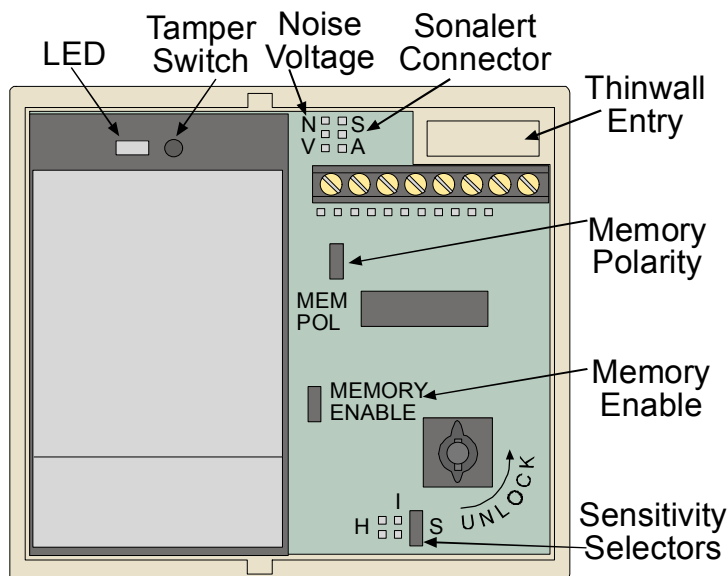


DS774Ti Passive Infrared Detector Installation Instructions

1.0 Specifications

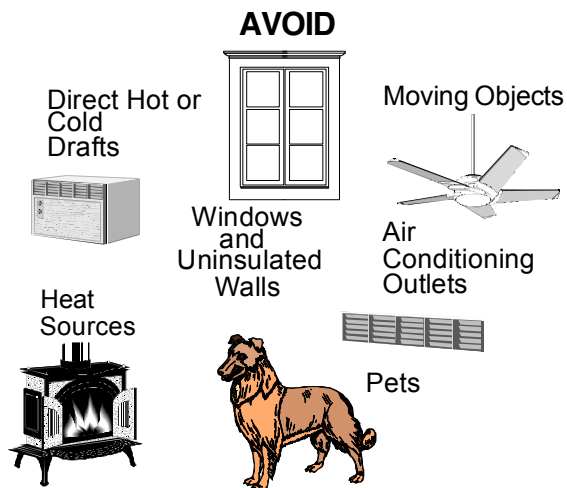
- Coverage:** Standard: 50 ft. x 60 ft. broad (15 m x 18 m) 50 ft. by 10 ft. barrier (15 m x 3 m).
Optional LR/T: 120 ft. x 9 ft. (37m x 2.7m) long range 25 ft. x 12 ft. trap (7.6 m x 3.7 m).
Optional Pet: 30 ft. x 40 ft. (9m x 12m) wide angle 60 ft. x 4.5 ft. narrow (18 m x 1.4 m).
- Mounting Options:** Surface, corner and flush mounting capabilities are standard. Optional B328 Swivel Mount, B330 Low Profile brackets, and B333 Swivel Bracket available for pattern adjustment.
- Input Power:** 6 to 14 VDC @ 20 ma.
- Alarm Contacts:** Form "C" reed relay (NO/C/NC) rated at 3.5 watts, 125 ma @ 28 VDC for DC resistive loads, and protected by a 4.7 ohm resistor in the common "C" leg.
- Tamper Contacts:** Cover activated Form "A" tamper contacts rated at 28 VDC, 0.125 amps maximum.
- Dimensions:** 3.72 in. H., x 4.32 in. W., x 2.10 in. D.
(9.5 cm H., 11.1 cm W., 4.7 cm D.).
- Operating Temperature:** -20°F to +120°F (-29°C to +49°C).

For Underwriters Laboratories Certificated Installations, the operating temperature range is +32°F to +120°F (0°C to +49°C).

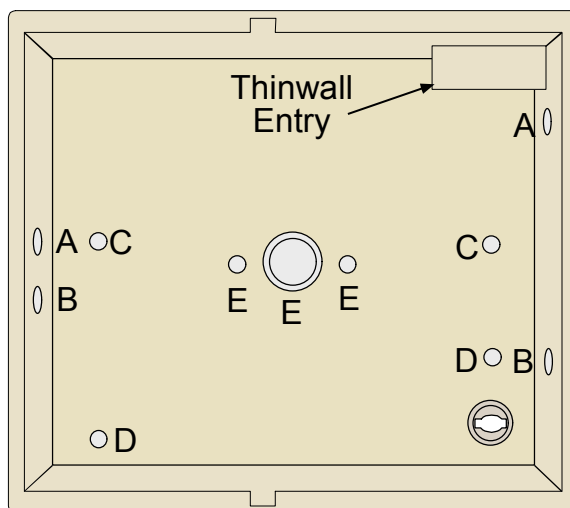


2.0 Mounting

- Select a location that is most likely to intercept an intruder moving *across* the coverage pattern. Recommended mounting height is 6.5 ft (2 m).



- Remove the cover by gently squeezing the top and bottom of the enclosure until the cover retaining tabs clear the slots in the cover.
- Unlock the keyed circuit board holder post by turning it one quarter-turn in the counter-clockwise direction. Remove both the holder post AND the circuit board assembly.
- Break away the thin-wall wire entrance covering at the top of the enclosure.



- A= Straight-away looking corner mount.
- B= 5° downward looking corner mount.
- C= Straight-away looking surface mount, and for use with the recess mount backplate
- D= 5° downward looking surface mount.
- E= Mounting holes for the B328 Swivel Bracket.

- Using the rear of the enclosure as a template, mark the location of the mounting holes on the mounting surface, and prestart the mounting screws.
- Route wiring as necessary to the rear of the enclosure and through the wire entrance, then firmly mount the enclosure to the mounting surface.



detection systems

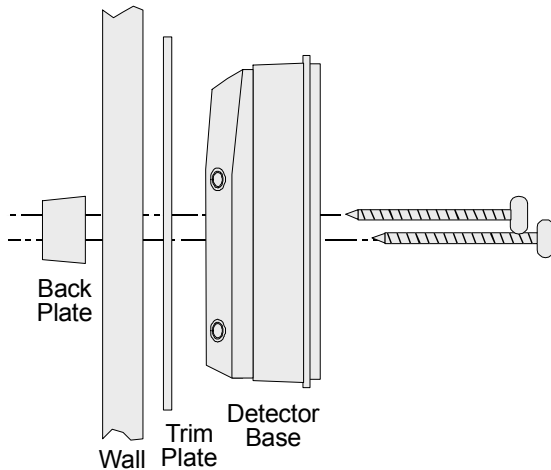
A member of the
Bosch Group

Corner Mounting

- The enclosure may be directly corner mounted or attached to an optional B328 Swivel bracket (see separate bracket instructions supplied with bracket).
- To corner mount, first choose the appropriate mounting hole pair from the guide below, then break out the thin-wall hole covers.
- Using the enclosure as a template, mark the location of the mounting holes on the mounting surface and prestart the mounting screws.

Recess Mounting

- Prepare a 4.25 in. across by 3.75 in. vertical opening (10.8 cm by 9.5 cm) in the mounting surface. If using the trim plate as a template (scribe inside edges), cut outside the scribed lines.
- Place the enclosure into the trim plate.

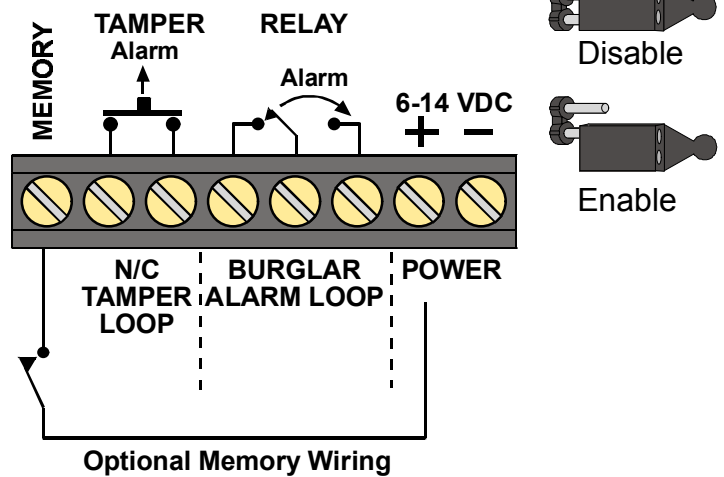


- Prestart one 1.5 in. (3.81 cm) metal screw through a C hole in the rear of the enclosure, and engage the back plate by three to five turns. Repeat for the second screw using the remaining C hole.
- Route wiring as necessary to the rear of the enclosure. Position assembly with wire entrance in upper, right corner, and bring wiring through the entrance.

