High Frequency Sensor

Model: HF1

TIMEGUARD®
LIMITED

Installation & Operating Instructions

1. Specifications:

1. Power: AC 220 ~ 240V 50MHz.
2. Sensor Technology: 5.8GHz High Frequency.
3. Switching capacity: 1000W Incandescent or Halogen / 500VA Fluorescent or Low Energy.
4. Angle of coverage: 360° with 160° angle of aperture.
5. Lux setting: 1 ~ 2000 Lux.
6. Time setting: 3 sec to 30 min.
7. Manual override: Switchable (4 Hours).
8. Warm up: 60 sec.
9. Indoor use only.

2. Adjustments:

1. **TIME:** The detector has an adjustable TIME ON control from 3 sec. to 30 min. Move the time indicator fully anti-clockwise for the shortest time (approx 3 sec). Move the time indicator fully clockwise for the longest time (approx 30 min). The timer starts working after the last detected movement. See Fig. A.
2. **RANGE:** The sensor has a detection range which is adjustable from 0.5m to 6m. Move the range indicator fully anti-clockwise for the minimum setting (0.5m). Move the range indicator fully clockwise for the maximum setting (6m). See Fig. B.
3. **LUX (light level):** It can be set to any level between 1 – 2000 Lux. Move the lux indicator fully anti-clockwise for night time operation (approx 1-8 Lux). Move the lux indicator fully clockwise for daylight operation (approx 2000 Lux). See Fig. C.

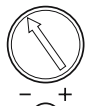


Fig. A

Fig. B

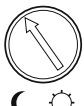


Fig. C

3. Detection Range:

The integrated HF sensor emits high-frequency electromagnetic waves (5.8GHz) and receives their echo, any change in echo is perceived by the sensor and will indicate the presence of a person(s) or animal(s). A microprocessor triggers almost without any delay and will activate the connected lights or applications. Detection is able to pass through glass, doors and around partitions with 360 degree coverage. See Fig. D, E.

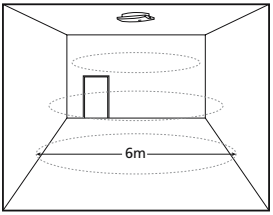


Fig. D

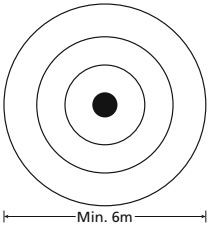
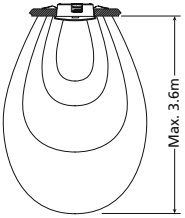


Fig. E



4. Safety Instructions:

1) Disconnect the power supply before any installation.
2) During the installation, the power cable must be voltage-free when connected. Therefore we recommend you switch off the power and check there is no voltage with a voltage tester – before you start.
3) Please note that the sensor must be protected by a 5A circuit breaker.
4) The mains cable needs to be 0.5~1.5mm².

4. Ceiling Flush-Mount Installation:

Warning: If you have any doubts about the installation, please ask a qualified electrician to install it and ensure that the sensor is screwed securely to the ceiling without any movement.

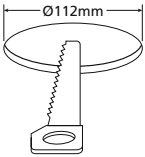


Fig. F

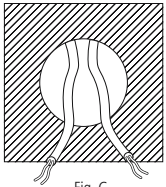
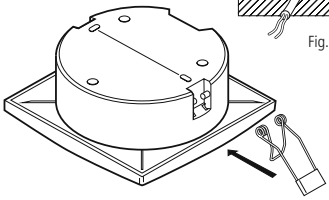


Fig. G



1. Determine the best location for the sensor.
2. Drill a hole of 112mm in diameter in the ceiling. The thickness of the ceiling must be between 5 and 25mm. See Fig. F.
3. Connecting the power supply. Please refer to the subject of "Connection to the power supply" in page 5 and the wiring diagram. See Fig. J.
4. Please remove the metal mounting feet from the accessory pack and clip on the HF1. Make sure the mounting feet is clipped to the correct position. See Fig. G.
5. Adjust the metal mounting feet vertically first (Fig. H) and then push the HF1 upward into the hole until the mounting feet holds the ceiling and the unit in place. See Fig. I.
6. Adjust TIME, LUX and RANGE controls. Please refer to the subject of "Initial set up and operation" in page 5.

