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Risco RK815DTG300B

RISCO RK815DTG300B Dual Technology Detector

User Manual

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the RISCO RK815DTG300B Dual Technology Detector. This device combines Passive Infrared (PIR) and Microwave (MW) detection technologies to offer reliable and accurate motion sensing for security applications. Please read this manual thoroughly before installation and use to ensure proper functionality and safety.

2. PRODUCT FEATURES

The RISCO RK815DTG300B detector is designed with advanced features to enhance security and minimize false alarms:

- **Dual Technology Detection:** Combines dual-element PIR and 10.25 GHz Microwave for superior detection and false alarm immunity.
- **Anti-Cloak Technology (ACT) Green Line:** Deactivates the microwave channel when the system is disarmed, reducing power consumption and extending product life.
- **Active Infrared Anti-Masking:** Detects attempts to block the detector's field of view, providing enhanced tamper protection.
- **Selectable End-of-Line (EOL) Resistors:** Configurable via jumpers for flexible wiring with various control panels.
- **Tamper Protection:** Features anti-opening and anti-dismount (wall/angle) tamper switches to alert against unauthorized access or removal.
- **Adjustable Microwave Sensitivity:** Allows fine-tuning of the microwave detection range.
- **Advanced Detection Zones:** Provides 30 detection zones across 4 levels with anti-radiation features.
- **Visual Indicators:** Equipped with 3 LED indicators for status and detection events.
- **True Temperature Compensation:** Ensures consistent detection performance across varying ambient temperatures.
- **High Immunity:** Excellent immunity to Radio Frequency (RF) interference and white light, reducing false alarms.

3. SAFETY INFORMATION

Please observe the following safety precautions:

- Installation should be performed by qualified personnel only, in accordance with local electrical codes and regulations.
- Disconnect power before performing any wiring or maintenance.
- Do not expose the device to moisture, extreme temperatures, or direct sunlight.
- Ensure the mounting surface is stable and secure.
- Keep the device away from strong electromagnetic fields.

4. PACKAGE CONTENTS

Verify that all items are present in the package:

- RISCO RK815DTG300B Dual Technology Detector unit
- Mounting screws and anchors
- Installation Guide / User Manual (this document)
- Optional lenses (if purchased separately)

5. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance. Follow these steps carefully:

5.1 Mounting Location

Choose a mounting location that provides the best coverage of the protected area. Avoid placing the detector directly facing heat sources, windows, or areas with strong air currents. The ideal mounting height is typically 2.1 to 2.7 meters (7 to 9 feet) above the floor.

5.2 Opening the Detector

Carefully open the detector casing by releasing the locking tab, usually located at the bottom or side of the unit. This will expose the terminal block and jumper settings.

5.3 Wiring

Connect the detector to the control panel according to the panel's instructions and the detector's terminal markings. Ensure correct polarity for power connections. Utilize the selectable EOL resistors via jumpers as required by your security system.

Terminal Connections:

- **+ / -** : Power input (typically 9-16 VDC).
- **ALARM**: Normally Closed (NC) alarm output.
- **TAMPER**: Normally Closed (NC) tamper output.
- **MASK**: Anti-masking output (if used).

5.4 Jumper Settings

Configure the jumpers for EOL resistors, microwave sensitivity, and ACT Green Line functionality as needed for your specific installation.

5.5 Mounting the Detector

Secure the detector base to the wall or corner using the provided screws and anchors. Ensure the tamper switch is properly engaged with the mounting surface.

