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SPECIFICATION AND USER's MANUAL

type of the device: IDO-04/99 identifying receiver

TECHNICAL PARAMETERS

- type of receiving module: superheterodyne
- sensitivity: -115 dBm
- frequency: 433,92 MHz
- radio transmission: KeeLoq hopping code by Microchip Technology
- memory capacity: 99
- voltage supply:
  nominal: 12 V DC
  allowable: 10-15 V DC
- power consumption:
  static: 30 mA
  maximal: 95 mA
- capacity:
  relay output NO: 1A/ 30 V DC
  sabotage output NC: 50mA/ 12 V DC
- number of relays: 1
- relay's operating mode: monostable
- time scope for the mono mode: 30s
- operating temperature range: 0 to +40 °C
- antenna socket: F type
- dimensions (mm): 79*149*22
- cooperation: any GE sender
- operating range (m)*: 200-1000

** the range depends on the type of the sender*

Functional features of the receiver:

- **identification** – it displays remote control's assigned number
- **shows four types of messages** from a multi-channel sender
- **remembers** last four events
- **confirms acoustically** the acceptance of a report
- possibility of **deleting remotely the controls - individually** or all at once
- the ID number can be assigned freely
- **signals the low battery level** in cooperation with senders supplied with batteries

TABLE OF RANGE

200 metres	types of the remote controls: PUK 101, PUK 102, PUK 104, PUK 112-1, PUK 112-2
400 metres	PNH 201 hermetic button
600 metres	PUK 303 remote control
1000 metres	types of the remote controls: RNB 101, RNB 101S, and NRP 100 stationary sender

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, bricks 20-40% lower, and reinforced concrete 40-80% lower. If there are many obstacles we advise to use retransmitters or stronger remote controls. If there are metal obstacles, using the radio systems is not recommended.

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

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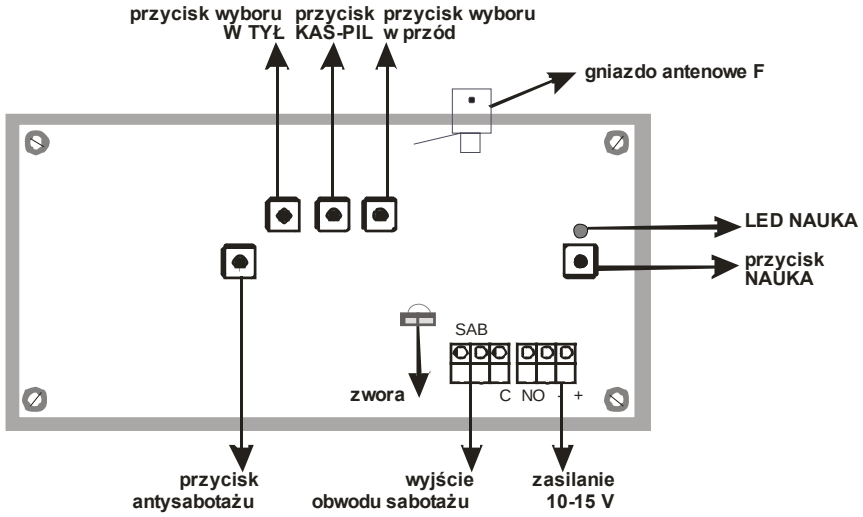
INNER AND OUTER VIEW OF THE RECEIVER



The receiver's use - IDO 04/99 is used in various types of devices remote controlling, when the superior parameter is distinguishing the signal's source. It is also often chosen because of the possibility of deleting the senders individually from the receiver's memory. In systems containing a dozen or several dozen remote controls, using the relay receivers like RSU or OPC is very uncomfortable in case of deleting one or several controls. The perfect solution in such situation is a receiver with an option of individual deleting, like IDO 04/99.

The transmission code - 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. „Loosing" 15 successive transmissions (using the remote control beyond the receiver's range) requires sending the signal twice (press the remote control button twice).

The memory capacity - if the memory capacity of the IDO 04/99 receiver is not enough, we recommended using the IDO 500 receiver, which has the capacity of 500 senders. It also maintains the parameters of identifying the signal source and deleting controls individually.

