

Installation

Refer to the illustration below for the recommended mounting positions. When selecting an appropriate mounting position, keep in mind the potential for air drafts or objects to be passed through gaps around the door and into the detection area.

The cable entry opening into the T.REX is on the right back side, near the cover retaining screw. There is a recess in the back of the T.REX to allow wires to be routed from any point behind the T.REX to the cable entry opening.

First, remove the cover, then remove the detector barrel from the back casing by rotating the barrel upward. Route the wiring into the back casing.

Next, mount the back casing to the wall. Install the detector barrel into the back casing and connect the wiring. This is a good time to modify the jumper settings if necessary; the

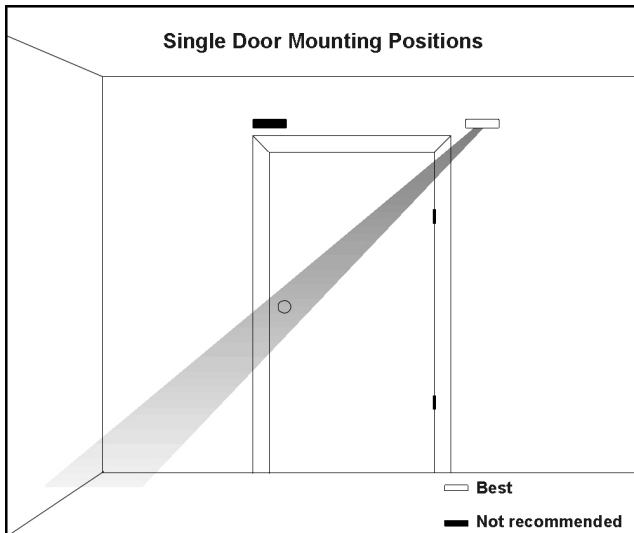
jumper settings are explained on next page. Make sure that the barrel is free to rotate, to permit final adjustment. Replace the cover, left end first (the end with 2 hooks).

Jumper Settings

There are a total of 7 jumpers on the left side of the circuit board. By default, all jumpers are ON.

LED Jumper

This jumper selects whether or not the LED changes colour when the main relay is activated. By default, the LED is enabled to follow the relay activation.



| Technical Specifications | |
|--------------------------|--|
| Detector type | Passive infrared |
| Filter technology | Digital Signal Processing (DSP) |
| Detector lens | Curtain type Fresnel lens |
| Detection range | One hand: 3m (10 ft.) Whole body: 6m (20 ft.) |
| Power consumption | 12-28 VDC, 50mA |
| Piezo buzzer | 90 dB at 28 VDC, 5-28 VDC, 20 mA (XL & XL2 only) |
| Main relay contacts | SPDT, 1A max. @ 30VDC max. |
| Main relay timer | Adjustable, 1/2 to 60 seconds |
| Main relay recycle time | Fixed, 3/4 second off |
| Lock control relay | Available on LT2 and XL2 models only, Solid state relay, N.C., 2A max. @ 30VDC, Timed at 2 seconds fixed |
| Tamper switch | N.C., 100 mA max. @ 30VDC max. |
| Dimensions (H.W.D) cm | 19 x 4.5 x 4.75 |
| Dimensions (H.W.D) in. | 7-1/8 x 1-3/4 x 1-7/8 |
| Indicator light | Red / Green LED |
| Certifications | UL294, CE, FCC |

Latch Jumper

This jumper determines the relay operation: in "Latch" mode (default), the relay activates for the duration of the main relay timer setting whenever someone is detected.

In "follow" mode (jumper removed), the relay stays on only as long as there is activity in the detection zone, but up to a maximum time equal to the main relay timer setting.

Fast Jumper

This jumper selects between normal and high sensitivity. When set to high sensitivity (default), the LED is normally red, and turns green when the main relay is activated. This mode is recommended for exit detector use.

When normal sensitivity is selected, the LED is normally green, and turns red when the relay is activated. (Selecting normal sensitivity allows the T.REX to be used in unsteady environments).