NOTE: Be sure all wiring is unpowered (de-energized) before routing.

- Push back plate into and through the prepared opening, and seat the enclosure in place, then tighten both mounting screws until the assembly is secure.
- To insert the circuit board, place the left edge of the board against the left, rear edge of the enclosure (into the notch formed by the two bracing bars), then swing board into place. Insert post and secure the circuit board to the enclosure.

3.0 Wiring



4.0 Memory

- To use the alarm memory function, first remove the **Memory Enable** shorting cap from the circuit board. Alarm memory is then controlled by switching (applying and removing) voltage to terminal 8. The voltage range that may be applied is +6 to +14 VDC.
- Connect a switch between terminals 2 and 8 as shown above.

NOTE: If switched voltage is supplied from another source such as an alarm panel, then wiring must also be provided from terminal 1 to the negative (-) side of the alternate source.

- When voltage is applied to terminal 8, any stored alarm is cleared from memory, the Walk Test/Alarm LED indicator is disabled, and the memory is ready to store the next alarm.
- When voltage is removed from terminal 8, the LED is allowed to operate, and a stored alarm will cause the LED to turn ON continuous. If there is no stored alarm, the LED will respond in a normal manner; it will turn on only during a present alarm.
- Some alarm panels and controls supply a switched voltage which may be used for this function. If the panel or control supplies the voltage in the Disarmed (Home) position, and removes the voltage in the Armed (Away) position, then the Memory Polarity shorting cap will have to be removed so that the memory will function correctly. *Leave the cap in place if voltage is supplied in the Armed (Away) position, and removed in the Disarmed (Home) position.*

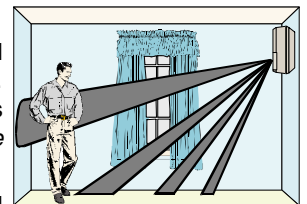
5.0 Sensitivity setting

Standard Sensitivity: Recommended setting for Broad Coverage patterns. Tolerates environment extremes on this setting. *Not recommended for Long Range or Barrier type patterns.*

Increased Sensitivity: Recommended setting for Long Range or Barrier type patterns, or for any location where an intruder is only expected to cover a small portion of the protected area.

High Sensitivity: Fast response to intruder signals. For use in quiet environments where thermal and illumination transients are not anticipated.

NOTE: The above sensitivity settings are intended for use with the supplied 0/A80 optical module. When replaced by any of the optional optical modules, please refer to the comments opposite the appropriate patterns on last page.



6.0 WalkTesting

NOTE: Walk testing should be done the across coverage pattern.

- Apply power to the unit. Wait at least **three minutes** after applying power to begin walk tests.
- The edge of the pattern is determined by the first flash of the LED and (if connected) the start of the sounder.

NOTE: The use of a *Sonalert™ type device (sounder) will provide an audible tone during the time the unit is in alarm. Of the three available connector pins, the center pin is positive with respect to either outside pin (outside pins are common

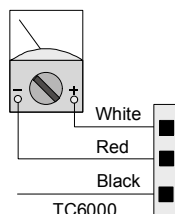
*Sonalert™ is a trademark of Mallory.

- Walk test the unit from both directions to determine the boundaries.
- If rated range can not be achieved, try angling the unit up then down to assure the unit is not aimed too low or too high due to an uneven mounting surface. Shim the unit if not bracket mounted.

7.0 FinalTests

NOTE: Meter readings are very important in determining background disturbance levels and catch margin sensitivity.

- Connect a 20,000 ohm/volt (or greater) DC VOM to the Background Noise Voltage connector pins as shown. Set meter scale for about 3 VDC. (Use of the TC6000 is recommended, but is not essential for meter use.)
- The base reference level for reading background noise or target voltages is approximately 1.5 VDC. Installations in quiet environments, therefore, will result in a steady meter reading between 1.4 and 1.6 VDC.
- With the optical module cover in place, again walk test across the farthest edge of required coverage.



