

PES / PESA – WIRELESS HAND SENSOR AND RECEIVER

PES + PESA
User Manual V1.0





Please read the user manual carefully before using your device. Pay attention to the installation, electrical connection and initial start sections and follow the specified steps. The product owner/user should keep this user manual in a known and visible place throughout the life of the product.

- Use the product only indoors and in dry environments. This product is designed for indoor using and there is no protection against water and dust.
- Keep the product in a dry place. Otherwise, the product may be damaged by high humidity conditions.
- Batteries are not covered by the warranty in battery operated products. In products whose shelf life has expired, malfunctions caused by battery liquid discharge or leakage are not covered by the warranty.
- All service and repairs can only be done by Kontal Elektronik technical service. The product should not be intervened by any other persons.
- The operating voltage of the product is described on its label. Do not power the product with a different source outside this voltage range.



If the product is used in violation of the above-mentioned items, it may cause fire, personal injury, or damage to the product or the structure in which the product is installed. Kontal Elektronik Ltd does not accept any responsibility for such situations caused by the user.

This exclamation mark will be used to highlight important points.



Do not touch supply input of the product with bare hands.

- ✓ This electric mark will be used to highlight electricity hazard.



- ✓ This sign on the label indicates that the supply voltage of the product is DC.



This symbol on the product or its box indicates that this product cannot be treated as normal household waste. Instead, the product should be delivered to designated collection points for the recycling of electronic equipment. Incorrect disposal of the product can have negative consequences for the environment and human health.



Legal rights and responsibilities of this document and its revisions belong to Kontal Elektronik Ltd. It is illegal and prohibited to change it without permission.

1.DEFINITION

Wireless Hand Sensor is a control device that detects when an object approaches, without the need for touch, and sends a signal to its receiver during the detection. The receiver card will give relay output as long as the signal comes from the hand sensor. Since it can be used without the need for contact and is battery-operated, it is easy to assemble, practical and also hygienic. With these features, it is a product that can be easily used in places where hygiene is at the forefront, such as hospitals, in automatic glass door systems where cable installation is difficult, and in many similar areas.

2.TECHNICAL FEATURES

TECHNICAL FEATURES – Transmitter Sensor

Model	: PES BEYAZ / PES SİYAH
Product Code	: K177-01 / K155-01
Working Voltage	: Battery (2 x 1.5V AAA)
Working Current	: ~30mA
Working Frequency	: 433,92 MHz
Hand Sensing Distance	: 5 - 25 cm
Receiver Working Distance	: <30m*
Battery Life	: 2 years**
Colour Options	: Black, White
Weight	: 90gr
Dimensions	: 60,35 x 97,68 x 19,90mm

TECHNICAL FEATURES - Receiver

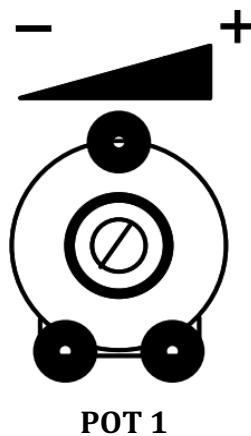
Model	: PESA
Product Code	: K172-01
Working Voltage	: 12 / 24V DC
Working Current	: 48 mA @24V DC
Working Frequency	: 433,92MHz
Contact Type	: 12 / 24V DC - NO
Max. Contact Power	: 250V 5A
Transmitter Capacity	: 40
Weight	: 28gr
Dimensions	: 27 x 67,5 x 22mm

* The working distance of the hand sensor may vary depending on the working environment.

** Measured under the following conditions: System set to 5 cm distance, 500 ms signal duration and 100 detections per day

2.1. Adjusting the Hand Sensing Distance

While the adjustment you make in the (+) direction with the trim pot shown as POT 1 on the sensor card will increase the detection distance, the adjustment you make in the (-) direction will decrease the detection distance(see the figure below).



