

HFP

180° Adjustable Safety Beam
Sensor With Battery



KONTAL

CE

Before operating the device, be sure to read this user manual carefully. Follow the steps described in the installation, electrical connection, and initial startup sections with attention. After completing these steps, the product owner/user must keep this manual in a known and easily accessible location for the entire service life of the product.



- Store the product in a dry environment. Otherwise, malfunctions may occur.
- In battery- or accumulator-powered products, batteries and accumulators are not covered under warranty. Similarly, failures caused by battery discharge or leakage in products that have exceeded their shelf life are not covered under warranty.
- All service and repair operations must be carried out exclusively by Kontal Elektronik technical service. The product must not be tampered with by unauthorized personnel.
- The operating voltage of each product is indicated on the label. Do not supply the device with a voltage different from the specified value.



- ✓ Failure to comply with the above-mentioned conditions may result in fire, serious personal injury, or damage to the product or the structure in which it is installed. In such cases caused by user negligence or misuse, **Kontal Elektronik San. ve Tic. Ltd. Şti.** assumes no responsibility.
- ✓ This symbol will be used to highlight important notes in the following sections.



- ✓ Do not touch the power supply terminals of the device with bare hands.
- ✓ This symbol will be used to indicate warnings related to voltage in the following sections.



- ✓ This symbol on the label indicates that the device operates with a DC supply voltage.



- ✓ This symbol on the label indicates that the device is equipped with reinforced insulation.



- ✓ This symbol on the product or its packaging indicates that the product must not be disposed of as household waste. Instead, it should be delivered to designated collection points for the recycling of electrical and electronic equipment. Improper disposal or destruction of the product may have adverse effects on the environment and human health.



- ✓ This document and its revisions are the legal property and responsibility of **KONTAL ELEKTRONİK SAN. VE TİC. LTD. ŞTİ.** Any unauthorized modification or alteration is strictly prohibited.



- ✓ Ensure that the system is properly grounded for the device to operate reliably.

1. DEFINITION

The Movable Battery-Powered Safety Photocell (HFP) is an infrared (IR) sensor system developed to provide safety and control in automatic door and barrier systems. The system consists of two main modules: a transmitter (HFP-V) and a receiver (HFP-A), positioned opposite each other. The HFP-V operates on battery power and continuously emits modulated infrared signals, eliminating the need for cabling and simplifying installation. The HFP-A detects these signals, and when an object passes between the transmitter and receiver, the infrared signal path is interrupted. Once the signal is blocked, the HFP-A generates an output signal to the connected control panel. In addition, since both the transmitter and receiver units are designed with $\pm 90^\circ$ angle adjustment, proper line-of-sight alignment can be easily achieved even when they are mounted on different surfaces.

1.1 BOX CONTENT

1x HFP-V – Transmitter Safety Photocell 1x HFP-A – Receiver Safety Photocell	2x Waterproof Gasket 2x Waterproof Gasket for Wire 4x Screw Plug 4x 2.9 X 13 YHB Sheet Metal Screw
---	---

**For special orders, the box contents may vary depending on the project or customer requirements.*

2. TECHNICAL SPECIFICATIONS

	HFP-V Transmitter Safety Photocell	HFP-A Receiver Safety Photocell
Product Code	K206-01	K208-01
Operating Voltage	2 x 3,6V DC Battery*	15/40V DC
Operating Current	80uA @ 3,6V DC	8mA @ 24V DC
Operating Distance	12m(Max.)	12m(Max.)
Operating Temperature	-20 °C +55 °C	-20 °C +55 °C
Contact Type	-	Kuru Kontak (NO/NC)
Contact Response Time	-	150ms(Min.)
Contact Capacity	-	30V DC 1A / 125V AC 0.3A (Max.)
Weight	78gr $\pm$ 5gr	58gr $\pm$ 5gr
Dimensions	43 x 105 x 36,5mm	43 x 105 x 36,5mm

* The battery life of the Transmitter Safety Photocell (HFP-V) is approximately 2 years. This duration may vary depending on the quality of the battery used and external environmental conditions. When the battery level becomes low, the LED located on the transmitter board will indicate this status by flashing three times at regular intervals.



