

**SPECIFICATION AND USER'S MANUAL**

Type of the device: a NRP-102K stationary sender with a connection control  
It is designed to cooperate with the RP 10-2K receiver.

**TECHNICAL PARAMETERS**

- frequency: 433,92 MHz
- transmission: coded (the KeeLoq hopping code by Microchip Technology)
- connection control: yes
- number of channels: 4 (2 channels are independently controlled)
- voltage supply:
  - nominal: 12 V DC
  - maximal: 10-15 V DC
- power consumption:
  - static: 2,5 mA
  - maximal: 110 mA
- maximal sabotage output capacity: 50mA/12V DC
- range (m)\*: 1000
- temperature operating range: -20 to +40 °C
- security level: IP 67
- antenna socket: BNC 50 Ohm
- dimensions (mm): 76(110)\*61\*33



\* The above range concerns the open space (without any obstacles, when the receiver and the remote control can "see each other"). If there are any obstacles between the receiver and the sender, one must assume that the range would be reduced: for wood and plaster it would be 5-20% lower, for bricks 20-40% lower, and for reinforced concrete 40-80% lower. If there are many obstacles we advise to use retransmitters. If there are metal obstacles, using the radio systems is not recommended.

**The device meets the requirements of the directives EMC 89/ 336/ EEC  
and RTTE 1999/ 5/ EC.**



**Use** - the sender transmits by radio way an alarm signal from a patrolled site to a receiver.

**The transmission** - the radio transmission, based on the hopping code (KeeLoq by Microchip Technology Inc. USA) ensures the high safety of using. Each transmission is different from the previous one. To make the receiver work, you must enter a remote control into its memory – it is the basic condition. The control can be programmed to unlimited number of receivers. The parameter of connection control guarantees getting information about changes on the way of the radio transmission (unexpected obstacles, radio and mechanical sabotage etc.).

**Frequency 433,92 MHz** – the devices work on the frequency 433,92 MHz. This bandwidth does not require any special permissions and concessions for using it.

**Operating** - the sender has two outputs. A change on any of them (K1 or K2) (unshorting the ground) emits a signal. Each unshorting on the given input results in sending one or two (depending on the position of the "number of transmissions" switch) packs of signals with duration time 2s with 1s interval. Duration time of the whole transmission for one channel is 2s or 5s. The position of the switch which allows for choosing the number of transmissions is checked after each supply connection (so after changing the switch's position, disconnect the sender's supply and then connect it again).

There may happen a situation that during sending a signal which concerns unshorting one of the inputs from the ground, the state of the other input also changes. In such case, the information about unshorting the second input will be sent after finishing the previous transmission. To activate the next transmission, short the input to ground and then release it by unshorting it.

NOTE: all the outputs are checked when the supply is connected to the sender. If any of them is unshorted, the signal will be sent.

The sender has a constant-voltage regulator which does not allow for diversification of the sending signal's power (and, simultaneously, the achieved range). The set is also protected from the voltage reversal.

The TEST button is useful for example when entering a sender to the station's memory – when two transmissions are to be sent. The lighting D1 diode signals the transmission.

The contacts of the SAB button lead to the terminal strip. You can connect them to the local alarm central input. This way you will be able to get information about intervention inside the sender.

**The installation conditions** - good. The hermetic case allows for installing the sender even in difficult conditions as humidity or low temperatures. In addition, the antenna socket allows for taking the antenna beyond obstacles.

### WAY OF CONNECTING THE NRP 102K SENDER

