Operating instructions

Wireless plug-in socket with repeater function

APR

Type: APR 234
Type: APR 234-NF

CE

Version: 05.2016.0
ID: 900.000.0752

1   About these operating instructions

These operating instructions describe the wireless plug-in socket with repeater function "APR 234 / APR 234-NF" (also referred to as "product" in these operating instructions).

- You may only use the product if you have fully read and understood these operating instructions.

- Verify that these operating instructions are always accessible for any type of work performed on or with the product.

- Pass these operating instructions as well as all other product-related documents on to all owners of the product.

- If you feel that these operating instructions contain errors, inconsistencies, ambiguities or other issues, contact the manufacturer prior to using the product.

There operating instructions are protected by copyright and may only be used as provided for by the corresponding copyright legislation. We reserve the right to modifications.

The manufacturer shall not be liable in any form whatsoever for direct or consequential damage resulting from failure to observe these operating instructions or from failure to comply with directives, regulations and standards and any other statutory requirements applicable at the installation site of the product.

2   Information on safety

2.1   Safety messages and hazard categories

These operating instructions contain safety messages to alert you to potential hazards and risks. In addition to the instructions provided in these operating instructions, you must comply with all directives, standards and safety regulations applicable at the installation site of the product. Verify that you are familiar with all directives, standards and safety regulations and ensure compliance with them prior to using the product.

Safety messages in these operating instructions are highlighted with warning symbols and warning words. Depending on the severity of a hazard, the safety messages are classified according to different hazard categories.

NOTICE

NOTICE indicates a hazardous situation, which, if not avoided, can result in equipment damage.

2.2 Intended use

This product may only be used for the following applications:

- As plug-in socket for electrical consumers, for example, lamps, to control them via a wireless connection

- As repeater for EnOcean® signals

- For measuring the active power

- For indoor applications

Any use other than the application explicitly permitted in these operating instructions is not permitted and causes hazards.

Verify that the product is suitable for the application planned by you prior to using the product. In doing so, take into account at least the following:

- All directives, standards and safety regulations applicable at the installation site of the product

- All conditions and data specified for the product

- The conditions of the planned application

In addition, perform a risk assessment in view of the planned application, according to an approved risk assessment method, and implement the appropriate safety measures, based on the results of the risk assessment. Take into account the consequences of installing or integrating the product into a system or a plant.

When using the product, perform all work and all other activities in conjunction with the product in compliance with the conditions specified in the operating instructions and on the nameplate, as well as with all directives, standards and safety regulations applicable at the installation site of the product.

2.3 Predictable incorrect application

The product must never be used in the following cases and for the following purposes:

• In conjunction with products which are used for health-saving or life-saving purposes or whose operation may incur hazards to humans, animals or property.

2.4 Qualification of personnel

Only persons who are familiar with and understand the contents of these operating instructions and all other pertinent product documentation are authorized to work on and with this product.

2.5 Personal protective equipment.

Always wear the required personal protective equipment. When performing work on and with the product, take into account that hazards may be present at the installation site which do not directly result from the product itself.

2.6 Modifications to the product

Only perform work on and with the product which is explicitly described in these operating instructions. Do not make any modifications to the product which are not described in these operating instructions.

3 Transport and storage

The product may be damaged as a result of improper transport or storage.
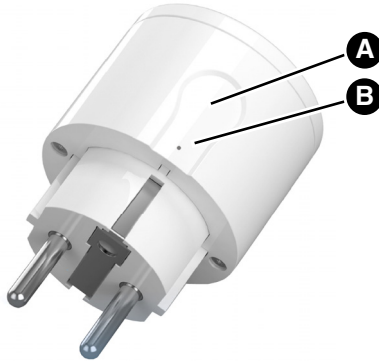
NOTICE

DAMAGE TO THE PRODUCT
- Verify compliance with the specified ambient conditions during transport or storage of the product.
- Use the original packaging when transporting the product.
- Store the product in a clean and dry environment.
- Verify that the product is protected against shocks and impact during transport and storage.