For stable operation of the HFP-A, it is recommended to use a power supply with a minimum output power of 0.5 W on the supply line.

3. ADJUSTMENT COMPONENT

a- HFP-V – Transmitter Safety Photocell User Configuration Components

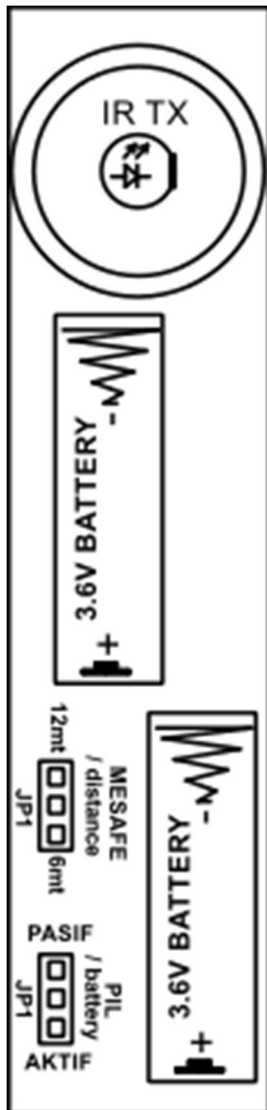
- JMP1: This component allows you to activate or deactivate the HFP-V. (See also Section 4.1)
- JMP2: This component allows you to adjust the operating distance of the HFP. (See also Section 4.1)

b- HFP-A – Receiver Safety Photocell User Configuration Components

- JMP: This component allows you to set the operating voltage of the receiver safety photocell. (See also Section 5.1)
- LED1: This indicator allows you to monitor the battery status of the transmitter photocell. (See also Section 5.1)
- LED2: This indicator allows you to observe the contact status of the receiver photocell. (See also Section 5.1)

4. HFP-V CONTROL BOARD

- HFP-V Control Board Installation and Initial Startup



Şekil 4.1 HFP-V Kontrol Kartı

a. Remove the top cover of your product.
(See also Installation Section 6.1)

b. Set your product to the active state using JMP1.



JMP1
HFP-V Active



JMP1
HFP-V Passive

c. Set the operating distance of your product.



JMP2

*HFP long-distance
operation (Max. 12 m)*



JMP2

*HFP short-distance
operation (Max. 6 m)*

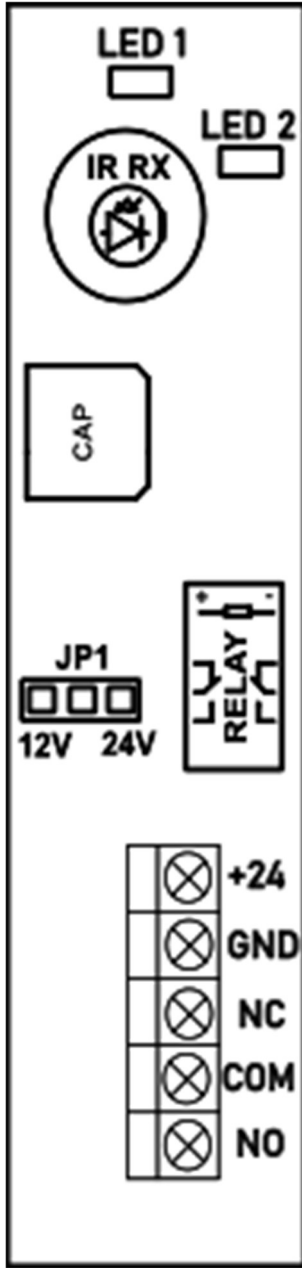
d. You can monitor the operating and battery status of your product via LED1 on the device;

e. When the transmitter module switches to active (operational) mode, LED1 flashes for approximately **3 seconds**. This indicates that the transmitter module has started operating.

f. When LED1 begins flashing at **10-second intervals**, the battery of the transmitter module should be replaced as soon as possible.

5. HFP-A CONTROL BOARD

a. HFP-A Control Board Installation and Initial Startup



Şekil 5.1 HFP-A Kontrol Kartı

- Remove the top cover of your product. (See also Installation Section 6.1)
- Set the operating voltage of your product using the JMP.



