

DoorWatcher

User Instructions

V0.6 (18th Nov 2022)

1. PRODUCT OVERVIEW

DoorWatcher now has improved performance and reliability, while adding additional functionality for new developments in caregiving.

Door sensor strips (DMS-21) are installed by the side of a door – recommended next to the doorknob – or on both sides of double doors and connected to operate as a joint sensor. When a patient transmitter (TXP-21) enters the detection zone, DoorWatcher sensors will alert nursing staff to prevent patient egress. Configurable options include an audible alarm, door lock, wireless output to a Nexus call system, or through a relay output to trigger a building management system.

Alarms can be reset using a caregiver transmitter carried by nursing staff, magnetic fob keychain, security keypad, or security key. A nurse can escort a patient through a door by temporarily disabling the monitor, and the door will automatically re-arm when the door has closed to prevent “tailgating”.

Status LEDs clearly indicate whether the DoorWatcher sensor is armed or in escort mode, the door is locked, or a patient tag is within detection distance.

1.1 Features

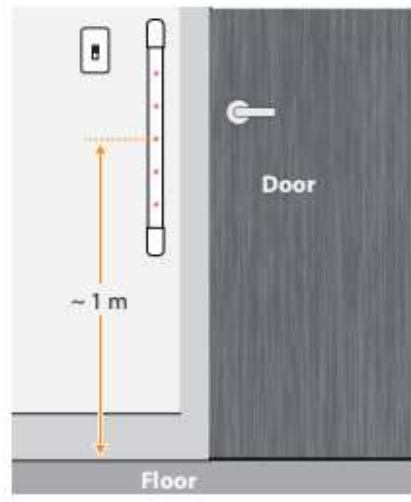
- Door lock option to prevent resident egress (lock timer complies with fire regulations)
- Door exit alarm (audible or silent)
- Transmission output for signaling an indication light or central monitor
- Relay output for triggering building security system
- Caregiver escort with anti-tailgating functionality
- Door open too long alarm
- Door status LED: Power, Wristband Detected, Night Mode Active
- Low battery indication for resident transmitters in detection range
- Fault detection and out-of-range checking
- Sleep mode on transmitters to conserve battery life while in storage

1.2 Compatible Equipment

Model	Description	Image
DMS-21	DoorWatcher Sensor Alerts nursing staff when patient(s) wearing a wristband transmitter approach a protected door	
TXP-21	Patient wristband - Comes with faux leather watch strap - Works with unbreakable hospital bracelet 1-year battery life	
TXR-02	Reset transmitter - Allows staff to trigger bypass/reset alarms - Wearable on wrist or belt	

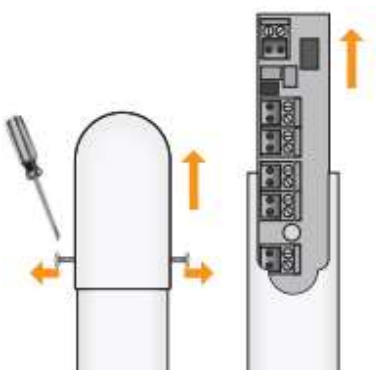
2.0 Installation

Step1: The mid-point of Door Monitor is at a height of approximately 1m.



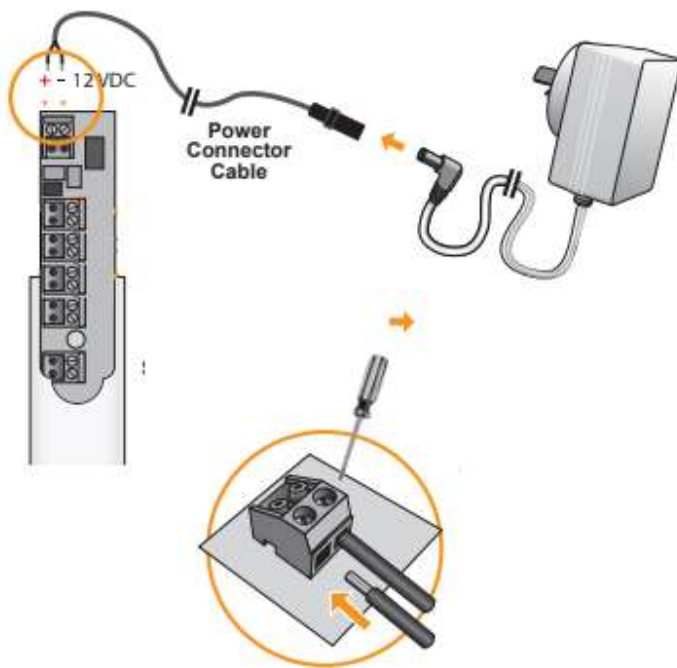
Step2:

Use a small screwdriver to remove two screws then slide the cover up to remove it. The PCB can be slid up to access the connection terminals.

