EN

AirWD-100L

Magnetic detector (indoor)

Characteristics

• The magnetic detector is used to detect motion – it is activated by attaching / removing the magnet from the sensor.

• The LoRa network can be used for message transmission.

• Anti-sabotage function (tamper): When unauthorized interference with the detector occurs (disassembly) it sends an information message to the server.

• Data is sent to the server from which it can be subsequently displayed as a smartphone, application, or Cloud notification.

• Battery status information is sent as a message to the server.

• Power supply: 1x CR123A battery.

Description

Detector   D/WD

1. Antenna
2. Magnetic contact
3. Battery
4. Tamper
5. Magnet
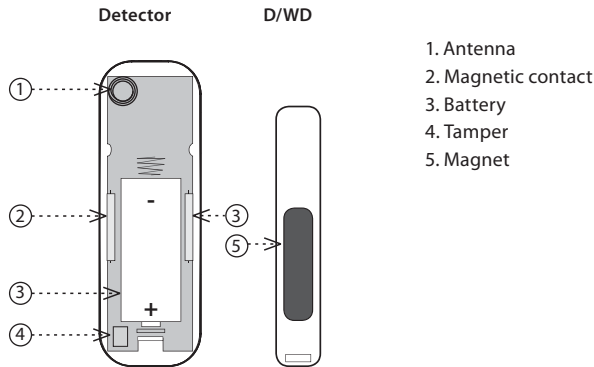
Cloud app assignment

It is done in your Smartphone application. Enter the relevant information on the product cover into the application.

Function

• When the battery is inserted, the detector sends an initial message, the LED blinks.

• Activation occurs when the magnet is attaching / removed from the sensor.

• The detector sends a data message every 12 hours. In case of a state change, it sends the data message immediately.

• In case of an open box, every movement of the magnet in/out is indicated by the blinking of the LED. In the case of a weak battery when moving in / out of the magnet is indicated by the LED flash twice.

• Alarm - when the magnet is moved to the detector, an audible alarm will sound for 2 seconds.

General instrucions

Internet of Things (IoT)

• The IOT wireless communications category describes the Low Power Wide Area (LPWA). This technology is designed to provide full-range coverage both inside and outside buildings, energy-saving and low-cost operation of individual devices. The LoRa network is available to use this standard.

LoRa network information

• The network is bidirectional and its communication uses free frequency band.
  • 865 - 867 MHz   India
  • 867 - 869 MHz   Europe
  • 902 - 928 MHz   North America, Japan, Korea
• The advantage of this network is the possibility of freely deploying individual stations in local locations, thus strengthening their signal. It can therefore be used efficiently in company premises or, for example, in local parts of cities.
• For more information on this technology, please visit www.lora-alliance.org.

Caution for proper operation:

• Products are installed according to the wiring diagram given for each product.
• For proper device functionality, it is necessary to have sufficient coverage of the selected network at the installation site.
• At the same time, the device must be registered in the network. Successful device registration on a given network requires a charge for traffic.
• Each network offers different tariff options - it always depends on the number of messages you want to send from your device. Information on these tariffs can be found in the current version of the ELKO EP pricelist.

Assembly

Detector
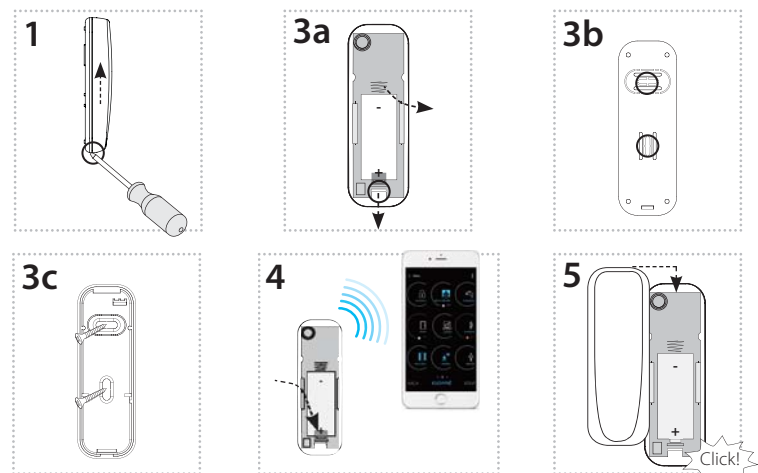
1. Push the screwdriver into the hole at the bottom of the detector, slide the upper cover by pulling it up and open the detector.