Failure to follow these instructions can result in equipment damage.
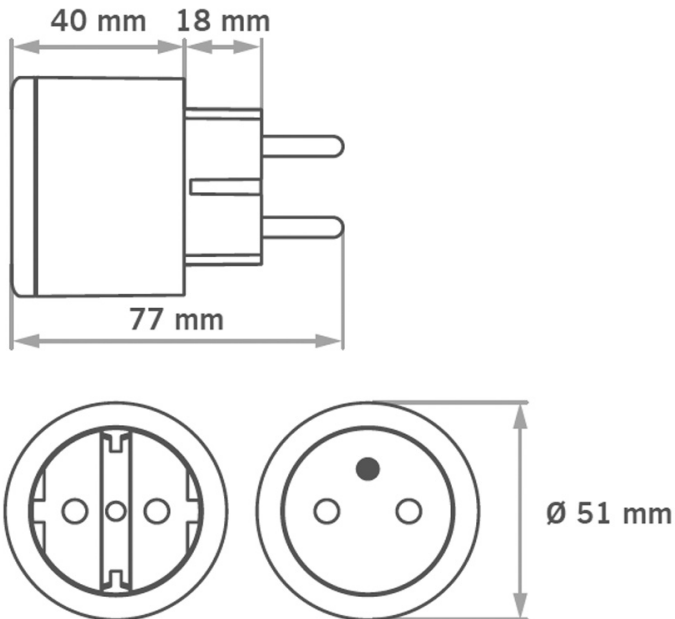
4   Product description

4.1   Overview

A. Touch area
  - The touch area allows for manual configuration of the device.

B. LED
  - The various operating states are indicated with the colour LED.

4.2   Dimensions

4.3 Function

The product allows for remote control of electric devices. It is possible to teach in up to 30 sensors. These include, for example, the wireless rocker switch "FT4F-rw", the door and window contact "AMC 10" and the wireless presence detector "APD 10".

This allows you to implement a great variety of functions, for example, switching off the exhaust hood when the window is closed, switching on the light when a person enters the room, etc.

The product can be operated as a component of the AFRISOhome gateway. This enables remote control via mobile devices.

The product also features a power metering function to measure the power consumption of connected equipment on an ongoing basis. The integrated repeater function turns the product into an indispensable component of a building automation system.

4.4 Approvals, conformities, certifications

The product complies with:

• EMC Directive (2014/30/EU)

• Low Voltage Directive (2014/35/E)

• Radio and Telecommunications Terminal Equipment Directive (1999/5/EC)

• RoHS Directive (2011/65/EU)

4.5 Technical specifications

Parameter	Value
General specifications	
Dimensions (W x H x D)	51 x 51 x 77 mm
Weight	Approx. 70 g
Colour	White, similar to RAL 9003
Operating temperature range	-10/+40 °C
Relative humidity	0-85 % r.h. (non-condensing)
Supply voltage	AC 207-253 V 43-67 Hz
Maximum power	

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Parameter	Value
Switch rating	3680 W, max. 16 A (resistive load)
Continuous power	2500 W
Inrush capability	80 A, TV-5
Surge-withstand capability	2.5 kV, non-destructive, 6 kV, no fire hazard
Power dissipation standby	< 0.5 W
Service life of relay contacts	> 50 x 10^3 cycles
Protective functions	
Overcurrent	Switching off of load
Overtemperature	Switching off of load
Child-proof	-
Power/energy measurement	
Power	Active power in W
Accuracy	5 %, at least 0.5 W
Standards	
Communication protocol	EnOcean® version based on Dolphin platform (ISO/IEC 14543-3-10)
	IEC 60884-1/2-5, EN 60730-1
EnOcean® wireless	
Frequency	868.3 MHz
Transmission power	Max. 10 mW
Range	See chapter "Information on EnOcean® wireless"
EnOcean® Equipment Profile (EEP)	D2-01-09, A5-38-08, A5-12-01

5 Commissioning

⇨ If you intend to mount multiple products, start by creating a mounting plan with the appropriate mounting locations. Then label the products with numbers or the corresponding mounting location to help avoid confusion of mounting locations.

5.1 Commissioning the product (local operation)

⇨ Make sure you press the touch area only briefly because pressing it for a longer period of time activates other commands/configurations.

After you have connected the product, the LED flashes once red and twice green to indicate that the product is ready for operation.

1. Briefly press the touch area.
   - This switches the product on and off.
   - The LED flashes once (green) and then goes off.

5.2 Wireless mode

If you do not make entries for a period of 15 seconds, the product automatically switches back from programming mode to regular operation. Settings you may have made are not stored.

Symbol	Meaning (touch area)
●	Hold down
○	Release
O	Press several times

Table 1: Legend for descriptions below

5.2.1 Teaching in into the AFRISOhome gateway

⇨Verify that the product is in the vicinity of the AFRISOhome gateway.

