

# THERMACON™

## T-80 and S-80

Not Currently RoHS Compliant

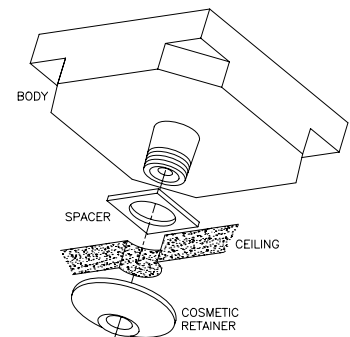
### CONCEALED, PASSIVE INFRARED MOTION SENSOR UNIT

#### APPLICATIONS

- Exit / Entry Control
- Guard Tour Detection
- Personnel Motion Detection
- Automatic Time Delays
- Spot Detection

#### BENEFITS

- Versatile
- Totally Passive Detection
- No Ultra Sonic or Microwave Emission
- Detects Natural Body Heat
- Automatic Circuit Shunt
- RF Resistant
- No Cross Interference Between Units
- Will Not Detect Through Walls, Doors, or Windows
- Operates from 12 to 24 Volts AC or DC
- Ceiling Mounting
- Concealed Installation
- Single or Multiple Unit Applications



## DESCRIPTION

Thermacon is a concealed passive infrared (PIR) motion sensor that senses the presence of natural body heat and activates a relay. Relay activation begins upon entering the detection area and remains on for the duration of the preset relay timing. The housing is 94-HB fire rated ABS plastic, coated with aluminum to protect against radio frequency interference. The unit is designed for concealed and easy installation in suspended ceilings alone or enclosed metal electrical box is acceptable for use in air handling areas. Four interchangeable detection patterns are standard with each unit and others may be custom made. The T-80 and S-80 accept a power supply range of 12 to 24 volts AC or DC, and is available in both Form A and Form C relay contact configurations.

## MODELS AND APPLICATIONS

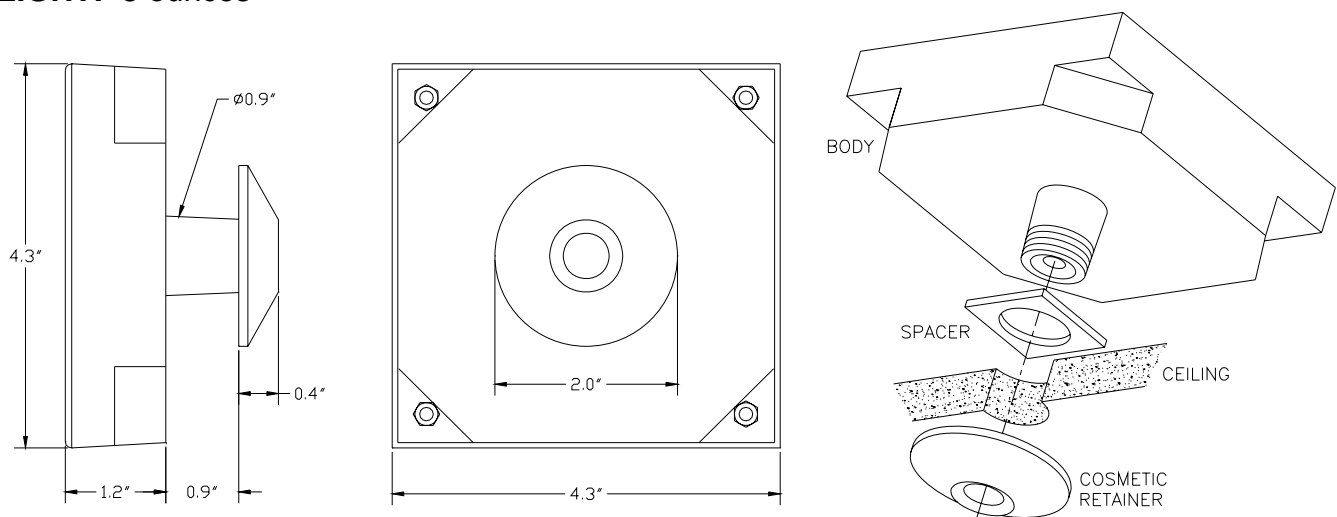
The model T-80 activates both when someone enters the detection area and again when they exit. It is used for access control of other motion detection where multiple alarms are acceptable or where people may pause for long periods within the detection area before exiting. The model S-80 activates **ONLY** when the detection area is entered (ignores exits from the detection area), and is used for annunciation in offices or classrooms where short single alarms are desired.