The receiver's operating - the receiver in the normal state of operating, that is, awaiting for signal from the sender (without remembered events) signals this state by lightning two horizontal lines on the display. After receiving a signal it will:

- turn the internal acoustic signalling device for 30s or until it is deleted with KAS (DEL) button located on the frontal plate
- open the relay (NO-C contacts connection) for 30s or until it is deleted with KAS (DEL) button
- display the sender's identification number on the display
- light the appropriate LED diode with a number from 1 to 4, in according to the sent code

USER'S MANUAL

Important! It is possible to enter the programming and deleting mode ONLY when the display is cleared (there are only two horizontal lines on the display).

1. ENTERING A SENDER INTO THE RECEIVER'S MEMORY

a) press the LEARNING button – the LEARNING LED diode will light and the display will show the first free cell, for example 01. If you want to assign other number to the sender, choose the required number using UP (>>) and DOWN (<<) buttons. If the cell is occupied, the BAT LED diode will light together with the displayed number. Choose another number or delete the sender which has previously been entered.
Important! You can not enter a sender into an occupied cell. First you have to clear the cell.

If the number suits you, you can enter the sender under this number:
b) press any button of the remote control being entered. If you register a stationary sender, activate it. After receiving the transmission the LEARNING LED diode will fade.

c) press the sender's button or activate the stationary sender once more – the LEARNING LED diode will blink and fade. The display for about 2 seconds will show the symbol of three lines and then will move to the normal operating mode, which is signalled by lighting the central segments in both display's positions.
Check whether the registering process succeeded – after pressing the remote control button, the receiver should show the number which has been assigned to it and the diode number 1, 2, 3 or 4 should light (depending on which remote control button was used) and the acoustic signal will turn on.

2. CHANGING THE SENDER'S NUMBER

It is impossible to enter the same sender under another number for the second time. First, you need to delete the sender with the previous number from the receiver's memory and only then, you can enter it under the new number.
If you wish to enter a new remote control (point a) and the receiver's memory is full (99 senders have already been entered), the device will display the cell no.99 and the LED BAT diode will light. In order to register a new sender, you need to clear a cell in the receiver's memory (to delete one of the senders entered earlier).

3. INDIVIDUAL DELETION

a) press the LEARNING button – the LEARNING LED diode will light and the display will show the first free cell
b) using the UP-DOWN buttons set the number of the sender being removed on the display – the LEARNING LED diode will still light
c) press the KAS-PIL button – the LEARNING LED diode will blink twice and then fade. The display will show the symbol of 3 lines for about 2 seconds and then will move to the normal operating mode, which is signalled by lighting the central segments on both positions of the display.
After correct deletion the receiver does not react to sending transmission from the deleted sender (it will be silent).

4. DELETING ALL THE SENDERS

To delete all the senders at once from the receiver's memory, during the deletion process press the LEARNING button for at least 8 seconds (until the LEARNING LED diode will fade). CLEAR MEMORY.

5. DELETING THE ACOUSTIC SIGNALLING AND THE RELAY'S OUTPUT

The KAS button on the frontal plate is used to delete the acoustic signalling and simultaneous to delete the relay's output. If it is not used to manual deletion, the acoustic signalling and the relay's output will get automatically closed after about 30s. Important! Cutting the switch turns the internal acoustic signalling device off.

6. THE EVENTS MEMORY AND DELETING ENTRIES FROM THE EVENTS MEMORY

If the receiver gets successive signals from the receivers, on the display you will see the numbers of subsequent received senders. If those entries are not deleted, the receiver will keep this information and will display it sequentially in the cycle 3 seconds each.
Reading the events memory – the beginning should be counted from the moment when two horizontal lines appear on the display for about 1 second. The first number displayed after it is the latest information, i.e. the newest one (the events are displayed in the sequence from the newest to the oldest one). The events memory has the capacity of 8 pieces of information; the 9^{th} one deletes the first one.
DELETING. The states remembered in the events memory can be deleted with use of the KAS button but it is possible only after deleting the acoustic signalling. If there are several entries in the events memory and you want to delete only one of them, wait until you see the given entry on the display and then press the KAS button and keep it pressed until on the display letters CA appear (it means deleting the entry from the memory). Keeping the KAS button pressed deletes the entry which appears next. After deleting the whole information you will see for 2 seconds on the display the symbol of 3 horizontal lines – the events memory is empty. The receiver moves to the normal operating mode.