⇨Verify that the AFRISOhome gateway is in "Learn" mode. See the operating instructions of the AFRISOhome gateway for information detailed information.

⇨If you intend to mount multiple products, start by creating a mounting plan with the appropriate mounting locations. Then label the products with numbers or the corresponding mounting location to help avoid confusion of mounting locations.

Step	Action	Duration (in sec.)	Response of product	External action
1	●	5	Red LED flashes 1 x per second	
2	○			
3	●	2-3	The product sends a 'Learn' telegram to the AFRISOhome gateway	
4	○		> Confirmation (green LED flashes 5 x per second) The product returns to regular operation	Teaching in is confirmed in the AFRISOhome app

5.2.2 Teaching in sensors

For example, wireless rocker switch "FT4F-rw", door and window contact "AMC 10" and wireless presence detector "APD 10".

Step	Action	Duration (in sec.)	Response of product	External action
1	●	5	Red LED flashes 1 x per second	
2	○			
3				Start the 'Learn' function of the sensor
			> Confirmation (green LED flashes 5 x per second) The product returns to regular operation	
			> Error (red LED flashes rapidly 5 times) Error during teach in or the maximum number of 30 sensors was exceeded	

5.2.3 Repeater function

The Product can be used as Level 1 and as Level 2 repeater.

- Level 1 = one repeater in operation

- Level 2 = several repeaters in operation
  (in this case, all repeaters must be operated in Level 2 mode)

Step	Action	Duration (in sec.)	Response of product	External action
1	●	25	While you hold down the touch area, the product goes through a number of operating states. > Learn mode (red LED flashes 1 x per second) > Reset mode (red LED lights solid) > Repeater menu (red LED flashes 1 x per second)	
2	○			
3	◉	<1	Each time you press the touch area, the repeater mode changes. The selected function is indicated by the red LED (fast flashing): - 1 x flashing = Off - 2 x flashing = Level 1 - 3 x flashing = Level 2	
4	●	5	> Confirmation (green LED flashes 5 x fast)	
5	○		The product returns to regular operation	

5.3 Clearing sensors

Step	Action	Duration (in sec.)	Response of product	External action
1	●	5	Red LED flashes 1 x per second	
2	○			
3				Start the Learn function of a sensor you have already taught in
4	○		> Confirmation (green LED flashes 5 x fast) The product returns to regular operation	

5.4 Clearing from AFRISOhome Gateway

⇨ Verify that the AFRISOhome app is open.

1. Selected the product in the main menu of the AFRISOhome app and tap. the button "Clear".

Step	Action	Duration (in sec.)	Response of product	External action
1	●	5	Red LED flashes 1 x per second	
2	○			
3	●	2-3	The product sends a 'Learn' telegram to the AFRISOhome gateway	
4	○		> Confirmation (green LED flashes 5 x per second) The product returns to regular operation	The product is removed in the AFRISOhome app

5.5 Factory reset (Clear All)

Step	Action	Duration (in sec.)	Response of the product	External action
1	●	20	While you hold down the touch area, the product goes through a number of operating states. > Learn mode (red LED flashes 1 x per second) > Reset mode (red LED lights solid)	
2	○			
3	●	5	> Confirmation (green LED flashes 5 x fast)	
4	○		The product returns to regular operation	

6 Maintenance

The product is maintenance-free.

7 Troubleshooting

Any malfunctions that cannot be removed by means of the measures described in this chapter may only be repaired by the manufacturer.

8 Decommissioning, disposal

Dispose of the product in compliance with all applicable directives, standards and safety regulations.

Electronic components must not be disposed of together with the normal household waste.

1. Remove the product from the power outlet.

2. Dispose of the product.

9 Returning the device

Get in touch with us before returning your product.

10   Warranty

See our terms and conditions at www.afriso.com or your purchase contract for information on warranty.

11   Spare parts and accessories

Product

Product designation	Part no.	Figure
Wireless plug-in socket with repeater function "APR 234"	75004	
Wireless plug-in socket with repeater function "APR 234-NF"	78977	

12   Information on EnOcean® wireless

12.1 Range of EnOcean® wireless

Visit www.enocean.com for further information on range planning with EnOcean®.

12.2 Additional information on EnOcean® wireless systems

Additional information on planning, installation and operation of EnOcean® wireless systems can be found at www.enocean.com.

12.3 Features of the EnOcean® technology

Visit www.afriso.de/afrisolab for documents on EnOcean® technologies.

A variety of videos on AFRISO products can also be found on the AFRISO YouTube channel.