**WARNING:** The Thermacon is not recommended where slow movement or an attempt to conceal passage through the detection area may occur; this may result in impaired operation of the Thermacon. Consult with Dexter Research Center before Thermacon installation in critical security applications. The Thermacon is *not* for Intrusion, Burglar Control, or for use with Panic Devices.

## PHYSICAL DESCRIPTION

**COLOR:** Body: Silver, Cosmetic Retainer: White (may be painted)

**WEIGHT:** 5 ounces



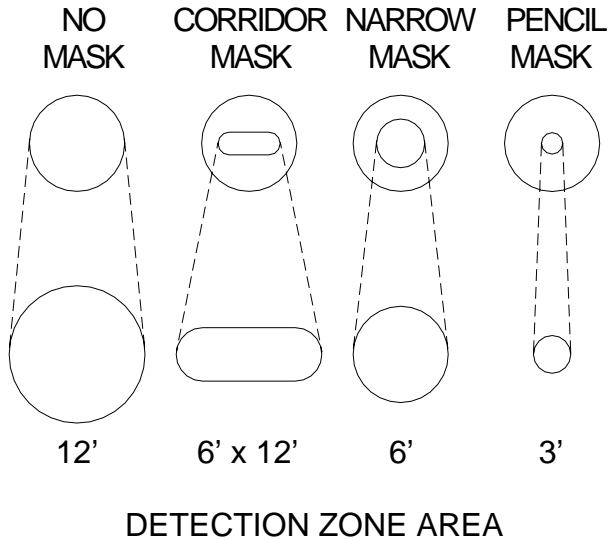
## OPERATING REQUIREMENTS

**TEMPERATURE:** 10°C (50°F) to 38°C (100°F)

**POWER:** 12 to 24 Volts AC/DC. Form A Relay: Rated Current draw = 0.03A; SPDT Relay: Rated Current draw = 0.06A; DPDT Relay: Rated Current draw = 0.10A. Relay is energized on activation, loss of power results in relay being de-energized.