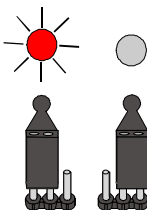
Voltage changes greater than 0.75 VDC from the reference level are desirable for good catch performance. If changes are less than plus or minus 0.75 VDC, the device may fail to respond at this distance if the temperature difference between the intruder and the background is very small. Try adjusting the unit up and down to maximize the voltage change during walk tests.

- Turn on all heating and cooling sources that would normally be in operation during times of protection. Stand away from the unit and outside the coverage pattern, then monitor the background noise for at least **three minutes**.

8.0 Other Information

LED DISABLE

If viewing the operation of the LED is not desired after setup and tests are completed, place the LED shorting cap over the center and right pins. The 3-pin LED Disable strip is located outside the upper, right corner of the optical module housing.



STANDBY POWER

An internal standby battery is not required. Connect the DS774Ti to DC power sources capable of supplying standby power in the event primary power fails. 20 ma-h required for each hour of standby time needed. 4 hours minimum (80 ma-h) are required for UL Certificated installations.

MAINTENANCE

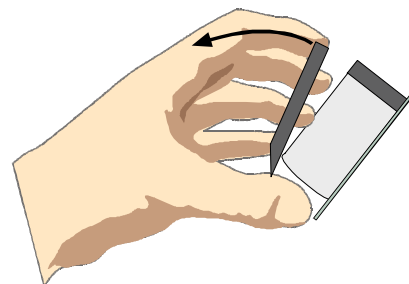
At least once a year, the range and coverage should be checked in accordance with the sections on "Walk Testing" and "Final Tests". To assure continued daily operation, the end user should be instructed to walk through the far end of the coverage pattern to assure an alarm output prior to arming the system.

DETECTION COVERAGE GAPS

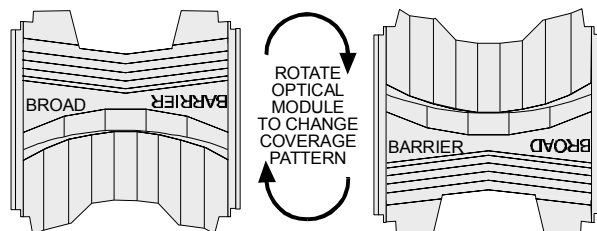
Detection gaps may exist on units mounted over 6.5 ft (2m) high. In such cases, gaps can be minimized by tilting the unit 5° downward using the B (corner) or D (surface) mounting holes, or mounting the unit on a B328 Swivel bracket and adjusting downward. The result of this, however, may be some loss of forward range. If rated range and minimum gaps are desired, the unit should not be mounted higher than 6.5 ft (2m). In the case of Pet Module usage, the recommended mounting height is 4 ft (1.2 m).

9.0 Optional Coverage Patterns

- Remove the lens filter by grasping the back of the filter assembly and lifting it upward.



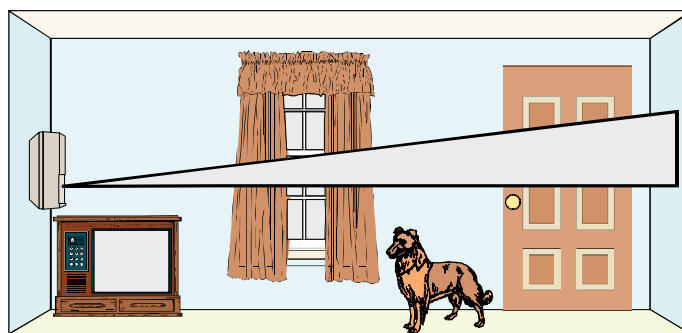
- To change the coverage pattern, grasp the optical module at the sides, lift, rotate and reinsert. Be careful not to touch the mirror surfaces.



- When reattaching the filter/cover to the optical module housing, make sure the cover first engages both bottom housing tabs, then push top into place.

