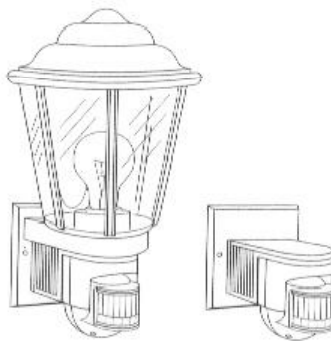


Night GUARDIAN™ made by STEINEL®

Night GUARDIAN™ IS 140

Night GUARDIAN™ Designer Series (L 900/L 910/L 970/L 991)



English

Owner's use & care manual

Read this use & care manual before using. Keep for future reference. Save this Manual.

Français

Notice d'utilisation et d'entretien

Lire cette notice d'utilisation et d'entretien avant l'emploi et la ranger pour s'y reporter ultérieurement.

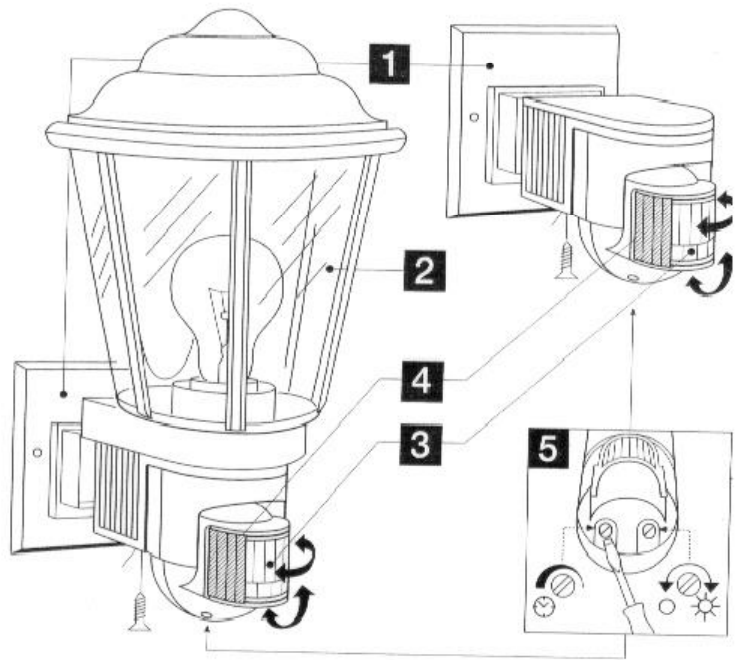
Español

Manual de uso y mantenimiento

Rogamos leá este manual de uso y mantenimiento antes de instalar el producto. Cuide y mantenga este manual para futuro uso.

Made in Germany





1 Backplate

2 Glass globe

3 Sensor vertical and horizontal adjustments

4 Clip-on shrouds in place

5 Time and lux set screws

1 Plaque arrière

2 Lanterne

3 Réglages horizontal et vertical du détecteur

4 Caches enfichables positionnés

5 Vis de réglage de minuterie et de crépuscularité

1 Placa trasera de montaje

2 Campana de cristal

3 Sensor orientable horizontal y verticalmente

4 Cubiertas reductoras

5 Tornillos de regulación del temporizador y de lux

Technical Specifications

Housing size (H x W x D):	IS 140: 3½" x 2¼" x 4½" Designer Series: 12½" x 6⅝" x 8¼"
Supply voltage:	120 V / 60 Hz
Switching capacity:	IS 140: 600 Watts Designer Series: 60 Watts
Detection angle of sensor:	140° horizontal / Plane A (10 zones)
Sneak-by guard:	90° horizontal / Plane B (6 zones) 8° vertical
Swivelling range of sensor:	130° horizontal, 65° vertical
Range over which detection is adjustable:	270° horizontal
"ON" time:	10 sec. to 15 min., adjustable
Sensor reach:	min. 40 feet in front, 23 feet at sides. Based on ten feet mounting height.
Type of enclosure:	Raintight

Night GUARDIAN™ Features / Principle of Operation

All STEINEL Motion Sensors use pyroelectric infrared technology to detect invisible heat radiation emitted by pedestrians or cars.

The thermal radiation detected is converted electronically to switch the lights on. By using high speed circuitry with surface mount

technology, STEINEL has created the most accurate, dependable sensor system available.

STEINEL Distortion Free Lens with two Detection Planes

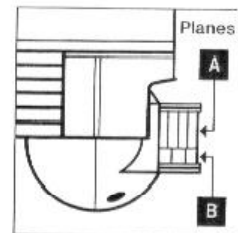
The STEINEL lens is designed and manufactured to assure accuracy, full / accurate zone coverage and raintight rating for years of service.