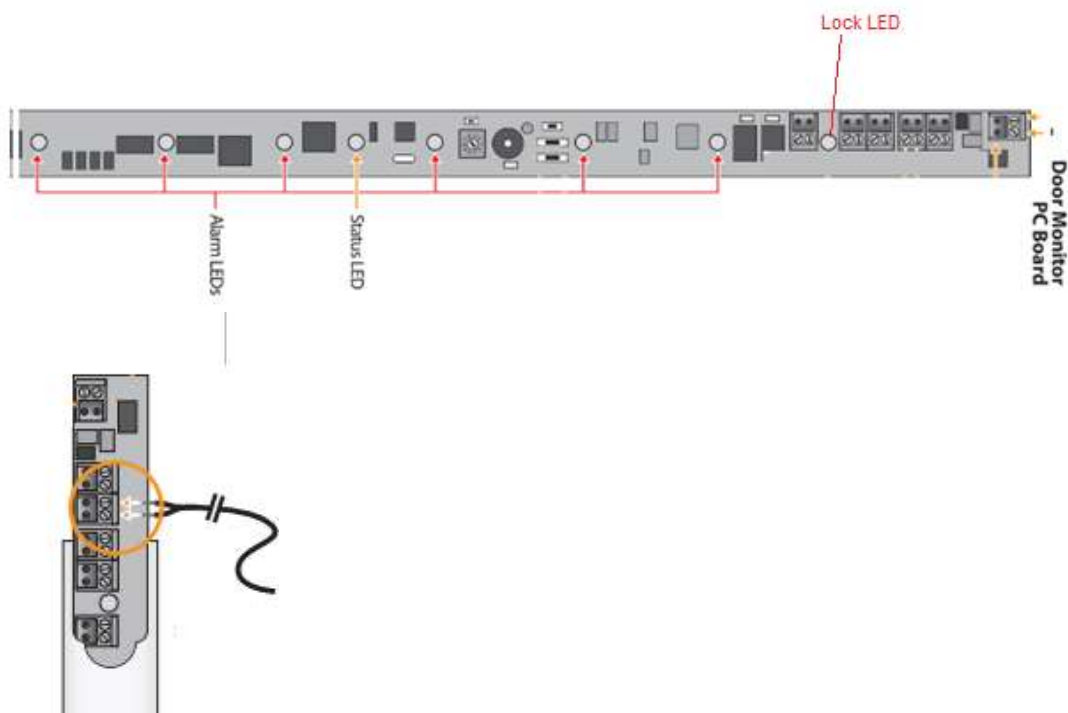


Step3:

Insert the Power Connector Cable into the terminals marked “12(+) & 12V(-)” and tighten with a small flat head screwdriver



3. Door Bar features



** Above connector is the input of door contact. These two points is shorted to simulate the door is close. These two points is opened to simulate the door is open.

3.1 The different status of Door Monitor

1) Normal status -- No Tag detected and door was closed:

“Door close is detected” AND “No any Tag approaching”.

- Status LED (Center) is ON in **Green** to show the power status. Alarm LED must be OFF.

2) Tag in range (Door closed) ← Pre-alarm:

- 1) The Status LED (Center) is ON in **Red**.
- 2) Buzzer is no alarm sound. No alarm LED is ON
- 3) The status will auto resume to normal status when the Tag is out range. Status LED (Center) is back to **green**.
- 4) **No 433MHz message** is sent out.

3) Tag in range (Door opened) ← Alarm stage:

- 1) Alarm is triggered, the buzzer and alarm LED is “ON”- “OFF” periodically.
- 2) 433MHz alert message is sent out, the Door ID and site code also included into EAS code.
- 3) The Status LED (Center) is ON in **Red**. All Six-alarm LEDs are “ON” and “Blink” in Red periodically.
- 4) The Status LED (Center) will turn back to **Green** if the Tag is out range.
- 5) The alarm signal is latching even if the Tag is out range.

4) IN Escort Mode

- 1) The Status LED (Center) is “ON” in white.
- 2) Transmit a reset signal though 433-channel.
- 3) The Escort mode will be following the Door Open timer.
- 4) The Escort mode could be exited anytime when door is closed.

3.2 Behavior Table

The chart below describes the expected behavior of a DMS-21 sensor in various conditions.

	Status LED	Tx	Sound
Day Mode			
Wristband not detected	Green	NA	NONE
Wristband detected, door closed*	Red	NA	NONE
Wristband detected, door open	Red	Door & Patient IDs (433MHz Tx)	Full alarm
Reset triggered	White	Door ID (433MHz Tx)	NONE

4. SPECIFICATIONS

Power

12V, @ 2.0A DC input

Frequencies

	Transmitting	Receiving
Door Sensor	20kHz (to tag) 433Mhz (alarm output)	924.5MHz
Patient Tag	924.5MHz	20kHz

5. IMPORTANT NOTICE

For TXP-21, Patient wristband

- Risk of fire or explosion if the battery is replaced by an incorrect type.
- If the coin / button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- Keep new and used batteries away from children.
- If the battery compartment does not close securely, stop using the product and keep it away from children.
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion

For DMS-21, DoorWatcher Sensor

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Notice:

Any changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.