10.0 Pet Module Considerations

- The Pet Module is intended to provide protection in installations where pets are allowed to move about freely.
- Because the unit will be installed lower than normal, be sure to position the unit so that it has a clear line-of-sight across the room.



- To provide an accurate safety margin, install the unit no lower than twice the height of the pet.
- Make sure the field of view is free of all furniture or other objects upon which the pet could climb or jump, resulting in an unwanted alarm.

11.0 Module Mirror To Pattern Reference

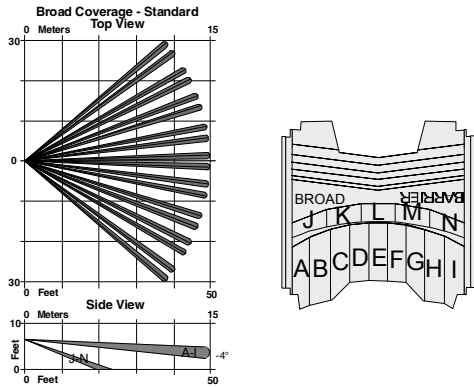
NOTE: Excessive handling of mirror surfaces may lead to performance degradation.

Before attempting any masking, be sure chosen mirror surface is the correct one. When attempting to remove any masking, many adhesives will either destroy the mirror surface or leave enough residue behind to reduce coverage performance. Drawings are not to scale, and are intended as pattern identifiers only.

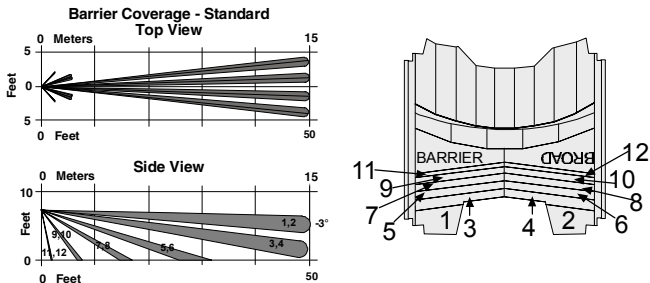
The following sensitivity settings apply to the maximum range permissible in UL Certificated installations:

OMLR/T		OMPET	
"H" or "I"	100 ft. Long Range Barrier	"H" or "I"	30 ft. Broad Pet
"H"	25 ft. Trap	"H"	60 ft. Narrow Pet
"I"	20 ft. Trap	"I"	50 ft. Narrow Pet
"S"	Not for use in UL Certificated Installations	"S"	Not for use in UL Certificated Installations

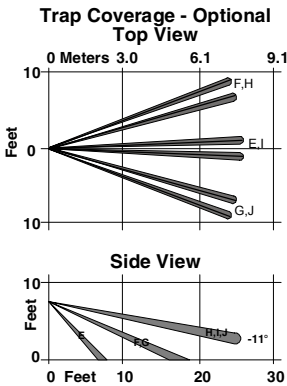
Broad Coverage



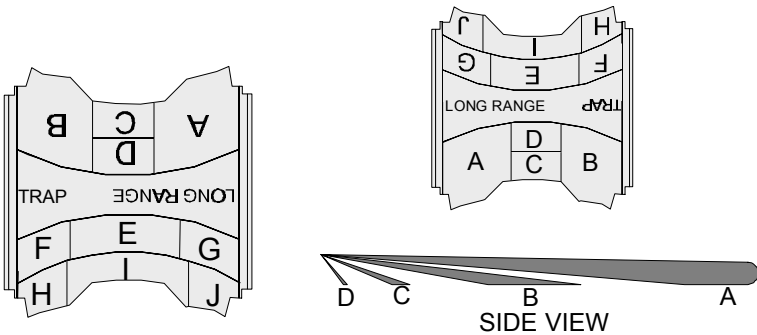
Barrier Coverage



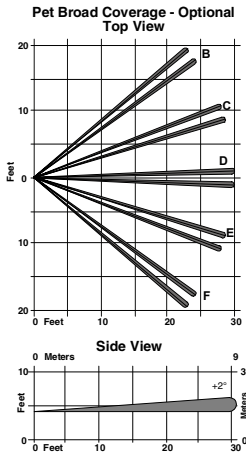
Trap Coverage



Long Range Coverage



Narrow Pet Coverage



Broad Pet Coverage