The STEINEL lens is molded curved, not flat. (Competitors use a molded flat lens which may distort readability when bent into curved form.) STEINEL lens contains 16 total precise viewing windows (plane A) with a sneak-by-guard (plane B). The viewing windows are

designed to give you maximum sensitivity in all areas. The sneak-by-guard will sense passage directly under the unit.

On the lens are viewing windows that vary in width to provide total motion detection accuracy. In the front the viewing windows are more narrow while on the sides they are wider. This allows you to direct your sensor straight into the zone and allows equal

sensitivity in front and on the sides.



Distance & Coverage of Detection Zone

STEINEL technology allows you maximum coverage and automatically adjusts to temperature changes once you set the unit.

- All motion sensors are effected by temperature changes.
- The colder the temperature the longer the reach of the detection zone.

The accuracy of the STEINEL system is not effected by this temperature change. **It will Automatically Adjust to the Changes in Temperature and Read the Situation Correctly Everytime.**

- Therefore we do not have:
- Sensitivity Control
 - Range Control

● Seasonal Adjustment for Accuracy

The **width** of the zone is not effected by temperature. STEINEL products work in temperature ranges from -40° F to 120° F.

Mounting Height

The reach of the detection zone is effected by the mounting height of the unit. To achieve a reach of forty feet it is recommended that the unit be mounted no greater than ten to twelve feet high. For higher mounting applications, the sensor head of the unit should

be turned down several degrees. At ten to twelve feet the sensor head should be turned down slightly to achieve an optimum detection zone. (See "adjustment and pinpointing of detection zones" section of manual.) The accuracy of the unit will not be effect-

ed by mounting height. But it is recommended that the unit not be mounted higher than twenty feet.

Built-In Surge Protection

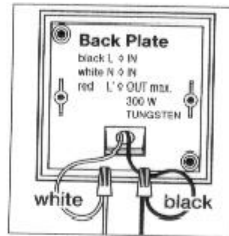
Every STEINEL motion sensor contains built in surge protection. This feature will re-set the unit automatically and instantaneously after:

- Power Surges
- Power Outages
- Power Shortages

Surge protection protects the sensor unit if it is mis-

wired. If you mis-wire, shut off the power, correct the connections, and the sensor will again operate.

Installation



Caution: Read this entire instruction manual before you start installation.

If you are not experienced with wiring, please consult a qualified electrician. All wiring should comply with local codes.

Tools required: Flat head screwdriver and Phillips head screwdriver.

Warning: 120 Volts can be lethal. Before wiring make sure that the power is off at the fuse box.

The mounting location should be at 20" from any lamp because its thermal radiation could trigger the system. The mounting height should be 6'-8'.

Installation:

- Use flathead screwdriver to remove screw on bottom of Night GUARDIAN™ and remove back plate 1 to expose lead wires.
 - Install enclosed X bar to junction box using 3/4" chrome colored bolts with, regular flathead screwdriver. (Note: The X bar may not be required for certain applications).
 - Adjust X bar to a horizontal position that lines up with the pre-drilled holes in the backplate. Tighten center screw on X bar to lock into position.
 - Feed wires through the center hole of the backplate after having inserted the rubber sealant.
 - Properly connect the wires from Night GUARDIAN™ unit to the corresponding wires in the junction box. See **connection of power supply lead**.
 - Fasten backplate to X bar using the remaining 3/4" bolts with regular flat-head screwdriver. Tighten to assure backplate is firmly in place.
 - Line up unit over backplate and mount on top lip of backplate. Fasten unit to backplate using one small screw with Phillips head screwdriver.
- H. (only Series L 900)
Place glass globe onto base unit and secure in place with 2 fastening screws.
- I. Installation complete – Adjust detection zone and test unit.

Connection of power supply lead

The connection lead consists of 2 wires:
L = hot wire (usually black)
N = neutral wire (usually white)

In case of doubt, identify the individual conductors with a voltage tester or contact a qualified electrician.

Note: If any STEINEL product is miswired it will not destroy the unit. Simply rewire correctly using a voltage tester to identify wires and proceed.

Note: While Night GUARDIAN™ is totally raintight, you may want to use a silicone sealant around the junction box.

Weatherproof Box Installation

It is recommended that a double gang box be used for wall mount weatherproof box applications. With this type of installation the X bar is not used and the backplate is mounted directly to the junction box.

