

infraSpot Infra-red detector



Function:

infraSpot is a wireless detector, which contains an active infra-red sensor. The sensor measures the distance to the enclosed object and if this distance is changed, an alarm is activated.

The detector registers a malfunction, if the detector is being exposed to too much light or is too close to the painting. If the amount of light is changed suddenly, an alarm is activated. The objective of the infra-red sensitive sensors are placed on the detector's front.

Note: the damage of the lens may destroy the functions of the detector.

The unit is supplied with an internal battery.

Assembly:

infraSpot must be placed as high as possible. Preferably so that the antenna is placed either in the right or left corner of the object, which it is placed on. Note that the end of the antenna must not be hidden behind metal or reinforced concrete. This considerably limits the reach of the antenna.

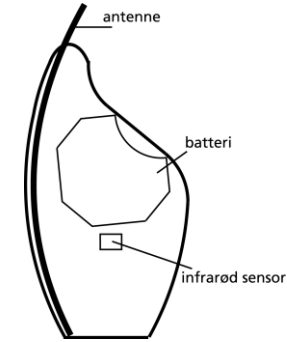
The detector is installed by means of Double-sided tape or through the hole, so that the infra-red sensor points at the object, which is to be monitored.

Service and maintenance:

Every 6 months a check must be made whether or not the detector can be activated. This can be done either by increasing or decreasing the distance between object and detector. Then it must be checked whether an alarm has been registered from the detector on the central unit. If the detector doesn't work the battery is exchanged. If it still doesn't work, the entire detector is exchanged.

The detector's battery is exchanged by loosening the screw at the back of the detector. The plug to the battery is loosened carefully by using a small screwdriver. Hereafter the new battery is put in. Note that the battery must be placed so that it is not squeezed when the cover is installed.

It may be necessary to clean the objective of the infra-red sensitive sensor. This is done by using a soft dry cloth.

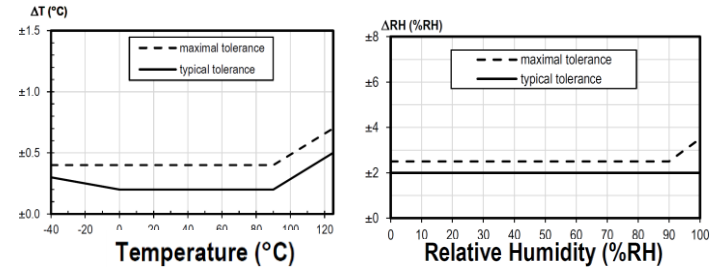


Build-in temperature and humidity sensor:

The infraSpot has a build-in temperature and humidity sensor. Every 4 minutes the infraSpot sends the actual temperature and humidity, and these data can be logged in the central unit.

Please notice that the sensors are placed inside the detector and therefore react slowly on changes in the climate conditions.

The sensors have the tolerances shown in the figure below:



Specifications:

Dimensions:	79 x 39 x 9 mm
Weight incl. internal battery:	25 g
Radius of wireless signal of 868MHz:	Up to 1000m by exterior measurement
Detection distance from Infra-red sensor:	Up to 40 mm
Power supply:	Battery
Battery life span:	Up to 3 years
Temperature:	Minus 10° to plus 55° Celsius

Installation:

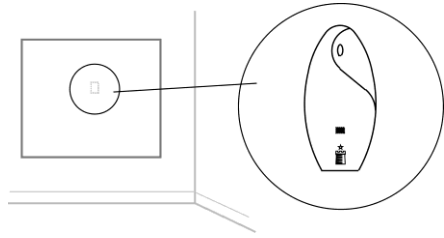
Mouting:

The infraSpot is mounted via double sided tape or using the build-in hole making sure that the ir-sensor is pointing directly towards the object.

Do not place the infraSpot, buzzer quite close at the object! The signal strength of the sounder will be affected. Keep at distance of e.g. 1mm.

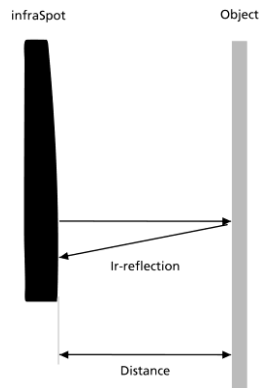
The best RF-signal:

The infraSpot must be placed if possible in the middle between the object and the wall. Note that the end of the antenna must not be hidden behind metal or reinforced concrete. This considerably limits the reach of the antenna.



Positioning:

The infraSpot uses an active reflective ir sensor. Therefore the infraSpot sends out ir light towards the object and measure the amount of ir reflection coming back. If the amount of ir light changes an alarm will be send. If the distance to the object is too big an installation error will be send to the central.



Therefore three things are important concerning positioning the infraSpot:

1. The distance between the infraSpot and the object must be as short as possible. Preferable quite close in order for the sensor to get as much ir-light back as possible.
2. The surface the infraSpot reflects must be as bright as possible. Preferable quite white. If the surface is dark place white tape or paper on the object. White surface reflect more ir-light than dark surface.
3. The infraSpot must be placed in darkness in order to avoid 'false' light from lamp or daylight. 'False' light will make the sensor believe a change in distance to the object has happened.

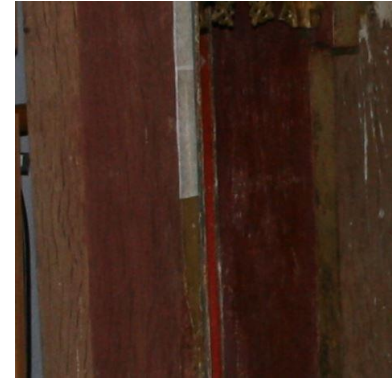
Too large distance:



Acceptable distance:



Too dark surface:



Good bright surface:



Too much 'false' light:



Acceptable darkness:

