



User manual

RP902





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Warning and safety instructions:



- The battery in this product complies with the relevant IEC safety standards for batteries.
- Please read the safety instructions on the power supply before use.
- The power supply unit must meet the relevant IEC safety standards.
- The battery must not be replaced, and the product must be sent for repair.
- The product must not be disassembled. Risk of electric shock!
- Read the intended use before putting it into service.
- The product is not water-resistant unless noted in product specification.

Contraindications

In general, the product cannot be used if:

- The disabled client/patient is mentally ill.
- The disabled client/patient is critically ill.
- The client/patient is unable to use the transmitters.

Lifetime after mounting of the device

The battery, if applies, must be replaced when the battery replacement information appears on the display and according to the user manual.

Lifetime is evaluated in relation to the pressure button. This is made according to the supplier's specification.

Lifetime battery (products using battery, only)

KNOP calculates the life of the batteries. See specification in the user manual.

Intended use

In general, the different variants of the medical device (transmitters/receiver system from KNOP Elektronik) are made as assistive aid for impaired/disabled patients to be able to call for assistance.

The various variants of the medical equipment consist of a combination of products (transmitter and receiver) designed to call for help to impaired/disabled patients; The transmitter-receiver system can be activated in different ways:

- For example, patients who actively do this and are aware that they are calling for help, such as e.g., people with walking difficulties who need help going to the toilet.
- Or disabled patients who are not aware that they are inadvertently putting pressure on the sendere.g. during a seizure.



- Or patients with intellectual and cognitive deficits who are not aware that a receiver is receiving a signal from their transmitter when they leave a house or room.

The system is not designed for critically or mentally ill persons.

General product description

The products manufactured by KNOP elektronik consist of several variants of transmitters and receivers that can be combined with each other. In addition, these products are used in combination with positioning and repeater systems.

These products are medical devices intended to call for assistance and are used for disabled/mobile people, such as those with walking difficulties who need help going to the toilet. The transmitters are activated, for example, by a sound or by pressure (e.g. by pressure with a finger or a breath through the mouth). The recipient is supervised by health care personnel or lay people in private homes.

The system is not designed for critically or mentally ill people.

Part of product	Function in the product system
Transmitter	The transmitter can send the signal obtained from the patient to the receiver monitored by the healthcare personnel or lay person. The transmitter products can be activated by button, sound, blow or movements.
Receiver	The transmitters can be coded into all the receivers and to several receivers at the same time. Some receivers also have a summon button for calling assistance from their coworkers.
Repeater system	If it is needed to cover a more comprehensive and larger area a repeater system is used. The repeater system also gives an increased functionality as e.g. that an alarm automatically is received at first at the healthcare person closest to the client.
Positionsystem	If a sender is equipped with a position receiver it can be used in connection with a Position system. Not all product variants include position receivers. Typically, it is seen in connection with nursing homes and security for patients with dementia. The receivers can be portable or stationary.



Product description

RP902 is a repeater unit for our Mater Repeater system.

RP902 unit will be able to extend the range of the system. Up to 14 repeaters can be added to a system.

RP902 has no independent functions, it only works if there is a master unit.

Commissioning

RP902 only needs to be connected to a 230V socket. No wiring is needed between the units.



The unit switches on automatically when it is connected to the electricity supply network.



The LED

The LED is either green or red when lit.

RED: Error, no connection

RED flashing: Battery status.

GREEN: Connection and OK.

GREEN flashing: Confirmation of the answer.

No light: The device is switched off.

Backup

The RP902 has an internal backup battery that keeps the system running in case of power failure.

The battery lasts for a few hours. If necessary, the battery can be recharged (a full charge takes about 24 hours).

If the battery cannot be replaced, contact your retailer for battery service.



Configure

Before use, the RP902 must be connected to the system. This must be done in the MR902 unit. See the MR902 user manual on how to do this.

Service

RP902 has four primary buttons, these are for future use.

F4, on the other hand, is for shutting down the unit, usually before transport or long-term storage.

Shutdown: disconnect RP902 from the electric power supply by pressing and holding F4 for about 5 seconds until it flashes RED.

Maintenance

Software update:

It is possible to update the RP902 software. For a more detailed description, please check the KNOPtool.

Cleaning

The product can be cleaned with a moist cloth or a wet wipe.

Spare parts and accessories

Spare parts and accessories can be ordered from Knop Elektronik A/S at www.knop.dk.



Technical data

Frequency HF:	869.2125 MHz
Range:	Up to 1500 metres between MR902/RP902 and RP in free view. ⁽¹⁾
Range in a building:	Recommended distance between repeater units <25m
Power supply:	230VAC
Connection plug:	2-pole EURO
Battery:	Lithium battery, LP853048 3.7V 1200mA
Battery time:	Approximately 4 hours
Charge:	Approximately 1 day
Surrounding environment:	Indoor use. ≤ 90% non-condensing
Ambient temperature:	0°C to +40°C
Cabinet type:	Color RAL9001 ABS
Cabinet dimensions:	Ø110mmx52mm
Desnity:	IP40
Weight:	135g

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⁽¹⁾ Measured outdoors with an unobstructed view between transmitter and receiver. In buildings the range is reduced.



Explanation of symbols and approvals

This product complies with:	
CE	Directive 2017/745/EU MDR Directive 1907/2006/EU REACH Directive 2011/65/EU RoHS Directive 2012/19/EU WEEE ISO 14971:2019 Risk Management for Medical devices EN 301 498-1 V2.2.3 Electro Magnetic Compatibility EN 301 489-3 V3.1.1 Electro Magnetic Compatibility EN 50130-4:2011 + 2014 Immunity alarm systems EN 300 220-1 V3.1.1 Short Range Devices EN 300 220-2 V3.1.1 Short Range Devices EN 300 220-3 V2.1.1 Short Range Devices EN 60601-1-2:2014 + 2015 Electromagnetic compatibility (Medical) EN 62368-1:2020 Electrical safety EN 50581:2012 Hazardous substances
	The product must not be used if the packaging is damaged.
	Medical Device Class 1, rule 1
	Manufacturer KNOP Elektronik A/S, Fabriksvej 20, DK-7600 Struer, Denmark
	Read the manual(s) before installation and commissioning at www.knop.dk .
	Interference may occur in an environment with equipment marked with this symbol.
	Must be protected against liquids.
	0 °C to +40 °C, temperature limit for transport/storage and use.
	The product must not be disposed of with normal household waste.
	Single Registration Number DK-MF-000025631
	Unique Device Identifier 05744002850342
	Products reference RP902, Repeater
	Serial Number Placed on the product
	Ingress Protection code IP40