one radio group.

The testing / stop button (smoke alarm device cover) can be actuated to interrupt or stop the alarm and alert tones.

### Smoke intake lamella

Through the smoke intake lamella, fire smoke reaches the interior of the device and can be detected by sensors.

## 4 Location selection

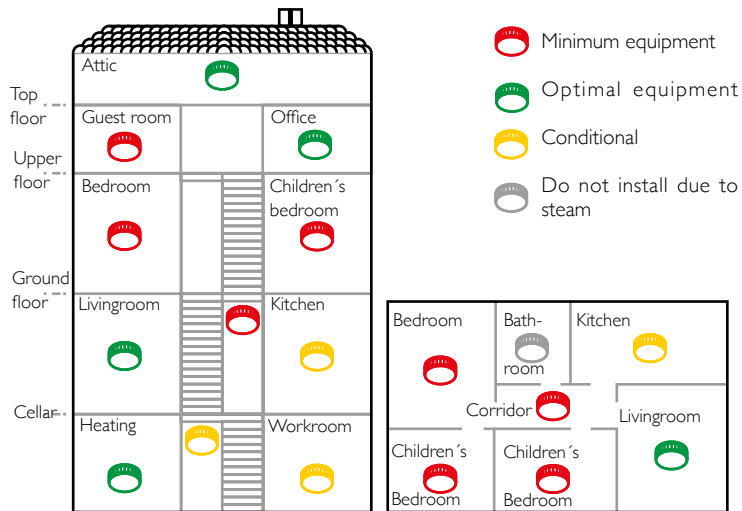


Fig. 3 Location selection



The use of smoke alarm devices is governed by DIN 14676.

### Minimum equipment

- Bedrooms
- Children's bedroom
- Guest room
- Corridors that serve as escape routes
- Stairwells of apartment buildings

### Optimal equipment

- All residential and hobby rooms
- Heating and work spaces
- Office or workroom
- Cellar
- Attic

### Conditional equipment

- In kitchens, smoke alarm devices must only be installed when false alarms (e.g., caused by steam) are excluded

### Not recommended

- Bathrooms are excluded from the installation of smoke alarm devices due to the high development of steam

- Exception: bathrooms with washing machines and cabinets

### 4.1 Area to be monitored

Use a device if at least one of the following applies:

- Monitoring area less than 60 m<sup>2</sup>, and ceiling height of less than 6 m
- Ceiling panels (height lower than 20 cm) with joists (ceiling surface less than 36 m<sup>2</sup>)

Use additional equipment if at least one of the following applies:

- Monitoring area greater than 60 m<sup>2</sup>
- Ceiling height greater than 6 m
- High partial walls
- Separating pieces of furniture
- Platform / gallery (area greater than 16 m<sup>2</sup>, at least 2 m long and wide)
- Ceiling panels (height greater than 20 cm) with joists (ceiling surface more than 36 m<sup>2</sup>)



In rooms with beams (e.g., wooden beams), the number and arrangement of the devices depends on the height of the joists and the surface formed by the beams.

### 4.2 Requirements for the monitoring area

When selecting the appropriate monitoring area, observe the following:

- ▶ Position the device centrally on the ceiling
- ▶ Position master or shared radio group at a central location (e.g., in the corridor)
- ▶ Maintain an approximately equal distance between the master and other devices of a radio group
- ▶ Maintain an approximately equal distance between the shared radio group and other radio groups
- ▶ Install additional equipment if required
- ▶ Keep a minimum distance of 2 m to electronic, radio-based devices (e.g., wireless routers)
- ▶ Keep a minimum distance of 3 m to other radio smoke alarm device

- ▶ Keep a minimum distance of 6 m to a potential fire source
- ▶ Keep a minimum distance of 0.5 m to surrounding walls, furniture and lamps

### Rooms with straight ceilings (slope angle < 20°)

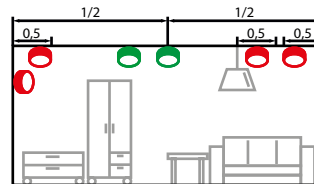


Fig. 4 Rooms with straight ceilings

Allowed

Not allowed

Note the following for locations in rooms with straight ceilings:

- ▶ Select the highest mounting point on the ceilings
- ▶ Mount the devices horizontally to the mounting surface

### Narrow spaces or corridors (1-3 m wide)

In addition, observe the following for locations in narrow rooms or corridors that are 1-3 m wide:

- ▶ Keep the distance of less than 7.5 m between the front surface (end of the corridor) and the first device
- ▶ Keep the distance of less than 15 m between two devices

### Narrow spaces or corridors (< 1 m wide)

In addition, observe the following for locations in narrow rooms or corridors that are less than 1 m wide:

- ▶ Observe chapter „Narrow spaces or corridors (1-3 m wide)“ on page 54
- ▶ Keep distance from surrounding walls (exception: distance less than 0.5 m)

### Narrow spaces or corridors (floor space < 6 m<sup>2</sup>)

An exception are narrow rooms and corridors that have an area of less than 6 m<sup>2</sup>. In this installation scenario, you can mount the devices on the wall.

- ▶ Position the device centrally on the longer wall
- ▶ Mount the device 0.5 m below the ceiling

### Rooms with slanted ceilings (slope angle > 20°)

In rooms with ceiling slope angles of more than 20° to the horizontal position, heat pads can form in the ceiling peak that impede the smoke entering the smoke alarm device.

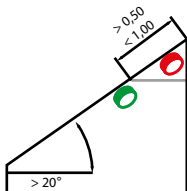


Fig. 5 Rooms with slanted ceilings

- Allowed
- Not allowed

Note the following for locations in rooms with slanted ceilings:

- ▶ Mount devices at least 0.5 m and at a maximum of 1 m away from the ceiling peak

### 4.3 Rooms with slanted and horizontal ceilings

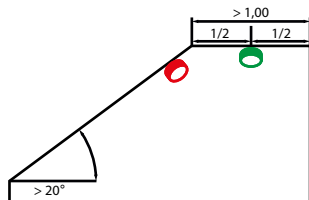


Fig. 6 Straight mounting surface at least 1 m long and 1 m wide

- Allowed
- Not allowed

Note the following for straight mounting surface less than 1 m long and 1 m wide:

- ▶ Observe chapter „Rooms with straight ceilings (slope angle < 20°)“ on page 53)

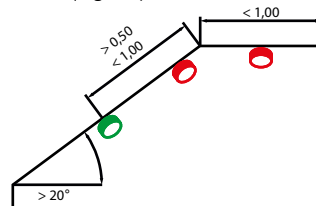


Fig. 7 Straight mounting surface less than 1 m long and 1 m wide

- Allowed
- Not allowed

Note the following for straight mounting surface less than 1 m long and 1 m wide:

- ▶ Observe chapter „Rooms with slanted ceilings (slope angle > 20°)“ on page 54)

## 5 Installation

### 4.4 Rooms with a platform or gallery

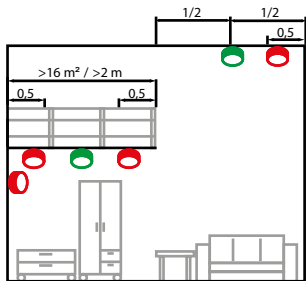




Abb. 8 Rooms with a platform or gallery

-  Allowed
-  Not allowed

Note the following for rooms with platforms or galleries (area greater than 16 m<sup>2</sup>, at least 2 m long and wide):

- ▶ Mount additional device under the platform / gallery.

The device is held by a magnetic carrier at the installation location. The magnetic carrier can be mounted by gluing or drilling.

**⚠ CAUTION**

**Possible property damage!**  
Using other fastening material (not enclosed) or wrong conditions at the installation location can cause the device to fall down.

- ▶ Use only the supplied mounting material (adhesive pad or screws /dowels).
- ▶ Ensure that the mounting location is strong enough, solid, dry, free from grease, dust and loose paint etc.
- ▶ Note that the magnetic carrier magnetically attracts only from one side.