JMP
HFP-A operation
with 15–29 V



JMP
HFP-A operation
with 29–40 V

- Make the terminal connections of your product. (See also the Wiring Diagram.)



When making the power connections of the product, pay attention to the “+” and “–” polarities!



Do not supply power to the product at a voltage other than the specified operating voltage. Otherwise, the device may be damaged!



After the power connections of the product have been made, do not touch the connection points under any circumstances!

- When an obstacle enters between the photocells, LED2 on the receiver module will turn on and the relay will switch to the energized state.
- If the battery voltage level of the transmitter unit decreases while the system is operating, LED1 on the Receiver Photocell will turn on. In this case, the transmitter battery must be replaced as soon as possible.

6. INSTALLATION

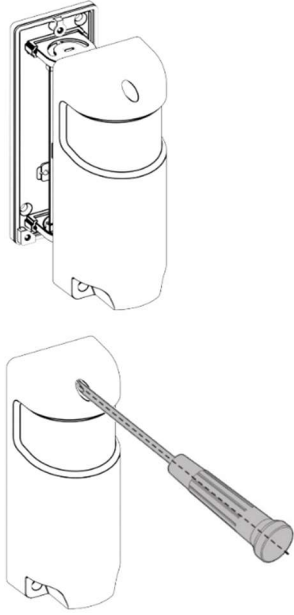


Figure 6.1 – Step 1: Removal / installation of the HFP front cover.

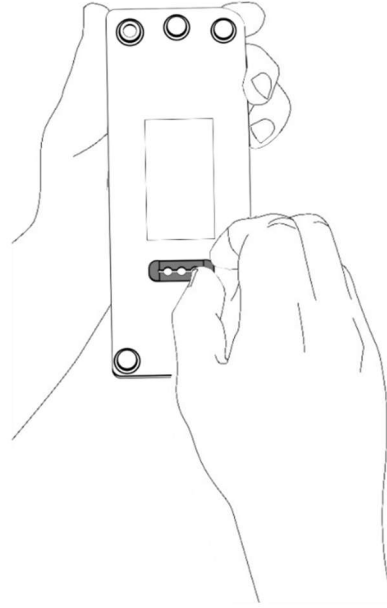


Figure 6.2 – Step 2: Installation of the HFP cable waterproof sealing gasket.

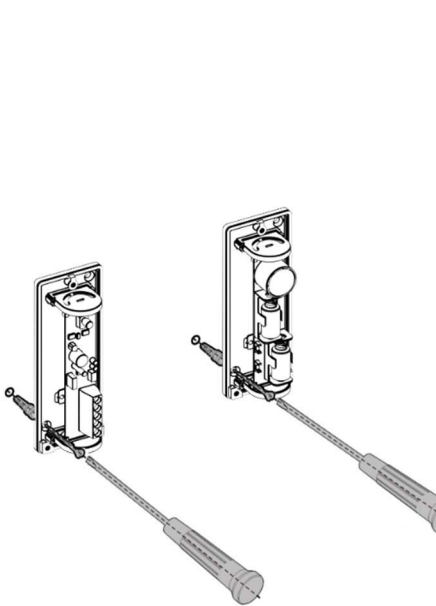


Figure 6.3 – Step 3: Wall mounting of the HFP.