The product can be attached in two ways:

2. Directly on a flat surface by gluing * - Apply a suitable adhesive to the outside of the base. Place the base at the desired location (moving window or door leaf) and allow to dry.

3. Using a suitable fastener ** by screwing
   a) Lower the molding at the bottom of the machine and pull it out of the base.
   b) Break and remove the screw plugs (e.g. with a Screwdriver).
   c) Drill the two holes of the appropriate diameter corresponding to the position of the holes in the bottom of the box in the required position (moving wing of the window or door). Place the base at the desired location and attach it with suitable bonding material according to the substrate. Click the unit into the base.

4. Remove the insulation foil, check the correct placement of the battery (the detector functionality message will be sent to the application).

5. Insert the top cover of the cover into the hole in the lower cover and snap it into place.

Magnet D/WD

You can attach the magnet in two ways:

- Directly on a flat surface by gluing * - Apply a suitable adhesive to the outside of the base. Place the base on the desired location (on the window or door frame) and let it dry.
- Using a suitable fastener ** by screwing.
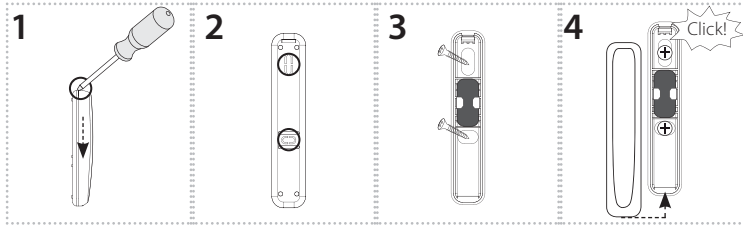
1. Push a screwdriver into the hole in the upper part of the magnet, the top cover slide and pull down magnet to open.

2. Break and remove the screw plugs (e.g. with a Screwdriver).

3. Place the base at the desired location (on the window or door frame) and attach it with suitable bonding material according to the substrate.

4. Insert the top cover of the cover into the hole in the lower cover and snap it into place.

## Recommendations for installation

- For the proper operation of the detector, the correct positioning position must be maintained so that the sensing distance is maintained when the window or doors are closed. Therefore, test the position of the detector and the magnetic module before installation.
- The detector is intended for indoor use.
- Before fixing the detectors in place consult with the manufacturer of the windows and doors, with regards to the most appropriate way to fix the detector.
- With the appropriate location (at the bottom of the window) can be applied to a window in a ventilation position.

* The glue must meet the optimal conditions for product placement (influence of temperature, humidity ...)

** Suitable fitting material can be, for example, a countersunk head screw, a screw Ø of 3 mm.

Safe handling

When handling a device unboxed it is important to avoid contact with liquids. Never place the device on the conductive pads or objects, avoid unnecessary contact with the components of the device.

Replacement of a battery
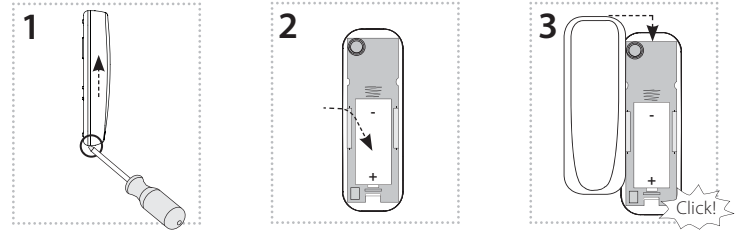
1. Push the screwdriver into the hole at the bottom of the detector, slide the upper cover by pulling it up and open the detector.