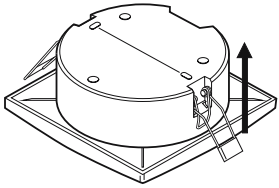


Fig. H

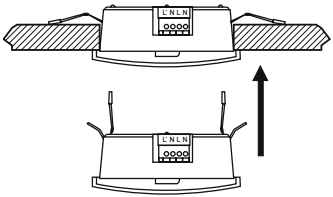


Fig. I

Note:

1. The ideal height for sensor is between 2.4m to 3.0m.
2. Please do not install in a location, which is subject to water spray, rain or wet conditions.
3. Please do not install in a place where the sensor's performance will be masked by metal objects in front of the sensor. It might affect the total detection distance.

5. Connection to the Power Supply:

Important:

1) Note: This sensor must be installed according to local Wiring Regulations and Code of Practice.
2) Ensure the supply is disconnected at the distribution board before beginning with the electrical wiring. If in doubt, the cables must be checked with a voltage tester.
3) Study the wiring diagram below before making any electrical connections. Incorrect wiring of the unit could destroy the sensor.

Connection:

1) The mains supply is connected to the AC IN terminals marked L (Live) and N (Neutral). See Fig. J.
2) The output (or Load) is connected to the LOAD terminals marked L' (Switch Live) and N (Neutral). See Fig. J.

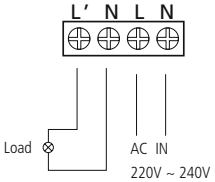
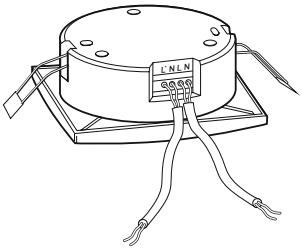
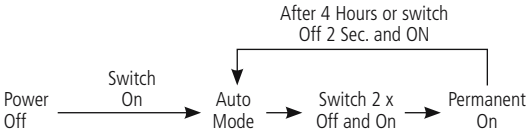


Fig. J



Initial set up and operation:



1) When powered on (after the 60 seconds warm up) the sensor goes into the auto mode. Please open the front cover and turn the TIME setting to its minimum and the LUX setting to its maximum in order to test.
2) Walk in front of detector until light comes on. This checks the operation of the detector and the field of view.
3) Turn the TIME and LUX to the desired positions.
4) To switch the light permanently ON (4 hours max), switch OFF and ON twice in rapid succession within in the range of 0.5 sec to 2 sec. This will change the HF1 from auto mode to manual override mode.
5) The sensor will automatically turn off after 4 hours or by switching power switch OFF for 2 sec and ON again.
6) The LED will flash 3 times when sensor goes into auto mode.

Note: If LED is still on, it means it is in override mode; make sure to switch off power for more than 2 sec. When in override mode, the LED will be on permanently.

6. Trouble Shooting:

Malfunction	Cause	Solution
Sensor without power	Fuse blown, not switched ON	Replace fuse and switch ON mains switch. Check supply with voltage tester
	Short circuit	Check connection
Sensor does not switch ON	Fuse blown	Replace fuse and check connection if necessary
	Bulb blown	Replace bulb
	Lux setting in night time mode during daytime operation	Readjust Lux setting
Sensor does not switch OFF	Detect continued movement	Check detection area in detection range
	Permanent light ON	Switch off permanent light
Sensor switch keeps switching ON and OFF	Curtains, pets, etc…	Check detection area

3 Year Guarantee

In the unlikely event of this product becoming faulty due to defective material or manufacture within 3 years of the date of purchase, please return it to your supplier in the first year with proof of purchase and it will be replaced free of charge. For years 2 and 3 or any difficulty in the first year telephone the helpline on 020 8450 0515.

For assistance with the product please contact:

HELPLINE

020 8450 0515

or email helpline@timeguard.com

For a product brochure please contact:

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