### 5.1 Adhesive mounting

The magnetic carrier can be mounted using adhesive assembly as follows:

- Easy to maintain and removable according to EN 14604:2005/AC:2008
- or maintenance-unfriendly but theft-proof according to EN 14604:2005/AC:2008 and vfdb 14/01 (Q)

#### Adhesive mounting according to EN 14604:2005/AC:2008

When performing this type of installation, proceed as follows:

- (1) Remove magnetic carrier from the device
  - ▶ To do this, tilt the magnetic carrier



- (2) Remove the protective film from the adhesive pad on the magnetic carrier



- (3) Press firmly magnetic carrier for about 10 seconds at the mounting position
- (4) Taking the device into operation and setting up
  - ▶ Observe chapter 6 „Putting into operation and setup“ on page 60
- (5) Put the device on the magnetic carrier
  - The device is mounted on the magnetic carrier



The ultimate strength of the adhesive bond is achieved after about 72 hours.

#### Adhesive mounting according to EN 14604:2005/AC:2008 and vfdb 14/01 (Q)

To establish a permanent connection between the device and magnetic carrier (e.g., as theft protection), you can additionally mount the device with the supplied adhesive film on the magnetic carrier.

**⚠ CAUTION**

**Possible property damage!**

The mounting of the device according to vfdb 14/01 (Q) establishes a permanent connection between the mounting surface and the device. Thus, a subsequent removal of the device is prevented. The start-up and set up of the device are no longer possible. If the device is disassembled, it can cause damage to the device and the mounting surface.

- ▶ Use the additional adhesive film only to prevent theft.
- ▶ Put the device in operation and set it up before attaching the additional adhesive film.

When performing this type of installation, proceed as follows:

**(1)** Mount magnetic carrier

- ▶ Observe chapter „Adhesive mounting according to EN 14604:2005/AC:2008“ on page 57

**(2)** Take the device into operation and set it up

- ▶ Observe chapter 6 „Putting into operation and setup“ on page 60

**(3)** Attach additional adhesive film to the magnetic carrier

- ▶ Remove the protective film on one side of the adhesive sheet
- ▶ Put adhesive sheet on the magnetic carrier and press on
- ▶ Remove the protective film on the other side

**(4)** Put the device on the magnetic carrier and press on

- ☑ The device is mounted on the magnetic carrier

## 5.2 Drilling installation

As an alternative to adhesive mounting, you can also screw the magnetic carrier on the mounting surface.

Even with the drilling installation, the adhesive pad must remain on the magnetic carrier and must not be removed.

When performing the drilling installation, proceed as follows:

**(1)** Remove magnetic carrier from the device

- ▶ To do this, tilt the magnetic carrier



**(2)** Drill a hole on the mounting position in the mounting surface

**(3)** Insert the dowel into the drill hole

**(4)** Tighten the screw in the magnetic carrier

**(5)** Position the magnetic carrier above the dowel

**⚠ CAUTION**

**Possible property damage!**

Over-tightening the screw may deform the magnetic carrier.

- ▶ Tighten the screw only so deep that the magnetic carrier is not deformed or bulged.

**(6)** To ensure a safe hold of the device, tighten the screw deep into the dowel so that it closes flush with the magnetic carrier



Also in a drilling installation, you can create an adhesive compound using additional adhesive film, according to vfdb 14/01 (Q) (see chapter „Adhesive mounting according to EN 14604:2005/AC:2008 and vfdb 14/01 (Q)“ on page 57).

## 6 Putting into operation and setup

- (7)** Take the device into operation and set it up
- ▶ Observe chapter 6 „Putting into operation and setup“ on page 60
- (8)** Put the device on the magnetic carrier
- Magnetic carrier is attached and the device is placed

Always consider the following when putting into operation and setting up the smoke alarm device:

- ▶ Take devices in a radio group into operation and set up individually, one after another and in close proximity to the installation location
- ▶ To avoid overlay of radio signals when putting into operation, keep a distance of 2 to 3 m between the individual devices
- ▶ After putting the device into operation, the splint pin is used as a tool for operating the radio button, and must be kept readily available in the vicinity of the device

### 6.1 Set up radio group

The first device placed into service is Master; and manages the installation of a radio group.

