TX-E251 Long-Range Extended Battery Life DWS

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Description

The TX-E251 Long-Range Extended Battery Life DWS is a sensor intended for installation on doors, windows, and other objects that open and close. The sensor transmits signals to the control panel when a magnet mounted near the sensor is moved away from or closer to the sensor. The TX-E251 features a high capacity CR2 lithium battery for extended battery life, and maximum performance output power for long range applications. The sensor features two separate zones: zone 1 can be used for either of the two reed switches, and zone 2 can be used as an external contact option. The sensor is also equipped with a cover tamper switch for additional security.

Figure 1: TX-E251
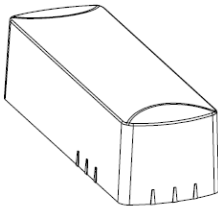
Reed Switch Enrolling

To enroll the TX-E251 into the panel for utilization of the transmitter's reed-switches, follow these steps:

1) Place the panel into program mode, then go to Learn Sensors menu. Refer to your specific alarm panel manual for details on these menus.

2) Remove the battery pull tab to auto-enroll. Then select the appropriate sensor group and number.

3) If the panel does not respond upon removing the battery pull tab, disengage the case cover from the back housing by sliding, then remove and replace the battery until the panel responds.

External Contact Enrolling

To enroll the TX-E251 into the panel for utilization of the transmitter's external contact, follow these steps:

1) Remove the battery OR make sure the pull tab is still in place between the positive battery terminal and the battery contact.

2) Connect the external contact in the restored state (4.7K for normally closed, or open circuit for normally open).

3) Install the battery OR remove the pull tab, and install and lock the top cover on to the sensor.

4) Place the panel into program mode, then go to Learn Sensors menu. Refer to your specific alarm panel manual for details on these menus.

5) To auto–enroll the external contact into the panel, change the state of the external contact to the faulted state (open circuit for normally closed contact or 4.7K for a normally open contact).

6) If the panel does not respond, then repeat steps 1 through 5.

External Contact Wiring

Use the following specifications for the external contact:

- Maximum wire length: 26 ft. (8 m).

- Wire: Stranded, 22-gauge (0.7112 mm).

- Switches: Hermetically sealed external switches (sealed reed switches) that supply a minimum 250 ms open or close on alarm.

Note: Do not connect more than five external contacts to a door/window sensor.

Caution: You must install the provided EOL resistor at the external detection device for proper supervision.

You can wire the sensor terminal blocks with leads from an external contact (Figure 2). The door/window sensor provides alarm and tamper indication. Wire the external contact with one end-of-line (EOL) resistor in series with the external contact.

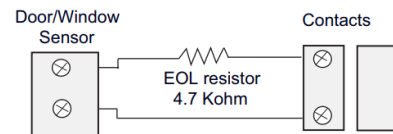This gives the following readings for each configuration:

Normally closed:
- Zero ohm/short = Tamper
- 4.7 Kohm = Normal
- Open = Alarm

Normally open:
- Zero ohm/short = Tamper
- 4.7 Kohm = Alarm
- Open = Normal

Figure 2: External Contact Wiring

Mounting

Included with this device is double sided tape for the transmitter and magnet, as well as screws if a more secure method of mounting is preferred. Choose a suitable location for the sensor by following the procedure in the section "Testing the Sensor" ensuring desired signal strength is achieved. Note that it is recommended the transmitter be installed on the stationary or non-moving part of the installation (frame) and the magnet installed on the moving object (door). Where possible, install sensors within 100 ft. (30 m) of the panel. While a transmitter may have an open-air range of 500 ft. (150 m) or more, the environment at the installation site may have a significant effect on operational range. Changing a sensor location may improve wireless communication.

For reliable bonding with the provided double sided tape, ensure the surface is clean and dry. Apply the tape to the backside of the sensor, and then to the

desired location. Apply firm pressure for several seconds. When mounting with double sided tape, ensure temperatures are above 50°F and will remain above 50°F for at least 24 hours to ensure proper bond. After 24 hours, the bond will hold at lower temperatures.

Sensor Testing

The sensor test verifies proper communication between the sensor and the panel/receiver. The sensor should be tested prior to permanent installation, as well as weekly. To test the sensor, refer to the specific panel/receiver documentation and do the following:

1) Put the panel/receiver into sensor test mode

2) Open the door/window the sensor is installed on – the sensor will then transmit a signal

3) Listen for the siren beeps to determine the appropriate response

4) Exit sensor test mode when proper communication between the sensor and panel/receiver has been verified

Replacing the Battery

The TX-E251 comes pre-installed with a single GPI CR2 Lithium battery that provides 10 years of battery life under normal usage conditions. When the battery is low, a signal will be sent to the control panel. To replace the battery, do the following:

1) With the sensor mounted, slide the case cover up or down (depending on the orientation of the sensor) to unlock the case cover from the base. Pull the case cover away from the sensor to reveal the battery.

2) Remove the existing battery and re-install a new Panasonic CR2 battery. When inserting the battery, pay close attention to the battery polarity indicators to ensure proper placement of the battery (positive end of battery should be facing towards the circuit board and antenna).

3) Replace the case cover and slide to lock. An audible click should be heard when the cover engages in the locked position correctly.

Figure 3: Circuit Board Layout
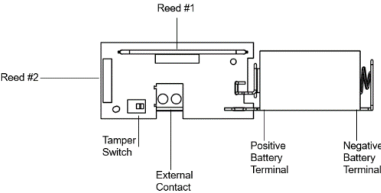
TX-E251

RF Frequency	319.5 MHz – (Crystal Based)
Compatibility	Interlogix 319.5 MHz control panels/receivers
Battery Type	CR2 (GPI)
Typical Battery Life	Up to 10 years at 68° F (20° C)
Operating Temperature Range	32° to 120°F (0° to 49°C)
Relative Humidity	0-85% non-condensing
Supervisory Interval	64 Minutes
Storage Temperature Range	-30 to 140°F (-34 to 60°C)
Regulatory	Conforms to ANSI / UL Std 634
	Certified to ULC Sub C634
Dimensions	3.25" x 1.13" x 0.88"

FCC Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

Changes or modifications not expressly approved by UTC Fire and Security could void the user's authority to operate the equipment.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas provoquer d'interférences et (2) cet appareil doit accepter toute interférence, y compris celles pouvant causer un mauvais fonctionnement de l'appareil.

In accordance with FCC requirements of human exposure to radiofrequency fields, the radiating element shall be installed such that a minimum separation distance of 20 cm is maintained from the general population.

Conformément aux exigences d'Industrie Canada en matière d'exposition humaine aux champs de radiofréquences, l'élément rayonnant doit être installé de telle sorte qu'une distance minimale de 20 cm soit maintenue par rapport à la population générale.

FCC: XQC-TXE251
IC: 9863B- TXE251

This Class B digital apparatus complies with Canadian ICES-3B.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Contact information

For contact information, visit us online at www.interlogix.com.
For technical support, see www.interlogix.com/support

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Product Warnings and Disclaimers

⚠ **WARNING: CHOKING HAZARD - Small parts. Keep away from children.**

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