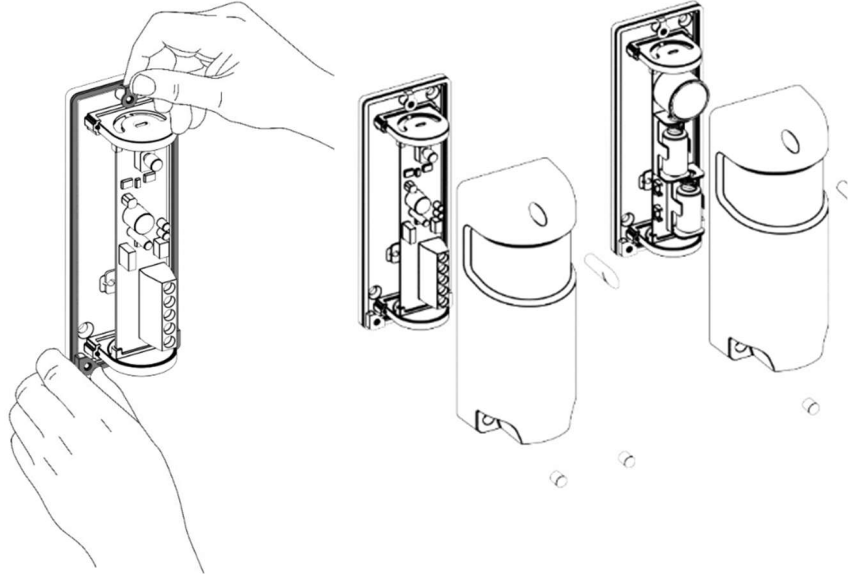


Figure 6.4 – Step 4: Installation of the HFP internal waterproof sealing gasket.

Figure 6.5 – Step 5: Installation of the HFP screw plugs and top cover.

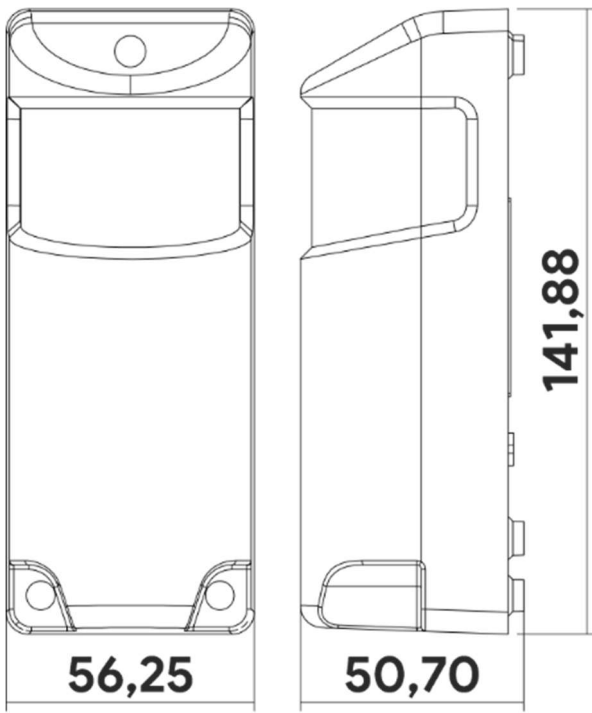
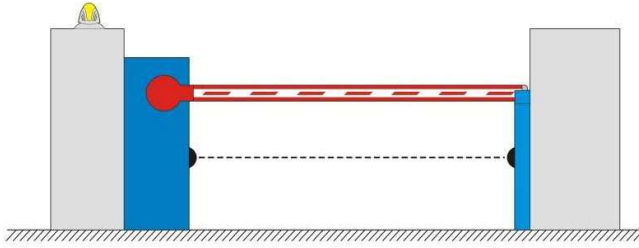


Figure 6.6 – Dimensions (Unit: mm)



Şekil 6. Figure 6.7 – Sample installation illustration 1.

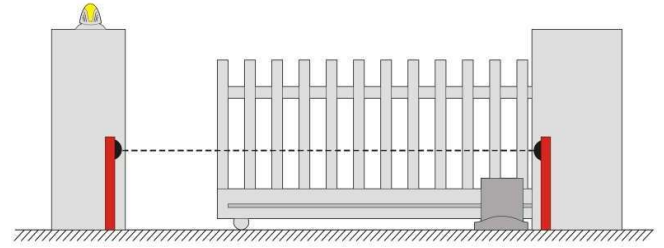


Figure 6.8 – Sample installation illustration 2.



Mount the receiver and transmitter modules in the same alignment and in direct line of sight with each other. This alignment is critical for proper system operation.