Note the following when setting up the master device of a radio group:

- (1)** Push the splint pin sideways off of activation button

 short acoustic signal



- No other device is in learning mode

- (3)** Press and hold the radio button with splint pin until:



- (4)** Release radio button



- Device max. 10 minutes in learning mode

### 6.2 Expand radio group (learning mode)

Observe the following when putting additional devices into operation and expanding the radio group:

- (1)** Push the splint pin sideways off of activation button

- (2)** Push activation button flush

 short acoustic signal



- Device max. 10 minutes in learning mode

- (3)** Add more devices analogous to the radio group

- With each additional device, the learning mode for all devices is extended by 10 minutes

### 6.3 Finalising radio group

In order to complete a newly established radio group, you must exit the learning mode. You have two options for this purpose:

- ▶ Wait 10 minutes
- ▶ or briefly push the radio button on the device last put into operation until:



all signal LEDs "off"

- Radio group is in operation
  - ▶ To verify, perform the connection test (see chapter 6.6 „Group connection test“ on page 64)

### 6.4 Bring the radio group into learning mode

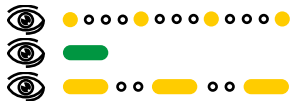
You can extend an existing radio group by bringing the radio group in the learning mode. Observe the following:

- (1) Press and hold the radio button with splint pin on any device until:



all signal LEDs "off"

- (2) Release radio button



- Device max. 10 minutes in learning mode
- (3) Add additional devices
  - ▶ Observe chapter 6.2 „Expand radio group (learning mode)“ on page 61

### 6.5 Set up shared radio group

For special applications, it may be useful to set up a shared radio group (e.g., in the corridor of an apartment building). A central radio group (corridor), which is associated with one or more other radio groups (flats), takes over the function of the shared radio group. The other radio groups form subgroups.

### Example

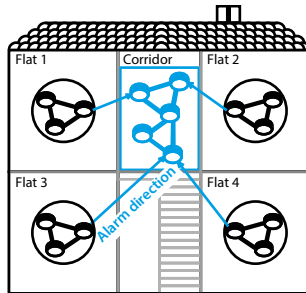


Fig. 9 Example of shared radio group

Flat = subgroup

Corridor = shared radio group

Alarm direction = towards the shared radio group



The illustration shown is an example. The number of devices in a group can vary.

Note the following when setting up a shared radio group:

- (1) Set up and maintain radio groups (subgroup and shared radio group) individually
  - ▶ Observe chapter 6.1 „Set up radio group“ on page 60 and chapter 6.2 „Expand radio group (learning mode)“ on page 61
- (2) Bring the shared radio group in learning mode
  - ▶ Observe chapter 6.4 „Bring the radio group into learning mode“ on page 62
- (3) In a subgroup, select the device closest to the shared radio group
- (4) Press the radio button with splint pin on the selected device for 1 second



- Sub-group is connected to the shared radio group

- (5) Complete the shared radio group with one device of the shared radio group

► Observe chapter 6.3 „Finalising radio group“ on page 62

- (6) Perform similar actions for other sub-groups


- Shared radio group is in operation  
► To verify, perform the connection test (see chapter 6.7 „Shared group connecting test“ on page 64)

### 6.6 Group connection test

You can check the correct connection of a group (radio groups or a shared radio group) as follows:

- (1) Press and hold testing / stop button of any device of the group for approx. 12 seconds


 short acoustic signal, single device

 short acoustic signal, single device

- (2) Release testing / stop button


 short acoustic signal, single device

- Successful connection test of the single device and the radio group

 When a device within the radio group is defective, the device triggering the alarm and all available devices sound an alarm signal. The defective device stays silent and can thus be identified (see chapter 12 „Alarm and alert tones“ on page 76).


### 6.7 Shared group connecting test


You can check the correct connection of a radio group to a shared radio group as follows:

 Only possible with subgroup devices.