2.2. Working Structure

- First, register the transmitter sensor to the receiver. To do this, put your receiver card into learning mode as explained in the section below and perform the registration process by bringing your hand close to the sensor. The recording process is completed when the LED on the receiver card blinks 3 times.
- A maximum of 40 sensors can be registered on the receiver card.
- Multiple sensors can be operated side by side without affecting each other.
- As long as the sensor detects, the red LED on the product will be on; when it does not detect, the LED will remain off.
- The sensor sends information to the receiver during the detection period, and the receiver gives output to the system with dry contact.
- Battery life is 2 years under normal conditions. (5 cm distance, 500 ms signal duration and 100 detections per day)
- When the voltage level of the battery decreases, when you bring your hand closer to the sensor, the red LED will blink three times and then the system will give an output. This indicates that the battery is weak and should be replaced. After the low battery warning starts, the product continues to operate for a certain period of time.
- Use 1.5V AAA battery when changing the battery.

2.3. Sensor Registration

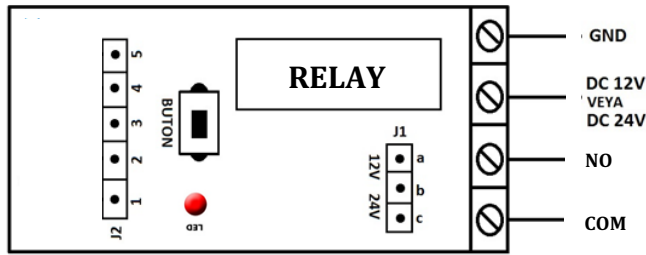


Figure 1 – Receiver Top View

1. Connect the power connection of the receiver card.
2. Press and hold the button on your card until the LED turns on. After the LED turns on, stop pressing the button and move your hand closer to the sensor you want to register.
3. If the system has registered the sensor, the LED on the receiver will blink three times.

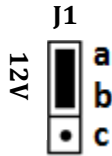


Figure 2 - 12V Option

Determination of Receiver Operating Voltage

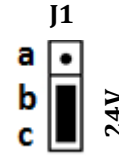


Figure 3 - 24V Option



NOTE: If the sensor has not been registered to the receiving card before, when the button is pressed, the LED will turn on and off twice and become active. If there is a previously saved sensor in its memory, the LED will be activated directly.

2.4. Deleting Sensors from Receiver Memory

- Turn off the supply voltage of the receiving card.
- When there is **NO power** in the system, press the button on the receiver card and **do not lift your finger from the button**.
- **With your finger on the button**, power on the receiver card.
- The LED on the receiver card will stay lit for about 3-4 seconds and then it will blink to indicate that it has deleted all hand sensors in the memory. After these operations, remove your hand from the button.