Installation:

- A. Use flathead screw driver to remove screw on bottom of Night GUARDIAN™ and remove backplate to expose lead wires.
- B. Line up backplate over double gang box.
- C. Feed wires through the center hole of the backplate, after having inserted the rubber sealant.
- D. Verify that holes in lower left and upper right hand corners of the backplate line up with the holes in junction box.
- E. Fasten backplate to junction box using two 3/4" non-chrome colored bolts with regular flat-head screwdriver.
- F. Properly connect the wires from Night GUARDIAN™ unit to the corresponding wires in

the junction box. See **connection of power supply lead.**

- G. Line up unit over backplate and mount on top lip of backplate. Fasten unit to backplate using two small screws with Phillips head screwdriver.
- H. (only series L 900) Place glass globe onto base unit and secure in place with 2 fastening screws.
- I. Installation complete – Adjust detection zone and test unit.

Settings on Night GUARDIAN™

Once in place you have only two settings to adjust at the bottom of the unit. Time Setting – 10 seconds to 15 minutes.

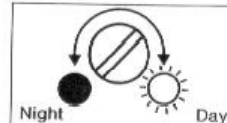


Timer Setting

Light on for approximately 10 sec. to 15 min. max.

Light threshold (lux setting) – Full daylight to total darkness.

All sensors are factory set at 10 seconds and full-



Twilight Setting

approximately 2 to 2,000 lux.

daylight operation. See also illustration 5. Night GUARDIAN™ will operate in full daylight if required.

Note: Timer and light threshold settings are not exact. Each installation varies and customers' needs differ. You may want to make small adjustments after a few days of operation. Fine tuning your Night GUARDIAN™ is simple and can be achieved very quickly.

Manual Override

Night GUARDIAN™ can be easily switched to override the sensor and turn the lights on. Manual override can be activated day or night.

- 1) To activate manual override flip the wall switch OFF/ON and OFF/ON within 2 seconds. Your lights are now on. **To verify that you are in manual override look at the sensor lens, you should see a red indicator light behind the lens in the upper right hand corner. If the red light is visible you are in manual override.** (If the red light is not

visible please refer to paragraph 3). Manual Override is controlled by a microprocessor to remain on for 4 hours. After this period of time the red light is no longer visible, the lights automatically turn-off and the unit returns to normal operation.

- 2) To resume sensor mode prior to the 4 hour pre-programmed reset time, simply flip the wall switch OFF/ON once within 2 seconds. The red indicator light is no longer visible, the lights turn off, and the unit returns to sensor mode.
- 3) **Note:** If you complete the OFF/ON and OFF/ON

manual override procedure and the red light is not visible repeat the procedure again making certain that you complete the process within 2 seconds.

- 4) **Note:** If the unit is accidentally switched OFF/ON and OFF/ON in a time span greater than 2 seconds, the red indicator light is not visible and the lights will remain on for the length of timer setting.
- 5) **Note:** If the switch is operated OFF/ON only once, the red indicator light is not visible and the lights remain on only for the length of timer setting.

When using multiple switches to operate the Night GUARDIAN™ you need to verify at which switch position power is going to the unit before switching to **manual override**.

- A. First, at the switch from which you are attempting to put the unit into manual override move the switch to the opposite position.
- B. Second, check Night GUARDIAN™ and note if lights are on. If lights are on move to step E.

- C. If you complete steps A and B and the lights are not on at the same switch, move switch to original position.
- D. At Night GUARDIAN™ verify that lights are on in sensor mode.
- E. If the lights are on, power is going to the unit. Let the unit cycle through the timer setting. After the lights have turned off the timer setting cycle is complete. Now at the same switch, put your unit into manual override.

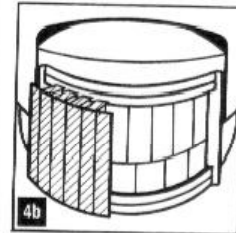
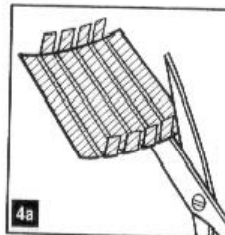
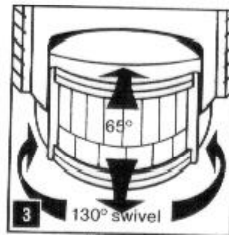
See manual override section of instruction manual.