- (1) Press and hold testing / stop button of any device of the subgroup pressed for approx. 60 seconds

 short acoustic signal, single device

 short acoustic signal, single device

 short acoustic signal, single device

- (2) Release testing / stop button

 short acoustic signal, all devices of the shared radio group

- (3) Perform similar actions for other radio groups

- Successful connection test of the single device and the shared radio group

### 6.8 Restore factory defaults

In the following situations, you must restore the factory settings:

- Connection attempt was unsuccessful and must be repeated
- To detach a device from a radio group

Proceed as follows:

- (1) Pull out activation button  
(2) Press and hold the testing / stop button for about 2 to 3 seconds

- (3) Press and hold the radio button with splint pin until:



- (4) Release radio button



- The device is in the factory state

### Cancel a device from a radio group

You must cancel a device from a radio group in the following cases:

- Remove device from an existing radio group and connect it to another group
- Remove the defective device from the radio group

In the radio group from which the device was removed, you must set all the devices to factory settings and re-connect them:

- ▶ Observe chapter 6.1 „Set up radio group“ on page 60
- ▶ Observe chapter 6.2 „Expand radio group (learning mode)“ on page 61
- ▶ Observe chapter 6.3 „Finalising radio group“ on page 62

## 6.9 Alarm forwarding

Alarm forwarding can take place in two directions, with the following forwarding times:

- Alarm forwarding within a radio group or a shared radio group = approx. 20 seconds
- Alarm forwarding from a radio group to shared radio group = approx. 60 seconds

There is no alarm forwarding from the shared radio group to the individual radio groups.

## Repeater function

Through the repeater function, radio signals are forwarded from one signalling device through available devices to unreachable devices.



If you need specific, complex and, where applicable, cascading connection functions for the alarm forwarding, please contact the manufacturer (see chapter 10 „Accessories, spare parts and service“ on page 73)

## 6.10 Alarm stop

You can stop an alarm with or without fire.



If there is still a risk of fire after an alarm stop, the switched-off devices ring again after 10 minutes.

## Alarm forwarding has not yet taken place

If the alarm forwarding has not yet taken place, you can stop the alarm directly on the alarm-triggering device:

- ▶ Press the testing / stop button on the device triggering the alarm
- Alarm is stopped and is not forwarded

## Alarm forwarding has already taken place

If the alarm forwarding has already taken place in a radio group, and you can identify the alarm-triggering device, proceed as follows:

- ▶ Press the testing / stop button on the device triggering the alarm
- Alarm on the triggering device and forwarding devices is stopped

If the alarm forwarding has already taken place in a radio group, and you cannot identify the alarm-triggering device, proceed as follows:

- (1)** Press the testing / stop button on a device of a subgroup or shared radio group
- (2)** Alarm of the forwarding devices of this group is stopped
- (3)** Follow the same procedure for other groups



The alarm of the alarm-triggering device can only be terminated directly on the device in question. Thus the fire location can be located in case of fire.

- (4)** Press the testing / stop button on the device triggering the alarm
- Alarm on the triggering device and forwarding devices is stopped



## 7 Fault and error messages

The device automatically checks its operational readiness once a minute. The device displays functional limitations in the form of error and alarm messages.

If the device detects environmental influences differing from the rule, it regulates the sensitivity of its detection electronics automatically.

### 7.1 Error messages

The following messages are considered error messages:

- Battery error message
- Contamination message
- Alarm without cause of fire
- Defective connection test of a radio group

**⚠ DANGER**

**Danger from malfunction**

In the event of a battery error message / contamination message, the smoke alarm device may only continue to provide its reliable warning performance for max. 60 days.

- ▶ It is necessary to replace the smoke alarm device before the remaining 60 days have passed.

#### Battery error message

A battery error message is triggered when the device starts using its energy reserve. With the battery error message, a simple tone will sound every 90 seconds (see chapter 12 „Alarm and alert tones“ on page 76). Proceed as follows:

- (1) Press testing / stop button to turn off the battery error message for 24 hours
- (2) Replace the device

#### Contamination message

A contamination message is triggered when the readjustment of the detection electronics is no longer possible due to heavy soiling.

With the contamination message, a double tone will sound every 90 seconds (see chapter 12 „Alarm and alert tones“ on page 76). Proceed as follows:

- (1) Press testing / stop button to turn off the contamination message for 24 hours
- (2) Replace the device

#### Alarm without cause of fire

An alarm without fire is triggered under the following circumstances;

- Regular development of dust in residential areas that are promoted by textiles (e.g., carpets, clothing, blankets and pillows)
- Pollen, construction, grinding or fine dust
- Insects or micro-organisms that have overcome the insect barriers of the device

- Strong cooking, water and / or frying fumes and room, fragrance and insect repellent sprays
- Extreme temperature fluctuations or very strong electromagnetic radiation in close proximity influence the device



Cigarette smoke triggers an alarm only in the immediate vicinity and at a high concentration.