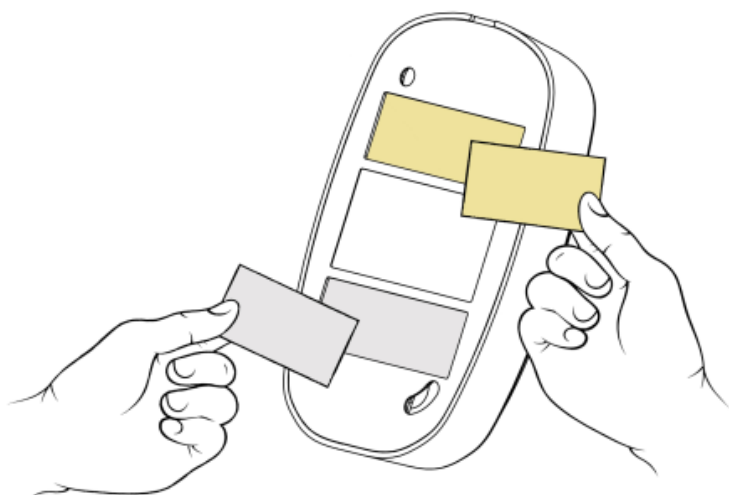
Warnings



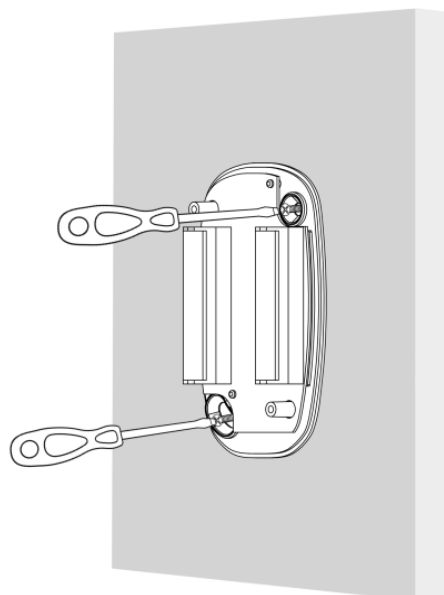
- Keep your receiver board away from switch mode circuits during installation. Otherwise, your product may not work stable.
- The receiver card should not be installed in a metal box. Your card will not work stably in the metal box.
- More than one receiver card should not be mounted side by side.
- Before installing PES card, make sure that no objects come in front of your product within the working distance. For example, if the shutter closes and comes in front of the PES product, the battery will run out quickly as the pes product will run continuously.

3.INSTALLATION

1.

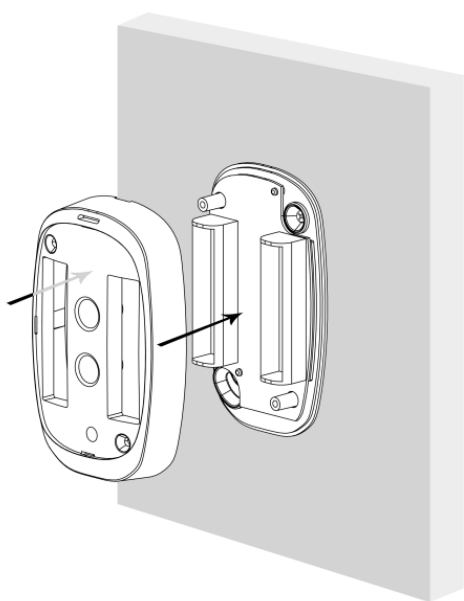


You can fix the sensor to smooth surfaces such as glass without any screwing, using double-sided tape.



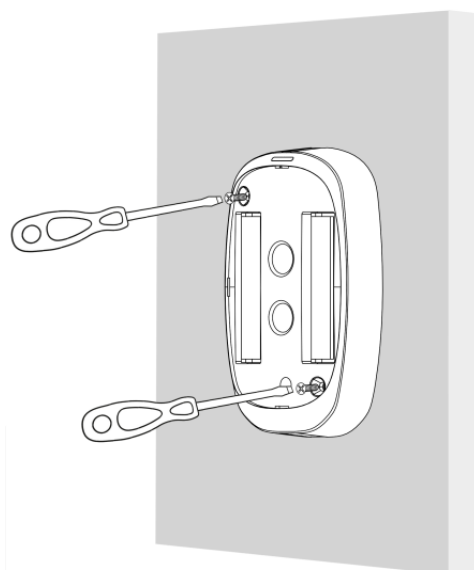
The bottom cover of the sensor can be fixed to the wall with the help of a screwdriver from the places indicated in the image.

2



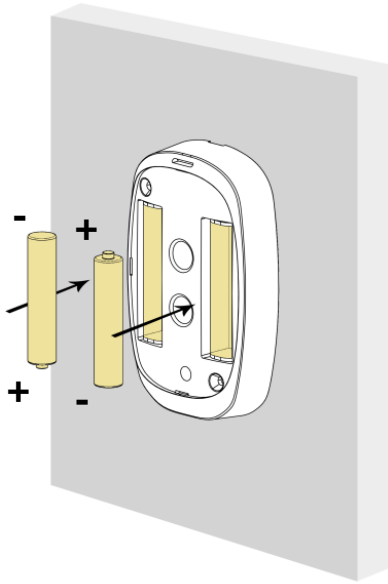
The upper cover is placed on the lower cover in the correct position.