Adjustment and Pinpointing of Detection Zones

By moving the sensor **3** sidewise (left to right) by 130° or alternatively moving the sensor **3** up and down by 65° the reach can best be set to meet your require-

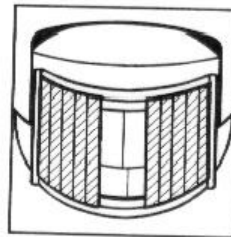
ments. The incl. clip-on shrouds **4** are made up of six 10° sections which can be snapped or cut off **4a** individually allowing you to create detection zones for

alleys, one side only or other speciality areas. The shrouds easily can be clipped on to the unit **4b** without changing the lens.

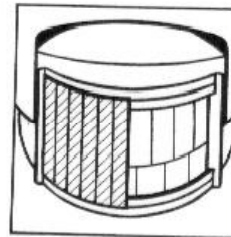


Clip-on shrouds with individual break-off sections of 10° each.

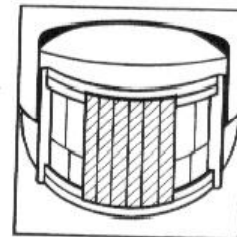
Left or right side only.



Narrow-Alley Zone.



Left or right side only.



Split Zone.

Testing after Installation

To assure the proper direction of your motion sensor take the following steps.

1. Factory setting of the unit is 10 seconds and full daylight operation. (Meaning both set screws located at the bottom of the unit are fully clockwise as you face the unit.)
2. Direct the unit to the desired detection area. Allow the light to go off (10 secs.) and then walk into the zone. Note at what point the light comes on. Best detection is achieved when entering the detection zone from an angle. Position your Night GUARDIAN™ accordingly.

3. Repeat this process for the side zones to assure complete zone coverage. (Note: Once the light goes off you may immediately step into the zone again.)

4. Because the **STEINEL system re-sets immediately** this process will not take long.

5. After you are satisfied with the zone setting you can set your light threshold to the desired settings.

Note: Lux setting (Light Threshold) tells your unit at what degree of darkness the unit will begin working. The setting will run from full-daylight to total darkness.

6. Now set the timer to the preferred amount of time that you would like the lights to remain on after detecting motion. Minimum approximately 10 seconds to maximum 15 minutes.

7. Night GUARDIAN™ **does not require a test mode feature** like many other units with old technology. It is not required. Simply follow the above directions.

Maintenance

The fresnel lens **1** should be periodically wiped clean

with a damp cloth if it gets dirty.

Do not use any cleansing materials.

Trouble Shooting Guide

Symptom	Cause	Action
Light does not come on.	<ul style="list-style-type: none"> ■ Is power going to the unit? ■ Is light bulb properly installed? ■ Is bulb faulty or burned-out? ■ Is lux setting positioned to activate the sensor at desired time of day? (See Night GUARDIAN™ settings section.) ■ Is the wiring loose or incorrect? 	<ul style="list-style-type: none"> ■ Check panel box to verify that circuit breaker has not been tripped. ■ Verify that wall switch is in the on position. ■ Verify that power is going to unit by switching to manual override mode at the wall switch (see Night GUARDIAN™ manual override section). Note: Manual Override can be activated day or night. ■ Turn off power at circuit breaker before checking. Note: If the Night GUARDIAN™ is mis-wired it will not destroy the unit. Simply rewire correctly and proceed.
Light does not turn off.	<ul style="list-style-type: none"> ■ Is the unit in manual override? ■ Is the unit detecting movement outside of desired sensing zone? 	<ul style="list-style-type: none"> ■ Check for red indicator light behind lens in upper right hand corner. ■ If visible, switch unit out of manual override (see Night GUARDIAN™ manual override section). ■ Readjust detection zone using clip-on-shrouds if required. Verify that the timer is properly set (see Night GUARDIAN™ settings section).
Light randomly turns on and off.	<ul style="list-style-type: none"> ■ Is the wiring loose? ■ Is the unit detecting movement outside of desired sensing zone? 	<ul style="list-style-type: none"> ■ Turn off power at circuit breaker before checking. ■ Readjust detection zone using clip-on-shrouds if required.
Unit does not go into manual override.	<ul style="list-style-type: none"> ■ Did not complete the switching motion within 2 seconds. ■ Is the wall switch the type that has a lighted toggle or a continuous night light? 	<ul style="list-style-type: none"> ■ Repeat the switching motion completing it within the 2 second time frame. ■ Replace wall switch with unlighted type. Lighted wall switches have continuous power and never completely shut off power. The microprocessor must have complete power shut off to activate the manual override. Red indicator light behind lens will indicate you are in override.

Night GUARDIAN™ Technology Advantages Installation Tips

Because Night GUARDIAN™ is the most technologically advanced motion sensor available it is able to perform in many installation applications that are problematic for other products. This list will answer some questions you may have.

