QUNDIS™
ADVANCED MEASURING SOLUTIONS.

Data sheet

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Smoke alarm
Q smoke 5.5

The smoke alarm Q smoke 5.5 detects smoke in apartments or buildings with residential use.

It is used to warn people in good time in the event of danger and alerts them through the integrated audible alarm.

The smoke alarm has an interface for the wireless transmission of numerous relevant device statuses.

Status recognition

Thank to the integrated multicolour LED in the button, the current status of the smoke alarm can be seen at a glance.

If the Q smoke 5.5 detects an error or the end of its life cycle, a status message is automatically issued. Status messages can be switched to mute by briefly pressing the button.

Installation

The smoke alarm is delivered with a base which permits both one-hole and two-hole screw attachment. The base is delivered with a small auxiliary pad especially for one-hole attachment. This auxiliary pad for one-hole attachment is designed exclusively for fixing the base or as twisting protection for easier screw attachment.

Alternatively to screw attachment, the smoke alarm can be fixed to the ceiling using an adhesive pad. The adhesive pad is VdS-tested and approved.

Automatic switch-on/switch-off

There is a magnet in the base of the smoke alarm which automatically activates the smoke alarm when it is screwed into place and triggers the function test.

When the smoke alarm is screwed back off the base the smoke alarm switches off automatically after 5 minutes. If the smoke alarm is removed from the base, all currently queued events are switched to mute.[1)]

Automatic transmission of the device statuses

The device statuses of the smoke alarm can be provided for different systems such as Q walk-by, Q AMR or Q SMP.

Installation telegrams are transmitted to the Q AMR network automatically after the Q smoke 5.5 has been screwed into the base. Test readout telegrams are transmitted for two days for Q walk-by.

- **Q walk-by (mobile data recording)**
  Q walk-by allows you to receive status messages from the smoke alarm Q smoke 5.5 on site. A radio receiver which is connected to a notebook via Bluetooth collects the information.

- **Q AMR (automatic data recording)**
  The Q smoke 5.5 makes its device status available in a network. The information is made available for collection via GPRS/EDGE using the Q gateway 5.

- **Q SMP (remote query via Q AMR)**
  The cloud-based Q SMP provides the desired smoke alarm device statuses fully automatically via email or SFTP in various file formats.

1) The smoke alarm status information or device statuses are still transmitted by a device even after it has been removed.

Soiling prediction

By permanently monitoring the measuring section, the smoke alarm can determine the soiling level of the measuring chamber. During the annual function test, it automatically predicts whether the alarm threshold can still be compensated using the function “alarm threshold tracking” for at least 15 months if soiling remains constant. If the result of the function test is negative, the LED flashes green and the negative self-test acoustic signal is sounded.

Soiling compensation

The smoke alarm permanently monitors the measuring chamber for soiling. If dirt particles are established in the measuring chamber, the alarm threshold is adapted in such a way that the distance to the basic signal always remains the same and thus the smoke alarm does not become more sensitive due to soiling.
This significantly increases the lifetime of the smoke alarm.

Function test

The smoke alarm should be checked for function at least once every year. The function test is triggered by pressing the button on the smoke alarm.

During the function test, the following are tested:
- Battery
- Audible alarm
- Soiling prediction
- Processor
- Measuring chamber

Suitability for use in bedrooms

Thanks to the integrated real-time clock, status messages such as Batt-Low are suppressed at night between 9 p.m. and 7 a.m. (winter time, CET[1]). The optical operation display is switched off at night.

Frequency-optimised acoustic signal

If the smoke alarm detects smoke, this is signalled by the frequency-optimised acoustic signal which has a sound level of at least 85 dB. The signal safely reaches the human ear in the event of an alarm due to the different high and low frequencies of the acoustic signal.

Theft protection and removal detection

Every smoke alarm can be secured using a seal (accessory). The seal prevents the smoke alarm simply being screwed out of its base. If the smoke alarm is removed from the base by force (sabotage), the seal is sheared off.