3



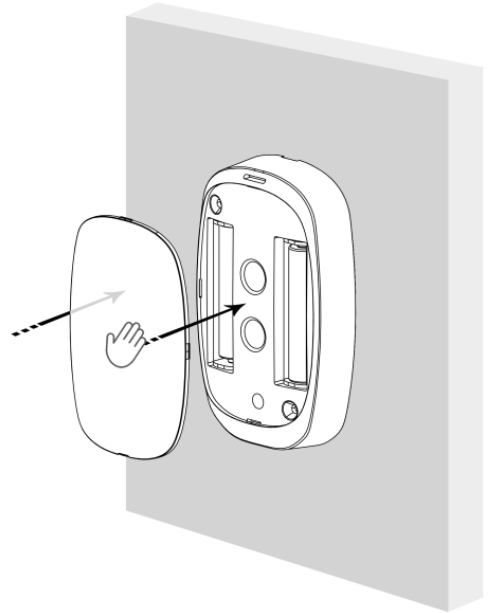
The upper cover is screwed to the lower cover with the help of a screwdriver.

4



Batteries are inserted in the proper direction

5



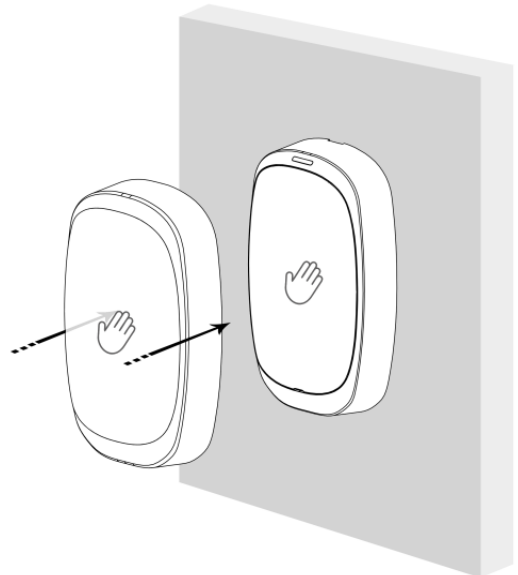
