

LUNAR DT

RK - 150 T Dual-Technology Ceiling Mounted Detector



ENGLISH

GENERAL DESCRIPTION

The RK - 150 T is a microprocessor based dual-technology ceiling mounted detector using a 360° field-of-view detection pattern. It combines infrared and microwave capabilities (eliminates false-alarms) with superior RFI / EMI protection.

The IR channel responds to differences between the thermal radiation caused when an intruder crosses the protected area and the ambient thermal radiation.

The MW channel transmits signals and analyzes the reflected frequency echo changes due the Doppler effect (caused by the moving intruder).

An Alarm is initiated only when both channels detect simultaneously, thereby greatly reducing the chances of a false alarm and significantly increasing the catch-performance.

RK - 150 T FEATURES

- * Microprocessor controlled.
- * Automatic True Temperature Compensation
- * Proprietary algorithm - Patent pending.
- * Superior Rejection of Fluorescent-Interface.
- * Alternate Polarity Pulse Count
- * High RFI Immunity of 30v/m up to 1 GHz
- * Memory (optional)

LED DISPLAY

2. When MEMORY Jumper is OUT

(FOR UNITS Memory only)

Events on RED LED are latched

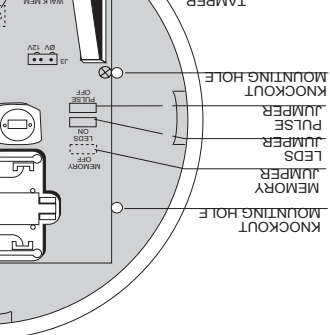


Figure 1. RK - 150 T , Internal View

SPECIFICATIONS

ELECTRIQUES :
Technologies de détection :
Consommation électrique :
Tension d'alimentation :
Contact d'alarme :
Autoprotection (anti-sabotage) :
Compte de pulses :
Compensation thermique :

à double élément PIR + Micro-ondes
25 mA à 12 VDC
9-15 VDC régulé
24 VDC, 50 mA
normalement fermé, 24 VDC, 0.5 A
réglable 1, 2 (polarité alternée)
par microprocesseur Thermistor
(brevet en instance)
30 V/m et jusqu'à 1 GHz
3 diodes LED

OPTIQUES :
Lentille :
Couverture :
Zones de détection :

Fresnel sphérique grand angle
angle 110°, vue d'ensemble 360°
3 niveaux optiques, 12 secteurs
extérieurs, 12 secteurs intermédiaires,
6 secteurs internes

PHYSIQUES :
Poids :
Dimensions :

138.6 g (5 Oz)
Ø 135x27 mm

ENVIRONNEMENTALES :
Température de fonctionnement :
Température de stockage :

de 0° C à 55° C (32° F à 131° F)
de -20° C à 60° C (-4° F à 140° F)

Dans le but de poursuivre l'amélioration de son produit, Groupe de RISCO se réserve le droit d'en modifier les spécifications et/ ou les schémas de conception sans avis préalable.

INSTALLATION

STEP 1 PRELIMINARY CONSIDERATIONS

The RK - 150 T has been designed to be installed above the center of the protected area. To provide for best area coverage its lens is arranged into three all-round levels incorporating 12 external sectors, 12 middle sectors and 7 internal sectors as shown in Figure 4.

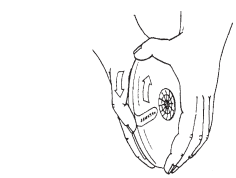


Figure 2. Removal of Front Cover

STEP 2 FRONTAL COVER REMOVAL

Remove front cover by holding the unit its base in the palm of your hand and turning the cover clockwise as shown in Figure 2.

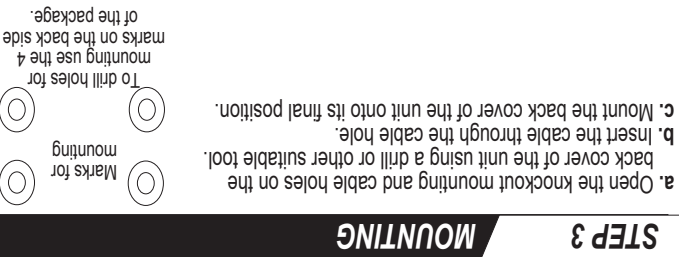


Figure 3. Jumper Positions

LED:
IN - Enables all 3 LEDs
OUT - Disables all 3 LEDs

MEMORY:
IN - Events are not latched
OUT - Events on Red LED are latched

PULSE:
IN - No pulse Count
OUT - Alternate Polarity Pulse Count (2 pulses)

STEP 4 TERMINAL WIRING

Wire the cable to the Terminal Block at the bottom of the PCB as follows:

STEP 5 JUMPER SETTINGS

The RK - 150 T has 3 jumpers which can be either IN (inserted) or OUT (unused). Unused jumpers are placed on one leg only as shown below.

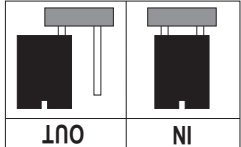


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LED:
IN - Enables all 3 LEDs
OUT - Disables all 3 LEDs

MEMORY:
IN - Events are not latched
OUT - Events on Red LED are latched

PULSE:
IN - No pulse Count
OUT - Alternate Polarity Pulse Count (2 pulses)

STEP 6 WALK TEST

After a two-minute warm up period from power up, walk test the detector. Walk test the entire protected area to verify proper operation of the unit.

STEP 7 FINAL SETUP

CAUTION: Make sure to replace front cover before performing Walk Test.

Note: The MW range can be adjusted using the potentiometer located at the left side of the PCB. It is important to set the potentiometer to the lowest possible position that will still provide coverage for the entire protected area.