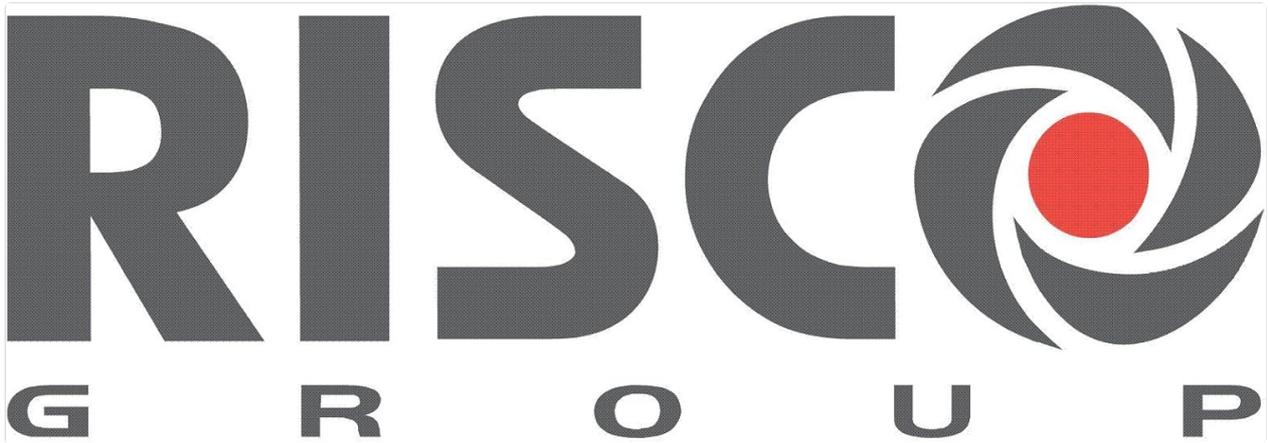


Figure 1: RISCO RK815DTG300B Dual Technology Detector. This image shows the front view of the detector, typically mounted on a wall or in a corner, indicating its compact design and sensor window.

5.6 Walk Test

After installation, perform a walk test to verify the detection coverage. Walk through the protected area and observe the LED indicators to confirm proper detection. Adjust the microwave sensitivity if necessary.

6. OPERATING INSTRUCTIONS

The RK815DTG300B detector operates automatically once powered and configured. It continuously monitors the protected area using both PIR and Microwave technologies.

6.1 Detection Logic

For an alarm to be triggered, both the PIR and Microwave sensors must detect motion simultaneously (AND logic), significantly reducing false alarms compared to single-technology detectors.

6.2 LED Indicators

The detector features three LEDs to indicate its status:

- **PIR LED:** Illuminates when the PIR sensor detects motion.
- **MW LED:** Illuminates when the Microwave sensor detects motion.
- **ALARM LED:** Illuminates when both PIR and MW detect motion, triggering an alarm.

6.3 Anti-Cloak Technology (ACT) Green Line

When enabled, the ACT Green Line feature automatically deactivates the microwave sensor when the security system is disarmed. This conserves energy and extends the lifespan of the microwave component. The microwave sensor reactivates automatically when the system is armed.

7. MAINTENANCE

The RISCO RK815DTG300B detector requires minimal maintenance to ensure continued reliable operation.

- **Cleaning:** Periodically clean the detector's lens and casing with a soft, dry cloth. Do not use abrasive cleaners or solvents.

- **Inspection:** Annually inspect the detector for any signs of damage, loose wiring, or obstructions to its field of view.
- **Walk Test:** Perform a walk test periodically (e.g., every 6-12 months) to confirm the detector is functioning correctly.

8. TROUBLESHOOTING

If you experience issues with your detector, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No detection	Incorrect wiring, power issue, obstructed view, incorrect sensitivity.	Check wiring connections and power supply. Ensure no obstructions. Adjust microwave sensitivity. Perform a walk test.
False alarms	Heat sources, air currents, pets, incorrect sensitivity, RF interference.	Relocate detector away from heat/air sources. Adjust sensitivity. Ensure proper mounting height for pet immunity. Check for strong RF sources.
Tamper alarm	Detector cover open, unit dismounted, loose tamper switch.	Ensure the detector cover is securely closed. Verify the unit is firmly mounted and the tamper switch is engaged.
Anti-masking alarm	Obstruction in front of the detector, dirty lens.	Clear any objects blocking the detector's view. Clean the lens.

If the problem persists, contact your security system installer or RISCO technical support.

9. SPECIFICATIONS

Feature	Detail
Model	RK815DTG300B
Detection Technology	Dual-element PIR + 10.25 GHz Microwave
Anti-Masking	Active Infrared
Tamper Protection	Anti-opening and Anti-dismount (wall/angle)
EOL Resistors	Selectable via jumpers
Detection Zones	30 zones, 4 levels
Visual Indicators	3 LEDs (PIR, MW, Alarm)
Temperature Compensation	True Temperature Compensation
Immunity	High RF and White Light Immunity
Manufacturer	RISCO
ASIN	B01N76MHTB

Feature	Detail
UPC	712073721408

10. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided with your purchase or visit the official RISCO Group website. For technical support, contact your authorized RISCO installer or the RISCO customer service department.

RISCO Group Website: www.riscogroup.com