Front plastic glass is attached

6



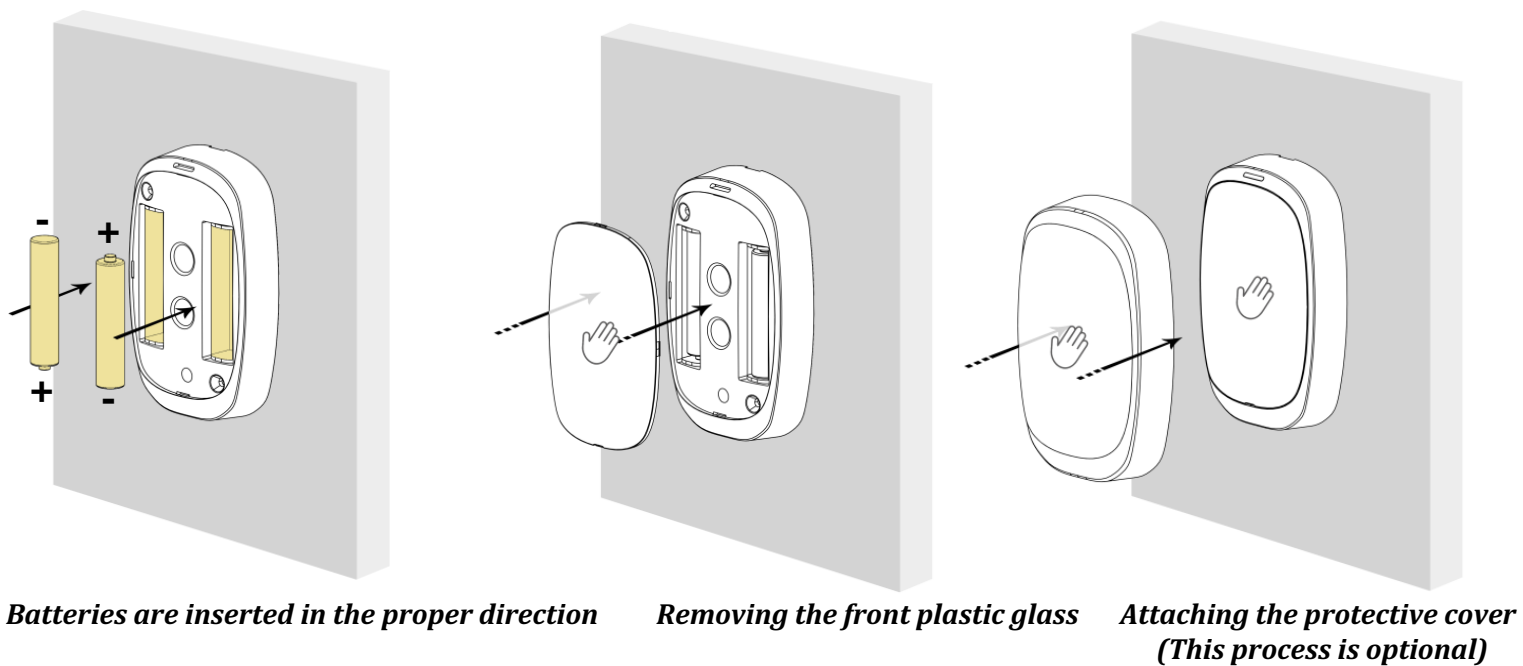
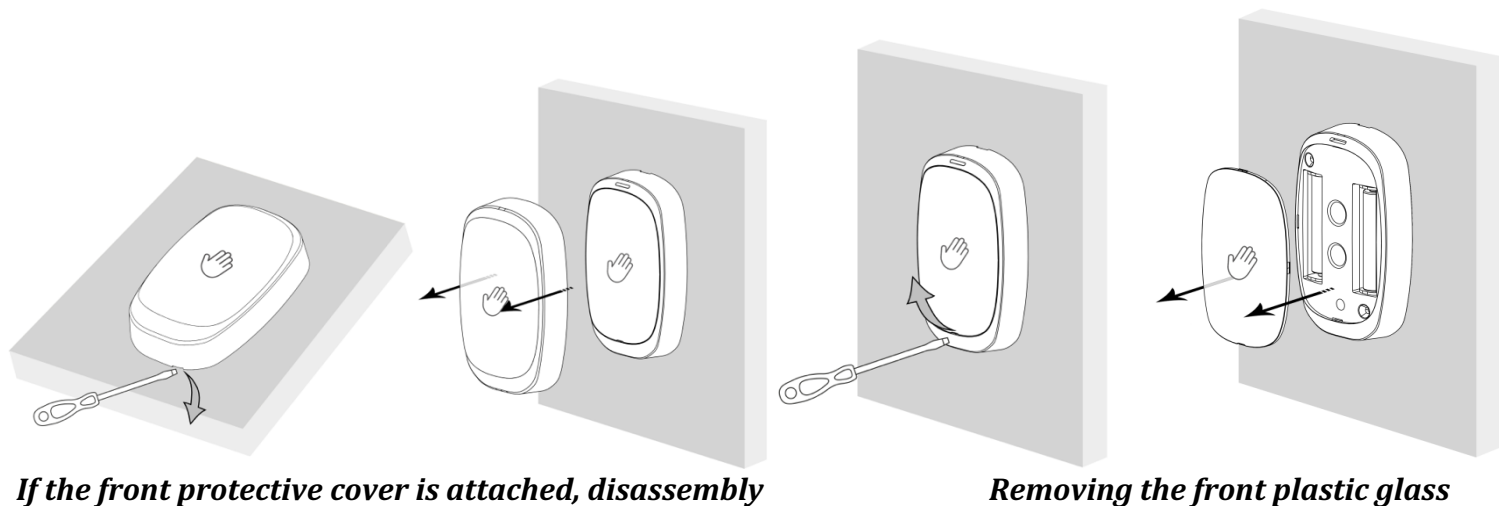
Front plastic glass is pressed from the edges and placed on the top cover