(See also Figures 6.7 & 6.8)

7. WIRING DIAGRAM

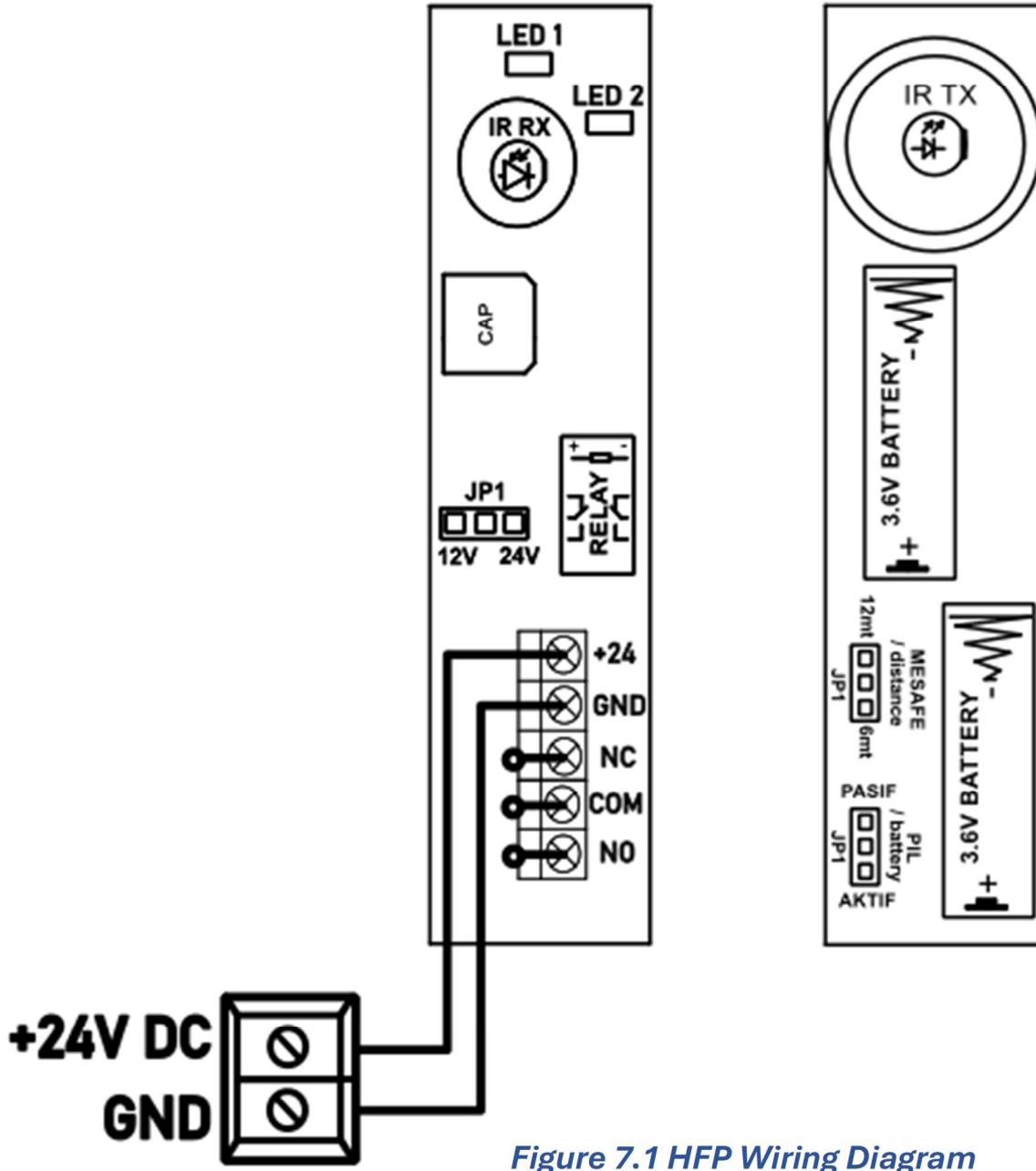


Figure 7.1 HFP Wiring Diagram

KONTAL



Manufacturer / Authorized Service

Kontal Elektronik San. Ve Tic. Ltd. Şti.

Çorapçılar Sanayi Sitesi A Blok NO: 1-2 İkitelli OSB

İSTANBUL / TÜRKİYE

+90 212 485 61 11

info@kontal.com.tr

www.kontal.com