After completing the installation and testing stages, reset the LED and the Pulse Count jumpers to their desired position, if necessary. The unit is now ready for normal use.

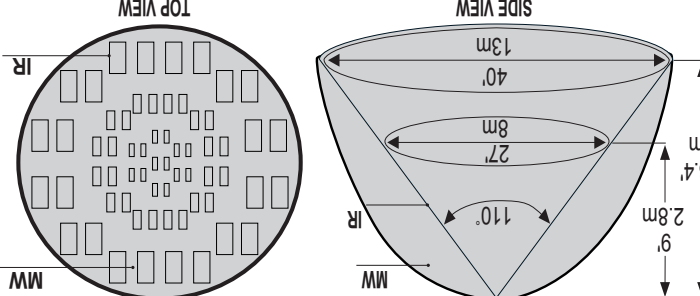


Figure 4. RK - 150 T - PROTECTION PATTERNS

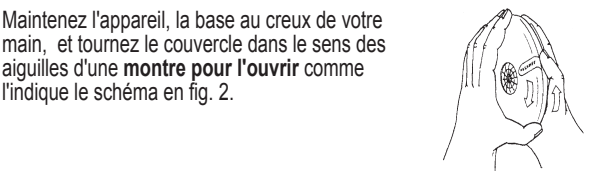
The MW Characteristics of RK - 150 T correspond to the optical coverage but they are dependable on reflections from the protected area and should be verified by performing Walk-Test.

STEP 3 ASSEMBLAGE

a. A l'aide d'un foret ou de tout autre outil approprié, ouvrez les pastilles défonçables prévues pour l'assemblage et le trou destiné au passage du câble, situés à l'arrière de l'appareil.
b. Introduisez le câble.
c. Placez le fond de l'appareil dans sa position définitive.

Marques destinées aux trous de fixation
Pour percer les trous de fixation, utilisez les 4 marques prévues à cet effet au dos de l'emballage

Figure 2. Retrait du couvercle



INSTALLATION

ETAP 1 CONDITIONS PRÉALABLES

Le RK-150 T a été conçu pour être placé au-dessus du centre de la zone à protéger. Pour assurer la meilleure couverture possible, sa lentille est organisée en trois niveaux panoramiques comportant 12 secteurs externes, 12 secteurs intermédiaires et 7 secteurs internes comme l'indique le schéma en figure 4.

ETAP 2 RETRAIT DU COUVERCLE

Maintenez l'appareil, la base au creux de votre main, et tournez le couvercle dans le sens des aiguilles d'une montre pour l'ouvrir comme l'indique le schéma en fig. 2.

AFFICHAGE LED

- Lorsque le cavalier des diodes LED est en position connectée (IN) :
 - * La diode LED JAUNE indique une détection PIR.
 - * La diode LED VERTE indique une détection micro-onde (MW).
 - * La diode LED ROUGE indique une alarme (détection simultanée des canaux PIR et MW).
- Lorsque le cavalier MEMOIRE est en position déconnectée (OUT) :
 - (option réservée aux appareils à mémoire)
 - Les événements se produisant sur LED rouge sont "verrouillés".

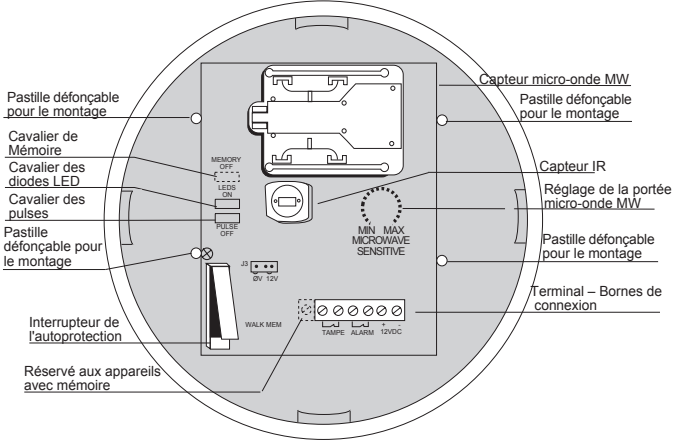


Figure 1. RK - 150 T Vue interne

ENVIRONNEMENTAL:

Operating temperature:
Storage temperature:
0° C to 55° C (32° F to 131° F)
-20° C to 60° C (-4° F to 140° F)

NOTE FOR UL
1. The tamper switch must be connected to a 24 hour alarm circuit.
2. The detector is intended to be connected to a listed burglar alarm control unit capable of providing 4 hours of standby power.
3. Units containing the memory function have not been investigated by UL and are not UL Listed.

In order to continue improving its product, Rokonet reserves the right to change specifications and/or designs without any prior notice.

PHYSICAL:

Weight:
Size:
138.6 G (5 Oz)
Ø 135x27 mm

OPTICAL:

Detection Zones:
Coverage:
11° angle, 360° overview
3 optical levels, 12 external sectors,
12 middle sectors, 6 internal sectors

WALK TEST:

After a two-minute warm up period from power up, walk test the detector. Walk test the entire protected area to verify proper operation of the unit.

SPECIFICATIONS

ELECTRICAL:

Dual element PIR - Microwave
25 mA at 12 VDC
9-16 VDC regulated
Normally closed, 24 VDC, 0.5 A
Selectable 1-2 (alternate polarity)
By Microcontroller (patent pending)

TEMPERATURE:

Temperature compensation:
RF immunity:
30V/m up to 1 GHz

WALK TEST:

After a two-minute warm up period from power up, walk test the detector. Walk test the entire protected area to verify proper operation of the unit.

PHYSICAL:

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