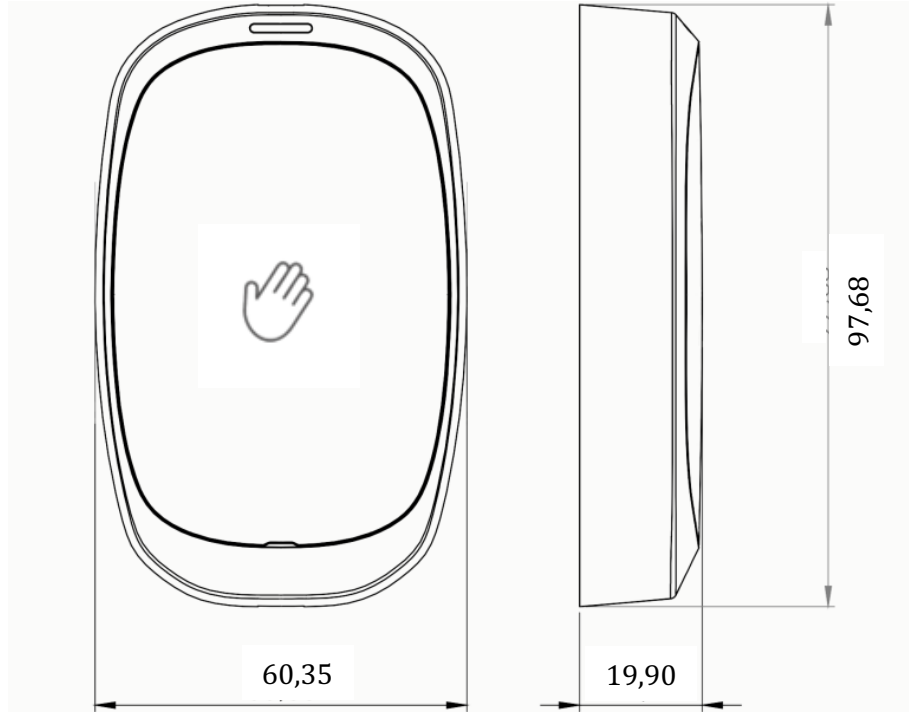
7



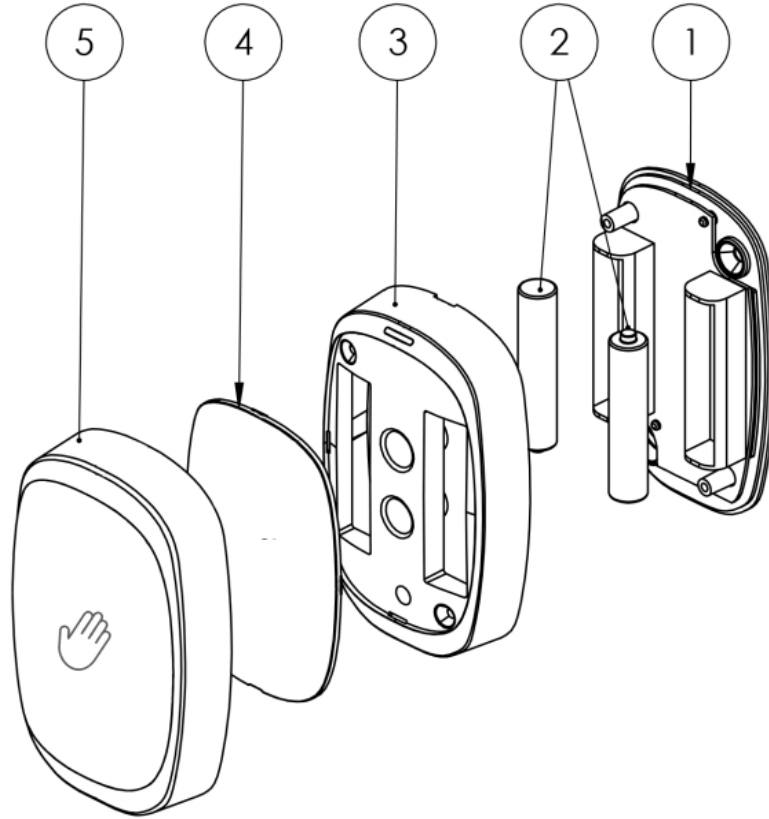
Preferably protective cover can be fitted

4.BATTERY REPLACEMENT STAGE





Dimensions(mm)



Product Parts