Main Relay Timer Jumpers

The duration of the relay ON time (Latch mode) or the maximum main relay ON time (Follow mode), is set by these jumpers, found on the lower left side of the circuit board. 16 different times can be selected according to the main relay timer setting table, ranging from 1/2 second to 60 seconds. The default setting is 2 seconds. In both latch and follow modes, when the main relay turns off again, it will stay off for 3/4 second. This is to ensure that the access control panel does not miss brief changes of state.

| Time (seconds) | Main Relay timer Settings | | | |
|----------------|---------------------------|---|---|---|
| | A | B | C | D |
| 1/2 | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 8 | | | | |
| 10 | | | | |
| 15 | | | | |
| 20 | | | | |
| 25 | | | | |
| 30 | | | | |
| 40 | | | | |
| 50 | | | | |
| 60 | | | | |

■ Jumper ON

| Top three (3) jumpers | | |
|-----------------------|--|--|
| Jumper | Jumper "ON" (Factory default) | Jumper "OFF" |
| LED | LED follows relay | LED stays "ON" |
| Fast | High sensitivity, LED normally red, LED green on detection | Normal sensitivity, LED normally green, LED red on detection |
| Latch | Relay stays "ON" for timer settings | Relay follows detection, up to maximum of timer settings |

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. Changes or modifications not expressly approved by Kantech could void the user's authority to use this equipment.

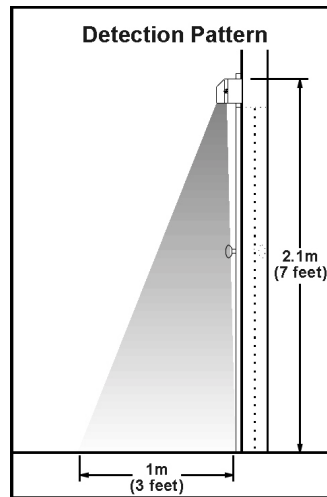
Lock Control Relay (LT2 and XL2 only)

The lock control relay is a normally closed solid state relay which deactivates (open contact) for a fixed time of 2 seconds, 50 ms after a detection. This time period **cannot** be modified.

Power-up Test

The LED will flash twice quickly every second while the T.REX goes through its power-up diagnostic sequence (about 40 seconds) after which the T.REX is ready to operate normally. If trouble is detected at any time, the LED will begin to flash rapidly 4 times per second. If the T.REX is upset by a strong power fluctuation, it will resume normal operation after a 10 second self-test.

Detection Pattern Adjustment



Once the T.REX is installed and the cover replaced, the span and target direction of the detection pattern is set by gently turning the louver direction screws, located just below the detector lens on the barrel. As the adjustment range is about 45°, you must be careful not to turn the louvers too far; stop turning when resistance is felt. The slots on the louver adjusting screws indicate the position of the louver and serve as an adjustment guide. To adjust

the detection zone toward or away from the door, simply rotate the detector barrel as required.

When the T.REX is mounted directly above the door, it is recommended to direct the detection area away from the door. Rotate the barrel slightly away from the door, such that the lower edge of the detector lens is about 1/4" above the edge of the case. Check that the detection pattern is adequate by walk testing. Watch the LED for position detection. When you are satisfied with the detection pattern, remove the cover and tighten the barrel locking screw on the right side of the barrel, and replace the cover.

WARNING This detector provides fast detection and has not been designed to be used in intrusion detection applications. This detector is designed to detect an individual approaching a door. Normally, upon receiving the detector information, the system supervising the door will bypass the door condition for a certain time to permit the exit without causing a "door forced open" alarm. This detector is designed to be used on free exit doors. It has not been designed to unlock doors equipped with door strikes. Locking and associated devices are generally governed by regulatory bodies and should always be installed according to local regulations. In most instances there are strict limitations to installing this type of device on doors used to exit. Be sure to check with local authorities for regulations before using any such devices.

| Part No. | Description |
|-----------|------------------------------------|
| T.REX-LT | Tamper and timer |
| T.REX-XL | Tamper, piezo, and timer |
| T.REX-LT2 | Tamper, timer, and 2 relays |
| T.REX-XL2 | Tamper, piezo, timer, and 2 relays |