Radio modes

C-mode Q smoke 5.5 AMR-WB-C QUNDIS			
Q AMR[2]	every 7.5 minutes, 24 hours per day, 365 days per year	Q walk-by	every 112 seconds, 10 hours per day, 365 days per year

S-mode Q smoke 5.5 AMR-S QUNDIS	
Q AMR	every 4 hours, 24 hours per day, 365 days per year

1) CET: Central European Time (winter time)
2) OMS-conform data telegrams (Q OMS)

Intelligent operating concept

The button on the smoke alarm is used to switch statuses such as error, alarm mute or to trigger a function test. Pressing the button briefly once is sufficient to trigger the right function, depending on the status of the smoke alarm.

Operating and warning signals

Fire alarm

Audible alarm	Button	Cause	What should you do?
Alternating, loud acoustic alarm signal	Flashes **RED** every second	Smoke has been detected	Leave the building
Off	Double flashes **GREEN** every 48 seconds	Alarm memory An alarm was triggered	Search the surroundings for possible sources of smoke. Reset the alarm memory by pressing the button.

Signalling daytime operation 7 a.m. to 9 p.m. CET[1)]

Audible alarm	Button	Cause	What should you do?
Off	Flashes **GREEN** every 48 seconds (off at night)	Normal mode	---
1 x every 48 seconds short acoustic signal	Flashes **ORANGE** every 8 seconds (off at night)	End of the life cycle	Replace device. Mute switching by pressing the button.
1 x every 48 seconds short acoustic signal	Flashes **RED** every 8 seconds (off at night)	Error has been recognised	Replace device. Mute switching by pressing the button.

Signalling during the day after mute switching for 24 hours

Audible alarm	Button	Cause	What should you do?
Off	Flashes **ORANGE** every 48 seconds (off at night)	End of the life cycle	Replace device
Off	Flashes **RED** every 48 seconds (off at night)	Error has been recognised	Replace device

Ambient conditions

The Q smoke 5.5 is suitable for use in e.g. frost-free basements, frost-free attic rooms or staircases.

Order data

Name	Order number
Q smoke 5.5 AMR-S QUNDIS	SDT500341000 00000
Q smoke 5.5 AMR-WB-C QUNDIS	SDT500371000 00000
Adhesive pad set Q smoke 5.5 VE10	SDTIKHKK 010
Adhesive pad set Q smoke 5.5 VE100	SDTIKHKK 100
Seal set Q smoke 5.5 VE32	SDTIKHKP 032

1) CET: Central European Time (winter time)

Technical data: Smoke alarm components

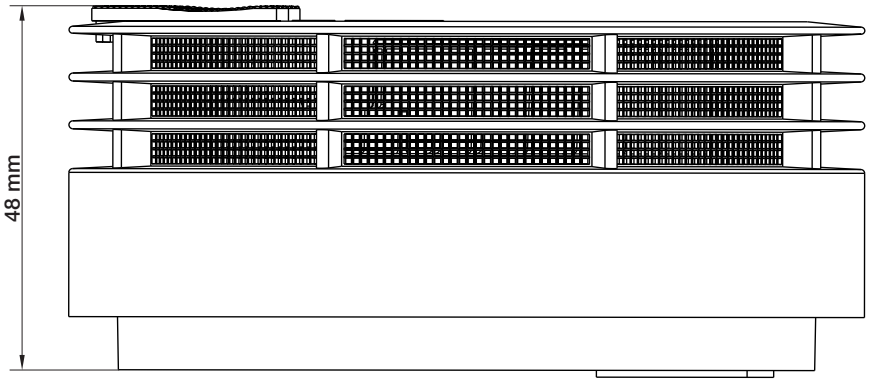
VdS approval	DIN EN 14604/VdS+Q-label - Dev. no. 215027
Declaration of performance	CPR-31-13-030-de-en
Acoustic alarm	Sound pressure greater than 85 dB(A) (3 m)
Acoustic alarm perception	Frequency optimisation for the human ear
Application area	Acc. to DIN 14676
Operation	Via button
Automatic operating levels	Yes
Operating state display	Green/orange/red
Error signal suppressed at night [1]	Automatically due to real-time clock
Error signal suppressed during the day	For 24 hours by pressing the button
LED switched off at night	Automatically due to real-time clock
Voltage supply for alarm	1 x separate lithium battery 3.6 V permanently installed [2]
Battery capacity	2.2 Ah
Battery service life for alarm	Typically 10 years
Automatic self-monitoring	Yes
Automatic adaptation (during temperature fluctuations)	By means of temperature sensor
Active soiling tracking	Yes
Alarm memory	Yes
Active soiling prediction	Yes, signalled when button pressed
Theft protection	Using seal (accessory)
Optical removal recognition	Using seal (accessory)
Storage temperature	-10 °C to +60 °C
Ambient operating temperature	0 °C to 55 °C
Ambient humidity (permanent, without condensation)	At ≤ +40 °C 10 to 70 % relative humidity
Protection rating	IP 40
Colour	White satin finish, similar to RAL 9010
Material	PC-ABS
Dimensions height/diameter	48 mm x 104 mm
Weight with base	170 g
One-hole attachment	Yes
Two-hole attachment	Yes
Adhesive attachment	Yes
RoHS/WEEE-conform	Yes
Disposal in line with environmental concerns	Regulated through EAR

