

U-PROX WDC Uni User Manual

Wireless Magnetic Contact Sensor with Angle-Adjustable Alarm and Glass Breakage Detection

This model incorporates all features of the WDC Plus – including integration with roller shutters, indoor/outdoor use, impact and vibration sensing, over-the-air (OTA) updates, three available body colors, and arming in airing mode – and adds a unique glass breakage detection function. It is fully compatible with the U-PROX security system.

Table of Contents

1. Introduction
2. Safety Warnings
3. Applications for Customization
4. Description and Principle of Operation
5. Functional Elements of the Device
6. Technical Specifications
7. Installation Instructions
 1. 7.1 Selecting the Installation Location
 2. 7.2 Mounting and Angle Adjustment
 3. 7.3 Connecting External Components
8. Operation and Settings
 1. 8.1 Device Registration
 2. 8.2 Testing and Configuration
9. Maintenance and Service
10. Compliance and Warranty
11. Scope of Delivery
12. Attributes and Additional Features

1. Introduction

The U-PROX WDC Uni is a wireless magnetic contact sensor designed to monitor the open/close status of doors, windows, and similar structural elements. In addition to the standard detection provided by the WDC Plus, the Uni model integrates a glass breakage detection function, enabling it to detect both intrusion attempts and potential glass break

incidents.

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

2. Safety Warnings

Battery and Electrical Safety:

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. Always install and service the sensor with the power supply turned off.

Installation and Handling:

Do not disassemble the device or its power supply when energized. Follow all electrical and fire safety guidelines during installation and maintenance.

3. Applications for Customization

The U-PROX WDC Uni integrates seamlessly into the U-PROX security system. Customize and monitor its operation using:

- **U-PROX Installer Mobile Application:** For quick setup, testing, calibration, and configuration.
- **Installer Web Portal:** For comprehensive remote configuration at <https://web-security.u-prox.systems/>.

4. Description and Principle of Operation

The U-PROX WDC Uni is a magnetic contact sensor that detects door or window openings via its built-in reed switch. When an opening or displacement is detected, it sends an encrypted alarm notification to the central U-PROX control panel using a two-way ISM-band wireless interface.

Uni extends the standard functionality by incorporating a glass breakage detection feature. In this mode, the sensor also monitors for vibrations or acoustic signals associated with breaking glass, alerting the system to potential forced entry attempts. Combined with its angle-adjustable alarm capability, the WDC Uni is ideal for installations where standard horizontal mounting is impractical.

5. Functional Elements of the Device

The sensor comprises the following parts:

- **Bottom Plate of the Magnet Case**
- **Magnet Case Cover**
- **Neodymium Magnet**
- **Bottom Plate of the Sensor Case**
- **Upper Cover of the Sensor Case with Device Capsule**
- **Magnet Position Marks**
- **LED Indicator** – displays device status, including alarm configuration and glass break detection status
- **Protective Plastic Plate for the Device Board**
- **Tamper Contact**
- **Connector for External Sensor/LED:**
 - LD contact (+ LED, red)
 - GND contact (ground, blue)
 - DC contact (reed switch, yellow)
- **On/Off Button**
- **CR123A Battery (Pre-installed)**
- **External Sensor (Reed Switch)**
- **External LED (Optional)**
- **Angle Adjustment Mechanism** – unique to this model, allowing the sensor to be set at a non-standard angle.
- **Glass Breakage Detection Component** – integrated to sense vibrations and acoustic cues from breaking glass.

6. Technical Specifications

Power Supply: 3V, CR123A lithium battery with a service life of up to 5 years.

Wireless Communication:

- Interface: ISM-band wireless 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)
- Secure two-way communication with 256-bit encryption 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: Approximately 85 x 20.9 x 20.4 mm (sensor); Weight: 66 grams;
Magnet: 85 x 11 x 6 mm

Protection: IP55 rated

Additional Features: Built-in temperature sensor, OTA automatic update, three available body colors, angle-adjustable alarm, and integrated glass breakage detection.

7. Installation Instructions

7.1 Selecting the Installation Location

Avoid areas with high humidity, extreme temperatures, or heavy radio interference. For optimal performance:

- Ensure the sensor is within 1 meter of the security center during registration.
- Select a location where the sensor's field of view can cover doors, windows, or roller shutters.
- Use the U-PROX Installer app to verify signal strength and confirm that the installation site is optimal for both contact detection and glass breakage sensing.

7.2 Mounting and Angle Adjustment

This sensor supports both vertical and horizontal mounting. Its unique angle-adjustment mechanism allows for optimal configuration even when the sensor is installed at an angle.

1. **Install the Magnet:** Securely fix the magnet at the desired location (e.g., on a door, window frame, or roller shutter) using the provided mounting kit or adhesive tape.
2. **Mount the Sensor Base:** Attach the sensor's bottom plate to the surface using screws or double-sided adhesive tape. Ensure the mounting surface is clean and dry.
3. **Adjust the Angle:** Before locking the sensor in place, adjust its angle using the built-in mechanism. This adjustment not only optimizes contact detection but also calibrates the glass breakage detection sensor.
4. **Install the Sensor:** Slide the sensor into the base and ensure the tamper contact locks properly (the LED indicator will flash to confirm proper locking).

7.3 Connecting External Components

If additional external components (such as an external LED for visual 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 application or log in via the web portal using your installer credentials. Follow the on-screen instructions to register the U-PROX WDC Uni with your security system. It is recommended to hold the sensor within approximately 1 meter of the control panel during registration.

Confirmation: The LED indicator will confirm successful registration.

8.2 Testing and Configuration

Use the U-PROX Installer app to perform a connection test. The LED indicator will display signal quality as follows:

- Green: Excellent signal quality
- Yellow: Satisfactory signal quality
- Red: Poor signal quality
- Fast blinking red: No connection

After registration, configure settings such as switching delays, sensor sensitivity, glass breakage detection thresholds, and alarm thresholds via the U-PROX Installer application. Adjust the angle-alarm parameters as needed for optimal performance.

9. Maintenance and Service

Cleaning: Periodically clean the sensor's case with a soft, dry cloth to remove dust and debris.

Battery Replacement: Replace the CR123A battery only with an approved type. Follow manufacturer instructions and dispose of used batteries according to local regulations.

Troubleshooting: If the sensor fails to communicate or if the glass breakage detection function does not operate correctly, verify the installation, check for radio interference, and consult the diagnostic tools available in the U-PROX Installer app.

10. Compliance and Warranty

Standards Compliance: The U-PROX WDC Uni complies with the Radio Equipment

Directive 2014/53/EU and Directive 2011/65/EU (RoHS). The original Declaration of Conformity is available on the U-PROX website in the Certificates section.

Warranty: Warranty for U-PROX devices (excluding batteries) is valid for two years from the purchase date. If issues arise, please contact support@u-prox.systems; remote troubleshooting may be available.

11. Scope of Delivery

The complete package includes:

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

12. Attributes and Additional Features

The U-PROX WDC Uni incorporates additional features beyond the standard WDC design. Key attributes include:

Attribute	Value
Integration with Roller Shutters	Yes
Indoor and Outdoor Use	Yes
Impact and Vibration Sensor	Yes
Glass Breakage Detection	Enabled – detects vibrations and acoustic signals from breaking glass
Built-in Temperature Sensor	Yes
OTA Automatic Update	Yes
Available Body Colors	Three options
Arming in Airing Mode	Yes
Battery Life	Up to 5 years

© 2024 Limited Liability Company Integrated Technical Vision

www.u-prox.systems