You can take the following corrective measures:

- ▶ Stop alarm (see chapter 6.10 „Alarm stop“ on page 66)
- ▶ Ensure adequate ventilation of the installation location
- ▶ Handle the device with care and clean it regularly, e.g., with a vacuum cleaner
- ▶ Inform neighbours about an alarm without cause of fire, so that they will not falsely alert fire brigade

## 7.2 Troubleshooting

Problems can occur when putting into service, installation and operation under the following circumstances:

- Devices not or no longer in the learning mode
- Radio group not or no longer in the learning mode
- No wireless connection, although the device and the radio group are in the learning mode

A problem is indicated by the LED light signal (see chapter 13 „Light signals“ on page 79).

### Device not or no longer in the learning mode

If a device cannot be connected to a radio group, and its LED signal light does not flash yellow, it can be that the device is not or is no longer in the learning mode.

To troubleshoot, proceed as follows:

- ▶ Pull activation button up
- ▶ Press and hold the testing / stop button for 2 to 3 seconds

- ▶ Bring the device into learning mode (see chapter 6.2 „Expand radio group (learning mode)“ on page 61)
- ▶ If required, put device into factory settings (see chapter 6.8 „Restore factory defaults“ on page 65), and extend the radio group (see chapter 6.2 „Expand radio group (learning mode)“ on page 61)

### Radio group not or no longer in the learning mode

If a device cannot be connected to a radio group, and the LED signal lights of the radio group devices do not flash yellow, it can be that the radio group is not or is no longer in the learning mode.

To troubleshoot, proceed as follows:

- ▶ Bring the radio group into learning mode (see chapter 6.4 „Bring the radio group into learning mode“ on page 62)

### Device and radio group in the learning mode

Although device and radio group are in the learning mode and the signal LED flashes

yellow, there may be no wireless connection. To troubleshoot, proceed as follows:

- (1)** Check the distance between the devices; reduce the distance if necessary
- (2)** Put the devices and radio group into operation again
  - ▶ Restore factory defaults of all devices restore (see chapter 6.8 „Restore factory defaults“ on page 65)
  - ▶ Put the devices and radio group into operation again (see chapter 6 „Putting into operation and setup“ on page 60)

### Defective connection test of a radio group

A defective device can be identified within a radio group by “group connection test” (see chapter 6.6 „Group connection test“ on page 64).

If a faulty device is identified, proceed as follows to troubleshoot

- ▶ In order to exclude a temporary radio interference from other radio-based devices, perform group connection test on another device

- ☑ Connection test was successful and all devices are operational

or

- ☑ Connection test was not successful, there is a defective device in the radio group
  - ▶ Reset the defective device to the factory settings (see chapter 6.8 „Restore factory defaults“ on page 65)
  - ▶ Cancel defective device from the radio group (see chapter „Cancel a device from a radio group“ on page 65)
  - ▶ Re-connect radio group with a reduced number of devices (see chapter „Cancel a device from a radio group“ on page 65)

To add a replacement device to the radio group, refer to the following chapters:

- ▶ Chapter 6.4 „Bring the radio group into learning mode“ on page 62
- ▶ Chapter 6.2 „Expand radio group (learning mode)“ on page 61
- ▶ Chapter 6.3 „Finalising radio group“ on page 62

## 8 Maintenance

### 8.1 Maintenance

You must perform visual and functional tests at regular intervals.

#### Visual inspection

Perform a visual inspection once a month:

- ▶ Make sure that the smoke intake lamella are not blocked (e.g., by dust, dirt, paint)
- ▶ Make sure that the device is not damaged, and is securely mounted on location

#### Functional check

To ensure that the devices are operational, you must check the function of each device and the group using a test alarm.

- ▶ If no test alarm sounds, you must replace the device.

