

U-PROX WDC User Manual

Wireless Magnetic Contact Sensor for Doors & Windows

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1. Introduction

This manual describes the installation, configuration, and operation of the U-PROX WDC – a wireless magnetic contact sensor designed to monitor the status (open/close) of structural elements such as doors and windows. It is an integral part of the U-PROX security alarm system. Once installed and registered, the device sends an alarm notification to the central alarm panel if an intrusion attempt is detected.

For technical support on all U-PROX products, please call +38(091)481-01-69 or email support@u-prox.systems.

2. Safety Warnings

Battery Replacement:

This device is powered by a built-in CR123A lithium battery. Replacing the battery with an incorrect type may result in fire or explosion. Dispose of used batteries in accordance with local regulations.

Installation Precautions:

Ensure the device is installed with the power supply turned off. Follow all electrical safety and fire safety rules during installation and maintenance.

Handling:

Do not disassemble the device or its power supply while it is energized or if the cable is damaged.

3. Applications for Customization

The U-PROX WDC is designed to work seamlessly with the U-PROX security system. You can configure and customize the sensor using:

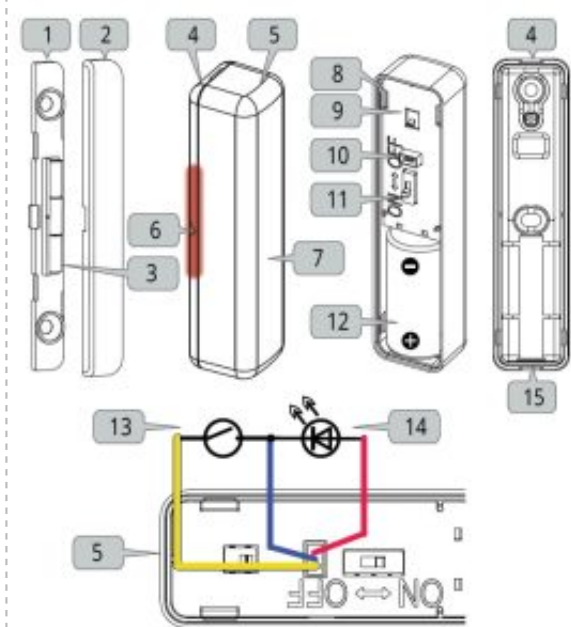
- **U-PROX Installer Mobile Application:** For quick setup, testing, and calibration via your mobile device.
- **Installer Web Portal:** Accessible at <https://web-security.u-prox.systems/>, it offers full configuration of the sensor and other system elements.

4. Description and Principle of Operation

U-PROX WDC is a magnetic contact sensor that monitors doors and windows. It detects any opening or displacement through its built-in reed switch. When a breach is detected, it sends an alarm notification to the central alarm panel using an encrypted, two-way ISM-band wireless interface. Note that the sensor is designed to work exclusively with the U-PROX security system.

5. Functional Elements of the Device

	<ol style="list-style-type: none">1. Bottom Plate of the Magnet Case2. Magnet Case Cover3. Neodymium Magnet4. Bottom Plate of the Sensor Case5. Upper Cover of the Sensor Case
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with Device Capsule

6. **Magnet Position Marks**
7. **LED Indicator**
8. **Protective Plastic Plate for the Device Board**
9. **Tamper Contact**
10. **Connector for External Sensor/LED:**
 1. LD contact (+ LED, red)
 2. GND contact (ground, blue)
 3. DC contact (reed switch, yellow)
11. **On/Off Button**
12. **CR123A Battery (Pre-installed)**
13. **External Sensor (Reed Switch)**
14. **External LED (Optional)**
15. **Rubber Seal**

6. Technical Specifications

Power Supply: 3V, CR123A lithium battery (service life up to 5 years)

Wireless Communication:

- ISM-band interface with multiple channels
- **ITU Region 1 (EU, UA):** 868.0...868.6 MHz, 100 kHz bandwidth, 20 mW max, up to 4800 m (line-of-sight)
- **ITU Region 3 (AU):** 916.5...917 MHz, 100 kHz bandwidth, 20 mW max, up to 4800 m (line-of-sight)
- Two-way encrypted communication with a 256-bit key and sabotage (jamming) detection.

