

# iREX & iREX Plus

## Intelligent Request-to-Exit Detectors

### Architect & Engineer Specifications

#### **Overview**

A Request-to-Exit (RTE) detector shall be installed near an exterior door inside the building with an access control system. The RTE detectors shall provide free exit to individuals within the building without causing an alarm.

#### **Standards and Approvals**

The RTE detector shall be UL or ETL certified under UL Standards 294 Access Control system Units and UL 639 Intrusion Detection units, and under the NFPA 101 Life Safety Code.

The RTE detector shall be approved by FCC Rules, Part 15.

The detector shall carry a CE mark.

#### **Detection Method and Stability**

The RTE detector shall employ balanced dual opposed passive infrared element to guard against unwanted activations caused by changes in infrared energy not associated with motion. The RTE shall be microprocessor controlled and employ digital signal processing.

The RTE detector shall use Fresnel lenses and the optics chamber shall be sealed to eliminate the chance of a false alarm due to drafts or small insects.

The RTE shall incorporate RFI protection interference so that no alarm shall occur at 30V/m within the range of 10MHz to 2GHz. A true temperature compensation mechanism shall increase detection capability and maintain detection sensitivity and stability under high temperature conditions.

#### **Mounting Height and Detection Area**

The RTE Detector shall be mountable on a wall or ceiling. Mounting height shall be from 7.5' to 15' (2.3m to 4.6m).

Detection range shall be from 2' up to 7.9' (0.6m to 2.4m) depending on the mounting height and detector adjustment. The RTE Detector shall have a rotatable barrel enabling adjusting the detection area to be closer or further away from the door. The detector shall have masking wedges that enable limiting the detection area.

#### **Remote Parallel Door Control**

The RTE detector shall have a remote input for parallel door control to enable unlocking of the door either upon RTE motion detection OR from an external device, such as a Card Reader or Keypad usually installed on the other side of the door.

### **Fail Safe & Fail Secure Modes**

The RTE detector shall support both Fail Safe Mode (door opens upon power failure) and fail Secure Mode (Door stays locked upon power failure). Fail Secure Mode must be authorized by the local authority having jurisdiction prior to implementation.

### **Adjustable Relay Latch Time**

The RTE detector shall have relay timer that is adjustable from ½ a second up to 32 seconds.

### **Single or Double Door Use**

The RTE Detector shall have two Form C relays with a rating of 1A at 30VDC max, selectable as Normally Closed or Normally Open, to allow use of the detector on single or on double doors.

### **Indication LED**

The RTE shall have a LED for indicating motion detection during walk test. The LED shall be capable of being field disabled via an On/Off dipswitch.

### **Power Requirements and Current Consumption**

The RTE Detector shall be capable of operating from an AC or a DC power source within the range of 12 to 30 VDC or CAV.

The Detector's current consumption shall be up to 8mA during standby, up to 30mA during Relay and LED activation, and up to 50mA during Relay, LED and Sounder activation.

### **Operational Temperature**

The RTE shall be rated to operate within a temperature range of -4°F to 131 °F (-20°C to 55°C).

### **Physical Characteristics**

The dimensions of the RTE Detector shall be 7" x 2" x 1.8" (177mm x 50mm x 45mm).

## **Additional Higher Security Requirements**

A Higher Security RTE Detector model shall be available for use in case any of the following higher security features is required.

(The **iREX Plus** model includes all of the following capabilities in addition to the features and capabilities listed above).

### **Prevention of Unauthorized Opening from Outside**

The Higher Security RTE Detector shall be installed so as not to detect objects that could be slid under the door from outside. This shall be accomplished by the RTE enabling Motion Detection only after another device has been activated, such as a floor switch, an additional PIR or a Burglar Alarm System in disarm state.

### **Door Secure Mode**

The Higher Security RTE Detector shall be able to prevent unauthorized individuals from entering following a valid exit. In this mode when the RTE is activated but the door remains closed, the relay will drop out after 10 seconds. When the RTE is activated and the door is opened and then closed, the relay will drop out after 2 seconds.

### **Internal Sounder**

The Higher Security RTE Detector shall include an internal Piezo Sounder with the volume being adjustable via an internal potentiometer. Sound output rating shall be at least 69dBA at 10ft (3m).

The sounder may be activated directly from an external device, via an input on the RTE Detector's terminal block.

### **Door Alarm Mode**

The Higher Security RTE Detector shall have a Door Alarm Mode. In this mode the sounder shall activate when the door is forced open or left open for above 10 seconds.

### **Cover Tamper**

The Higher Security RTE Detector shall have a protective tamper switch that shall activate upon opening of the cover. The tamper output rating shall be 50mA at 30VDC.



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