#### Test alarm device

Trigger a test alarm at least once every 3 months:

- ▶ Press and hold the testing / stop button for about 2 to 3 seconds



short acoustic signal, single device

#### Radio group test alarm

Trigger a test alarm every 3 to 6 months:

- ▶ Observe chapter 6.6 „Group connection test“ on page 64

#### Test alarm for shared radio group

Trigger a test alarm every 3 to 6 months:

- ▶ Observe chapter 6.7 „Shared group connecting test“ on page 64

### 8.2 Cleaning

Note the following when cleaning:

- ▶ Remove the device from the magnetic carrier
- ▶ Clean the device with care, e.g. with a vacuum cleaner and a wet cloth

## 9 Decommissioning

### 9.1 Final decommissioning

The smoke alarm device will reach the end of its useful life at the latest after 12 years of usage according to the intended purpose.

- ▶ Replace the device at the end of this useful life.

### 9.2 Disposal

According to the EU's Restriction of Hazardous Substances Directive, this product should never be placed in domestic waste.

- ▶ Return the appliance to be discarded to the manufacturer for further utilisation, or hand it over to your local waste disposal company.
- ▶ Note that the environment can be damaged by improper disposal.



## 10 Accessories, spare parts and service

### 10.1 Accessories and spare parts

- Testing / stop button (smoke alarm device cover)
- Magnetic carrier
- Adhesive pad
- Adhesive film
- Splint pin (activation backup)
- Screw / dowel bag
- Mounting rod
- PX-iP internet gateway for PX-IC wireless networks

### 10.2 Customer service

Pyrex Technologies GmbH  
Spichernstraße 2  
10777 Berlin  
Germany

[pyrex.com/de/support](http://pyrex.com/de/support)

[www.pyrexsmokealarms.co.uk](http://www.pyrexsmokealarms.co.uk)

## II Technical specifications

Area of use	EN 14604:2005/AC:2008
Monitoring radius (depending on structural conditions)	Up to 60 m <sup>2</sup> capture area Up to 6 m room height
Battery	2 x 3.0 V lithium 2/3 A, firmly soldered
Battery life	Maximum 10 + 2 years
Audible alarm	> 85 dB
Optimum storage temperature	5 to 35° C, <70% rel. humidity
Protection class	IP 40
Colour	Refrigerator white
Material	ABS
Dimensions (H x Ø)	4 x 10 cm
Weight	Approx. 160 g net (without fasteners)

Readable data storage with Export function	Available
Installation	Acrylate foam adhesive pad for screw and adhesive mounting
Wireless networking (frequency)	868.3 MHz according to R&TTE Directive
Protocol	FSK (Frequency Shift Keying)
Networked devices per radio group	Maximum 15
Networked radio groups with shared radio group	Maximum 14
Number of parallel groups	Unlimited (automatic coding via unique serial number)
Radio range	400 m (± 10%) in the open field
Repeater function	Available

## 12 Alarm and alert tones

<i>Alarm or alert tones</i>			
<i>Description</i>	<i>Cause</i>	<i>Noise level</i>	<i>Interval</i>
<b>Start-up alert tone</b>			
<i>Activation sound</i>			
<b>Maintenance alert tone</b>			
<i>Test tone</i>			
<b>Alarm tones</b>			
<i>Smoke alarm</i>			
<i>Temperature alarm</i>			

### *Alert tones for error messages*

<i>Battery error message</i>			
<i>Contamination message</i>			
<i>Defective connection test of a radio group</i>			



You can temporarily disable the alarm sounds “smoke alarm” and “temperature alarm” for 10 minutes by pressing the testing / stop button.

10 Minutes








You can temporarily disable the alarm sounds “battery alarm message” and “contamination message” for 24 hours by pressing the testing / stop button. It is necessary to replace the device.

24 Hours

It is NOT possible to temporarily disable the fault or error message „Error in radio group connection test” by pressing the test/stop button. The device triggering the test and all reached devices are automatically silenced after 2 minutes. A faulty device must be replaced.

## 13 Light signals

### Light signal

Description	Interval
<b>Light signals of the signal LED</b>	
Check in progress, please wait	 1 Second
Commissioning (press the radio button)	 3 Seconds
Learning mode (about 10 minutes)	 1 Second
Successful completion of an action	 3 Seconds
Error	 3 Seconds

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