2. Remove the original battery and insert new batteries into the battery holder. Beware of the polarity. The LED on the detector will blink.

3. Insert the top cover of the cover into the hole in the lower cover and snap it into place.

Notice:

Only use batteries designed for this product correctly inserted in the device! Immediately replace weak batteries with new ones. Do not use new and used batteries together. If necessary, clean the battery and contacts prior to using. Avoid battery shorts! Do not dispose of batteries in water or fire. Do not dismantle batteries, do not try to charge them and protect them from extreme heating - danger of leakage! Upon contact with acid, immediately rinse the affected area with a stream of water and seek medical attention. Keep batteries out of the reach of children. If it is suspected that the battery has been swallowed or somehow placed inside the body, consult a doctor immediately. Give the doctor information about the type of battery (from battery case, device or its manual, etc.) to determine the chemical composition of the battery. Batteries must be recycled or returned to an appropriate location (e.g. collection container) in accordance with local legal provisions.

UPLINK

		Byte	0								1	2	3
		Bit	7	6	5	4	3	2	1	0			
NOTIFICATION	1		Reserved for future use				Tamper: 1 - opened 0 - closed	Accelerometer: 1 - shake 0 - OK	Window sensor 2: 1 - opened 0 - closed	Window sensor 1: 1 - opened 0 - closed			
HEARTBEAT	2												
START	3		Version FW								Subversion FW	Version FW LoRaWAN	Subversion FW LoRaWAN

Technical parameters

AirWD-100L

Power supply

Battery power:	1x CR123A battery
Battery life by frequency *:	
1x 10 minutes	3 years
1x 60 minutes	5 years
1x 12 hours	5.5 years
1x 24 hours	6 years

Setting

Alarm Detection:	message to the server, audible alarm
Acoustic signal:	greater than 45 dB / 1m
Battery status view:	message to the server

Detection

Closed:	< 1.5 cm
Open:	> 2 cm
Reliability:	99.9 %

Indication

LED:	broadcast
Sensor:	magnetic / tongue relay

Communication

Protocol:	LoRa
Transmitter frequency:	868 MHz
Range in open space:	Approx. 10 km**
Transmission power (max.):	25 mW / 14 dBm

Other parameters

Working temperature:	0…+50°C (Pay attention to the operating temperature of batteries)
Storage temperature:	-30…+70°C
Operation position:	vertical
Mounting:	glue / screws
Protection degree:	IP40
Color:	white
Detector	
Dimension / Weight:	31.5 x 75 x 30 mm / 32 g (without battery)
Magnet D/WD***	
Dimension / Weight:	15 x 75 x 13 mm / 13 g

* Values are calculated under ideal conditions and may vary according to alarm frequency
** Depending on network coverage
*** Included in the package

Warning

Read the operating instructions before installing the device and putting it into operation. Instruction manual is designated for mounting and also for user of the device. It is always a part of its packing. Installation and connection can be carried out only by a person with adequate professional qualification upon understanding this instruction manual and functions of the device, and while observing all valid regulations. Trouble-free function of the device also depends on transportation, storing and handling. In case you notice any sign of damage, deformation, malfunction or missing part, do not install this device and return it to its seller. It is necessary to treat this product and its parts as electronic waste after its lifetime is terminated. Before starting installation, make sure that all wires, connected parts or terminals are de-energized. While mounting and servicing observe safety regulations, norms, directives and professional, and export regulations for working with electrical devices. Do not touch parts of the device that are energized – life threat. To ensure the transmission of the radio signal, make sure that the devices in the building where the installation is installed are correctly located. Unless otherwise stated, the devices are not intended for installation in outdoor and damp areas, they must not be installed in metal switchboards or in plastic cabinets with metal doors - this prevents transmission of the radio frequency signal. iNELS Air is not recommended for controlling life-saving instruments or for controlling hazardous devices such as pumps, heaters without thermostat, lifts, hoists, etc. - radio frequency transmission may be overshadowed by obstruction, interference, transmitter battery may be discharged etc., thereby disabling the remote control.