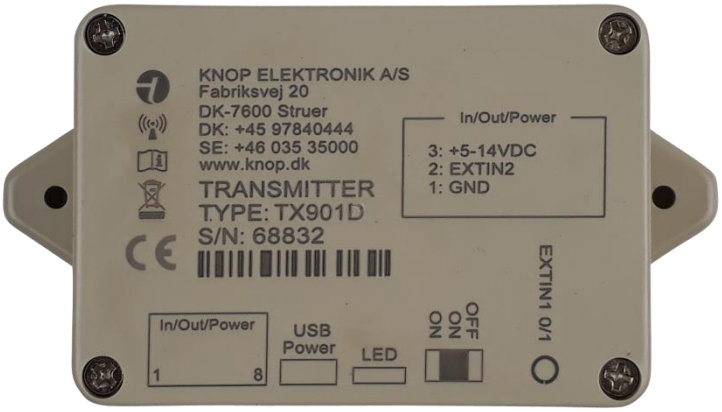
User manual

TX901D



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Warning and safety instructions

- The battery in this product must compile with the relevant IEC safety standards for batteries.
- Do not consume or eat the battery, risk of chemical burns.
- Keep new and used batteries away from children.
- If the battery compartment cannot be closed properly, discard the product, and keep it away from children.
- Read the intended use before use.
- Batteries should be checked regularly. ‘
- Read the intended use before using.
- 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.
Repeatersystem	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

TX901D is a 2-channel transmitter designed to transmit to the KNOP 901 series receivers.

The product has an on/off switch.

The external inputs are activated either via RJ45 or mini-jack connectors.

The product can be powered either via the internal batteries (AA alkaline) or via Micro-USB or via the RJ45 connector.

TX901D can be used together with MR902/RP902 repeater system.

Adapter cables are available as accessories - see knop.dk.

Check the coverage area

One person activates the product at short intervals, while another person systematically walks around the area and marks on a sketch the building and the area where there is coverage. The map is placed in the office so that anyone who needs to use the system can see where there is coverage. Outside the coverage area, alarms cannot be received.
Contact your retailer for more information.

Alarm call

When the external input is activated, the LED flashes green and briefly lights green when the transfer is successful or red if the transfer fails.

TX901D repeats the transmission up to two times at 30-second intervals if the transmission fails.

Commissioning

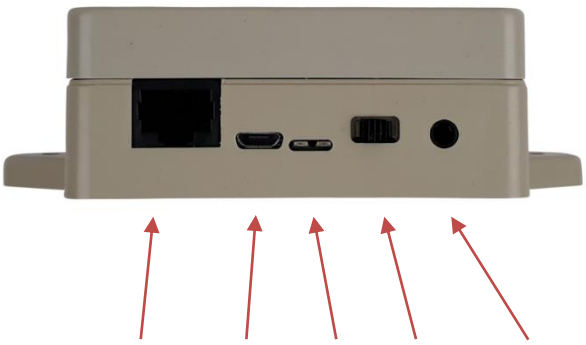
It is necessary that the product is in good condition.

External connection

TX901D has a transmitter function on mini-jack and RJ45 respectively external alarm 1 or 2 telegrams are sent on activation.

The modular RJ45 connector contains the external input and the possibility of an external supply.

Modular connector, RJ45:
Pin 8: GND
Pin 7:
Pin 6:
Pin 5:
Pin 4:
Pin 3: External supply 5-14 V
Pin 2: External input 1
Pin 1: GND



1-RJ45-8 - MiniUSB - LED – ON/ON/OFF - MiniJack

NOTE: The cable used must not be longer than 3 meters for RJ45 and mini-jack connectors.

TX901D can be powered via the MiniUSB connector, the batteries can act as a backup in case of power failure.

Battery alarm

The batteries are checked regularly, if the batteries need to be replaced the red LED flashes regularly and the product beeps.
When an alarm is sent to an RX901A, B, or C, the display may show "Low battery".

Changing the battery

When replacing the battery, the four screws on the front of the casing are loosened and the product can be disassembled.
2 x 1.5V AA batteries are used.

REMEMBER to turn the batteries correctly.

Maintenance

Update of TX901D
It is possible to update the software of the TX901D. For further 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 500 m between TX901D and RX901B [(1)]
External power supply:	5-14V
Power consumption, off:	< 20uA
Power consumption, transmission:	< 100mA
Surrounding environment:	Indoor use. ≤ 90% non-condensing
Ambient temperature:	0°C to +40°C
Type of cabinet:	Color RAL9002 ABS
Cabinet dimensions:	W: 83, H: 57, D: 35mm.
Density:	IP20
Weight:	130g

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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

CE	**This product complies with:** 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.
MD	**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.
SRN	**Single Registration Number** DK-MF-000025631
UDI	**Unique Device Identifier** 05744002850533
REF	**Product reference/product number** TX901D Transmitter
SN	**Serial number** Placed on the product
IP	**Ingress Protection Code** IP20