## T-80 HUMAN FIGURE DETECTION PATTERNS

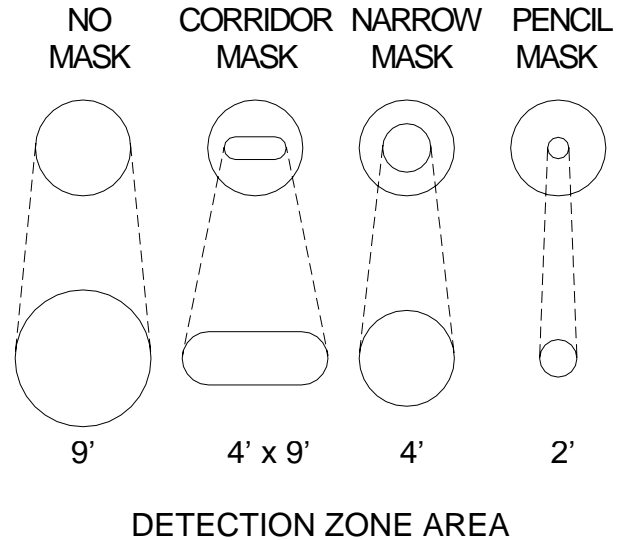
11 Foot Maximum Ceiling Height



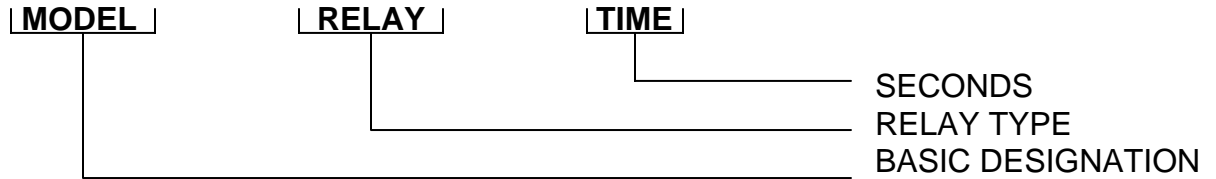
## T-80 and S-80 SERIES

## S-80 HUMAN FIGURE DETECTION PATTERNS

9 Foot Maximum Ceiling Height



## THERMACON SELECTION GUIDE



Example: T-80 NO 01 = Model T-80; Form A Relay with Normally Open Contacts; One Second

Closure on Alarm

Model Types: S-80 - Trips only on Zone Entry  
Stock units are N.O. Form A, 10 Seconds.

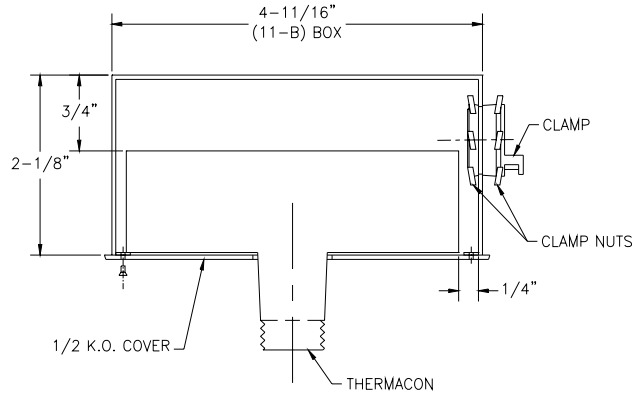
T-80 - Trips both on Zone Entry and Zone Exit.  
Stock units are N.C. Form A, 10 Seconds.

Relay Types: N.O. -Form A Normally Open – 10 watts max.  
N.C. -Form A Normally Closed (Supervised) – 10 watts max.  
SPDT -Form C 1 amp max.  
DPDT -2 Form C 1 amp max.  
(1 wired N.O., 1 wired N.C., unless otherwise specified)

Time: Specify Fixed Time 1 to 30 seconds (10 seconds standard)  
Potentiometer Adjustable 1 to 30 seconds ( $\pm 20\%$ ) available.

# INSTALLATION INSTRUCTIONS

## OPTIONAL ENCLOSED INSTALLATION



Suggested Boxes/Covers: Raco 255/833  
Raco Plenum 264  
Steel City 72171½ / 72C6

Note: If box is grounded, do not connect AC or DC +V power supply to ground.

## ELECTRICAL CONNECTIONS

1. The power input bridge circuit can operate from either AC or DC power sources. The DC connection is polarity insensitive.
2. The relay wires are completely isolated from internal circuitry and should be used to form a series loop with your control panel or response circuit.

**NOTE:** WHEN EXTERNAL RELAYS OR INDUCTIVE DEVICES ARE CONNECTED TO THE THERMACON, A REVERSE POLARITY DIODE OR VARISTOR SHOULD BE CONNECTED ACROSS THE INDUCTIVE DEVICE AS CLOSE TO THE COIL AS POSSIBLE (SEE BELOW).

**NOTE:** DO NOT EXCEED CURRENT, VOLTAGE, OR POWER LIMITATIONS OF RELAY CONTACTS OR POSSIBLE INJURY MAY RESULT.

3. Observe standard safety precautions, all wiring shall be in accordance with the National Electrical Code (NEC), ANSI/NFPA70, and all local codes.
4. No User Serviceable Components, Contact Manufacturer for Repair or Replacement.