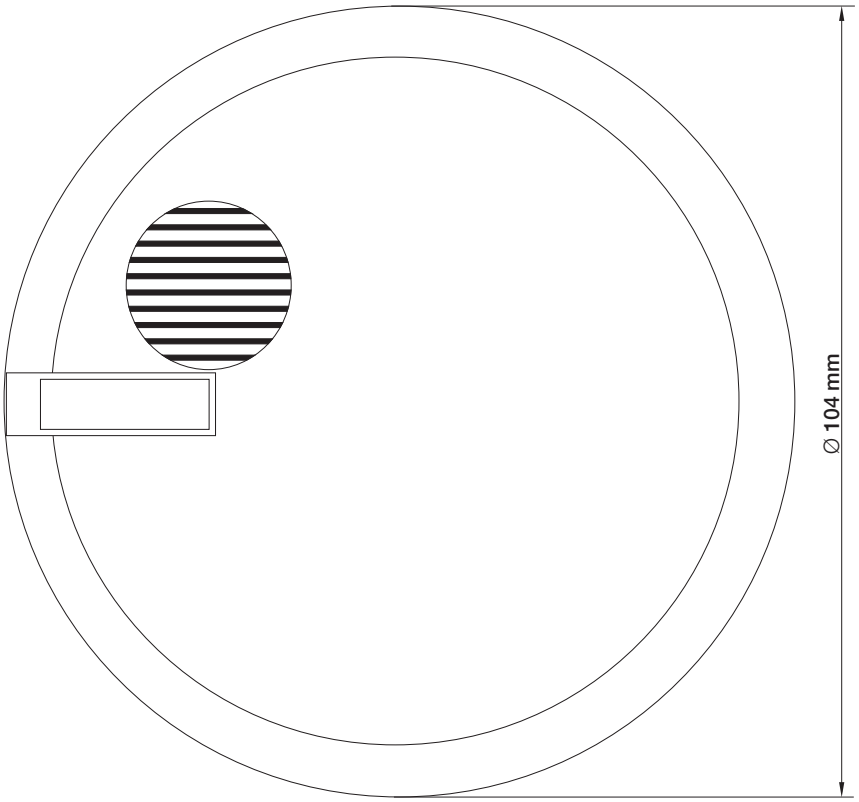
Technical data: Radio components status messages

Frequency band	S-mode C-mode	868.30 MHz 868.95 MHz
Transmission power		Typically 10 dBm
Duty cycle		< 1 %
Permissible ambient temperature during storage, in operation		-10 °C to +60 °C 0 °C to +55 °C
Environment-related humidity (permanent, without condensation)		At 40 °C max. 70 % relative humidity
Power supply		1 lithium battery 3.6 V
Service life		Typically 10 years
Nominal voltage		DC 3.6 Volt
Data transmission according to		EN 13757-4
Antenna type		PCB antenna
Approval		R&TTE, RED
Dimensions		approx. 52 mm x 82.5 mm
Weight of radio module		10 g

[1] From 9 p.m. to 7 a.m. CET: Central European Time (winter time)
[2] For reasons of safety, an uninterrupted power supply is required for the smoke alarm.

Dimensional drawing





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