Operating Temperature: -20°C to +50°C

Environmental Conditions: Permissible humidity up to 95%; Climate class III (EN 50131-1)

Dimensions & Weight:

- Sensor: 85 x 20.9 x 20.4 mm; Weight: 66 grams
- Magnet: 85 x 11 x 6 mm

Protection: IP55 rated

7. Installation Instructions

7.1 Selecting the Installation Location

Avoid:

- Areas with high humidity or extreme temperatures
- Locations with heavy radio interference or near objects that may shield or attenuate the radio signal (e.g., metal surfaces, mirrors)
- Sites closer than 1 meter to the security center

Recommendation: Use the U-PROX Installer app to verify optimal signal strength at your chosen location.

7.2 Mounting Procedure (Vertical and Horizontal Installation)

Vertical Installation:

- **Install the Magnet:** Securely fix the magnet at the desired location (e.g., on a door or window frame) using the provided mounting kit or adhesive tape.
- **Mount the Sensor Base:** Attach the bottom plate (sensor base) to the surface using screws or double-sided adhesive tape. Ensure the area is clean and dry.
- **Install the Sensor:** Slide the sensor into place within the base plate. Ensure that the tamper contact locks correctly (a visual confirmation will be provided by the LED indicator).

Horizontal Installation:

- **Install the Magnet:** Position the magnet in line with the sensor's contact area.
- **Mount the Sensor Base:** Affix the sensor base horizontally on the surface.
- **Place the Sensor:** Slide the sensor into the base ensuring proper alignment and secure locking.

7.3 Connecting External Components

If additional external components (such as an LED for visual arm/disarm confirmation) are required, connect them to the dedicated contacts as follows:

- **LD Contact:** + LED (red)
- **GND Contact:** Ground (blue)
- **DC Contact:** Sensor (yellow)

8. Operation and Settings

8.1 Device Registration

Launch the U-PROX Installer Mobile App or Web Portal and log in with your installer credentials.

- **Add the Device:** Follow the on-screen instructions to register the U-PROX WDC with your U-PROX MPX (or other central unit). Bring the sensor within approximately 1 meter of the security center during registration.

8.2 Testing the Connection

Use the Installer app to initiate a connection test. The sensor's LED indicator will provide feedback:

- **Green:** Successful transmission/reception
- **Red:** Communication failure (in which case, check the installation or reposition the sensor)

8.3 Configuring Settings

- **Light Indication:** Toggle the LED indicator on/off according to your requirements.
- **Group Assignment:** Assign the sensor to the appropriate security group (for example, "Front Door" or "Living Room Window") to enable integrated system monitoring.
- **Additional Settings:** Further settings may be configured via the U-PROX Installer app or web portal to customize behavior, such as alarm delays and response to tampering.

9. Maintenance and Service

Cleaning:

Periodically clean the sensor body with a dry, soft cloth to remove dust.

Battery Replacement:

If the battery's service life ends (up to 5 years), follow the manufacturer's instructions for safe battery replacement using a utility tool. Always dispose of used batteries in accordance with local regulations.

Troubleshooting:

If the sensor fails to communicate, verify the installation, check for radio interference, and consult the U-PROX Installer app for diagnostic information.

10. Compliance and Warranty

Standards:

The U-PROX WDC complies with the Radio Equipment Directive 2014/53/EU and relevant EN standards (e.g., EN 50131-1).

Warranty:

Warranty for the device (excluding batteries) is valid for two years from the purchase date. If you experience any issues, please contact support@u-prox.systems.

11. Scope of Delivery

The complete package includes:

- U-PROX WDC Sensor
- Neodymium Magnet
- Mounting Kit
- Quick Start Guide