- Night GUARDIAN™ is Ⓜ and Ⓢ listed raintight. This includes the lamp holders. Others are rated "wet areas only". This means Night GUARDIAN™ can be put in open weather and the lamp-holder, if desired, can be pointed directly up towards the sky. Rain, snow and moisture will not affect the operation of the sensor or lamp-holder.
- Night GUARDIAN™ does not require a dedicated circuit to operate properly. You may wire it on the same circuit with other appliances like HVAC, washer/dryer or garage door openers.
- Night GUARDIAN™ can be wired in parallel with other Night GUARDIAN™ sensors.
- Night GUARDIAN™ may be used with a relay, if required.
- Night GUARDIAN™ senses motion directly toward the sensor. You are not required to turn the sensor head sideways to increase sensitivity.
- The minimum distance Night GUARDIAN™ will cover is approximately 40'. Because installations vary and temperatures vary, coverage can be much greater. This coverage is also affected by mounting height. It is

important to note that Night GUARDIAN™ accuracy is not affected by these variables.

- Night GUARDIAN™ will not be destroyed if miswired. Simply turn the power off, make the wiring corrections and proceed.

Night GUARDIAN™ will not be affected by waving branches, swimming pool reflections, heating vents, open windows, reflecting lights or bright colored surfaces.

Night GUARDIAN™ will not be affected by heavy rain, snow, sleet, high winds or barometric pressure changes.

Night GUARDIAN™ will not trigger because of insects or moths being drawn to the light.

Night GUARDIAN™ will accept, and operate with PL "A" or "R" type lamps. We recommend the use of PAR or quartz floods as they are more readily available and will give you optimum light. Consider using energy saving, lower wattage lamps.

Night GUARDIAN™ may be placed in open weather. It does not require mounting in a protected area.

Night GUARDIAN™ will not be affected by power surges.

Night GUARDIAN™ will not be affected by strong radio signals, such as CB, ham, cellular telephone or VHF radio transmission.

Night GUARDIAN™ will not leak, allowing insects, moisture and water into the unit.

- Night GUARDIAN™ exclusive microprocess manual override will not be initiated on by power surges or power outages.

If you have any questions concerning the care, use or installation of your Night GUARDIAN™ motion sensor, please call us toll free at 1-800-852-4343. Office hours are 8:00 AM to 4:30 PM Central Standard time.

Note: If you have questions concerning wiring other than the Night GUARDIAN™ to a junction box, please consult with a qualified electrician. We can not give instructions beyond the limit of our product.

Warranty

Lifetime Limited Warranty

STEINEL America, Inc., (the "Company") warrants its products to be free from defective material and workmanship, within generally accepted industry standards as long as the original purchaser owns the product except the glass globe, which shall be warranted, as set forth herein, for a period of one year from the date of purchase. The liability of the Company under this warranty shall be limited, at the Company's option, to the repair or replacement of any product found to be defective within the meaning of this warranty. The Company shall be liable for no other damages or losses.

This warranty does not apply where: (1) repairs or attempted repairs have been made by others; (2) relating only to the globe, repairs are required because of normal wear and tear; (3) the product has been abused, misused, or improperly maintained; or (4) alterations have been made to the product.

To obtain repair or replacement, you must, within

30 days of discovery of the defect, return the product, postage pre-paid to:

STEINEL AMERICA, INC.
Lyndale Business Center
9051 Lyndale Avenue South
Bloomington, MN 55420

Please enclose a letter explaining the problem or defect, with a copy of the proof of purchase. Allow approximately four weeks for delivery of a replacement or repair and return of the product.

The warranty described herein shall be **in lieu of any other warranty, express or implied**. Including but not limited to, any implied warranty of **merchantability** or **fitness for a particular purpose**.

The parties agree that the purchaser's **sole and exclusive remedy against the company shall be for the repair or replacement of the product**, as provided for herein. Purchaser agrees that **no other remedy** (including, but not limited to, actions for actual direct loss or damage, incidental or consequential

damages for lost profits, lost sales, injury to person or property or any other actual, direct, incidental or consequential loss) **shall be available to purchaser.**

Any and all other statements about the merchandise being purchased under this contract, whether oral or written, do not constitute a warranty, and shall not be relied upon by the purchaser, and are not part of the contract for sale. The entire contract is embodied in this writing. This writing constitutes the final expression of the parties' agreement and is a complete and exclusive statement of the terms of that agreement.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

★ Lifetime
★ Limited
★ Warranty