

PATROL – 801

PROFESSIONAL COMBINED DIGITAL PIR & GLASS BREAK DETECTOR

INSTALLATION INSTRUCTIONS



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G.S.N. Electronic Company Ltd.

Features:

- High immunity to the direct sunlight - no less than 10000 Lux – by “Fresnel Technologies” lightproof lens.
- High RFI and EMI immunity.
- Digital signal processing.
- Two optoelectronic switch relays for glass break and PIR detectors.
- Test mode for two acoustic channels.
- Self-test diagnostic - control test of the main circuit of the detector.
- Hermetically insulated pyrosensor.
- Automatic pulse count.
- Automatic temperature compensation.

Description:

«PATROL-801» – digital combined PIR & GLASS BREAK detector.

The PIR detector analyzes the environment and detects the motion crossing the beam.

ACOUSTIC GLASS BREAK detector identifies the sounds of impact and glass breaking. Due to the unique firmware, processing the signals of PIR and Glass Break Detectors, “Patrol-801” provides greater immunity to false alarms even in case of strong noises and other interferences.

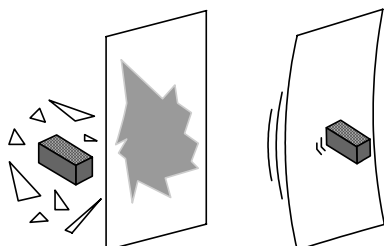
Two independent optoelectronic relays allow the detector to be connected to two independent zones in the control unit.

Glass Break Detector’s Two-Channel Identification.

For an alarm to occur both low-frequency sound of impact on the glass, and high-frequency glass breaking sound must be registered within a prescribed time frame.

HIGH FREQUENCY SIGNAL

LOW FREQUENCY SIGNAL



Since both channels should register the fact of glass breaking, false alarms are practically excluded.

The firmware, based on the mathematical algorithm, processes the signals and identifies only the actual situations of glass breaking for most glass types at different force of impact.

Owing to all these qualities, and high RFI immunity, “Patrol-801” provides great protection in all secured locations: in the small buildings with stable environment, such as residences, offices, and shops as well as in the large constructions with unstable environments, such as factories, malls, warehouses, and so on...

Protected Glass Types/Thickness

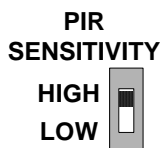
Glass type	Min. Thickness	Max. Thickness
Plate	2 mm	10 mm
Tempered	3 mm	8.4 mm
Patterned	3 mm	10 mm
Laminated ¹	3.2 mm	14.3 mm
Wired	5 mm	6.4 mm
Coated ²	2,5 mm	8.4 mm
Sealed Insulating ¹	3.2 mm	6.4 mm

¹ Laminated and sealed insulating glass types are protected only if both plates of glass are broken.

² For glass coated with plastic film on the inner surface, effective range is reduced to 6m.

PIR Sensitivity Adjustment.

For locations with stable environment (without thermal or other interferences) – set the jumper to the “HIGH” position.



For locations with unstable environment - thermal or other streams of air, vibration, etc. – set the jumper to the “LOW” position.

Installation Location.

Install the detector in a direct line of sight with protected glass and at height of 2.1 meter (the recommended installation height). If a single detector protects several windows – mount the detector in between. Choose a location most likely to intercept the intruder. If heavy blinds of curtains cover the glass, locate the detector so the blinds do not block the sound.

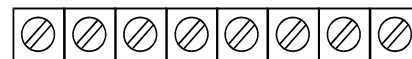
Attention!

Avoid the following installation locations:

- Areas subject to rapid temperature changes.
- Areas with substantial air flows.
- On the unstable bases.
- Avoid proximity to noisy objects such as bells, compressors and loud machinery.

Terminal Block Connections.

+ 12V - TAMPER RELAY 1 RELAY 2



Terminals “+12V-” connect to the power supply of the control unit.

Terminals “Tamper” – connect to a 24-hour normally closed protective zone in the control unit.

Terminals “Relay 1” – an output relay of the PIR detector.

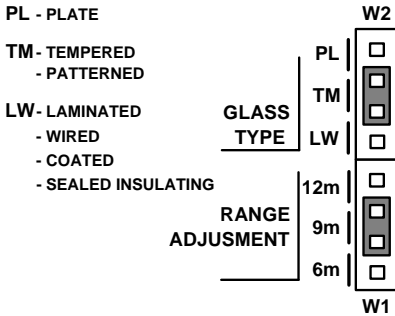
Terminal “Relay 2” – an output relay of the glass break detector.

Pulse Count.

“Patrol-801” - automatically selects and counts the levels of pulses according to the strength of the incoming signals.

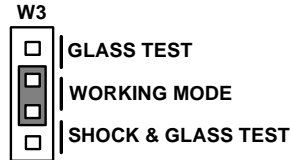
Glass Break Sensitivity Adjustment.
Glass Type Selection.

Set jumper W1 to position according to the distance from the protected glass.
 Set jumper W2 to position according to the protected glass type (see figure).



Glass Break Test.

Set jumper W3 to "GLASS TEST" position.
Replace the cover.
 Use Glass Break simulator, models "FG-701" or "RG-65", to simulate the high frequency signal of glass breaking. The LED should illuminate at each simulator activation.



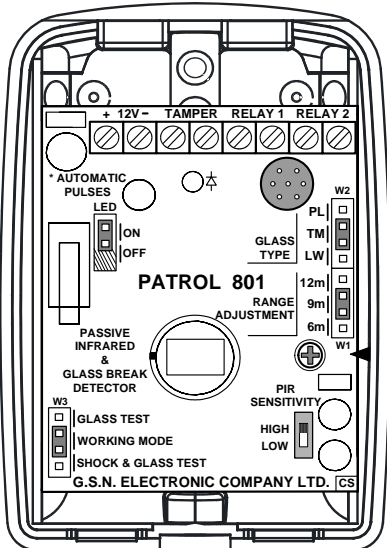
Shock & Glass Test.

Set the jumper W3 to "SHOCK & GLASS TEST" position.
Replace the cover.
 Hit gently on the protected glass, and activate the simulator at the same time. The LED should illuminate for 3 sec.

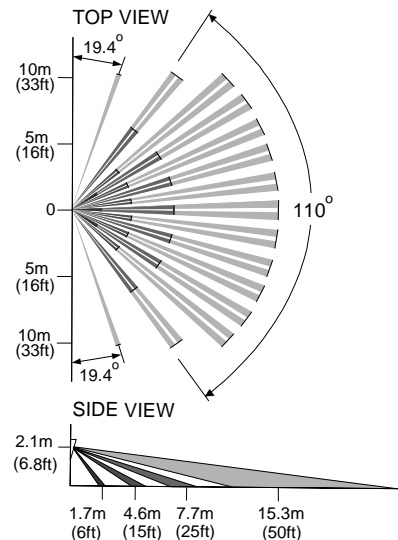
Attention!

During the "GLASS TEST" and "SHOCK & GLASS TEST", the PIR detector is disconnected, and the outputs relay of the detector – "RELAY 1" and "RELAY 2" - are opened.

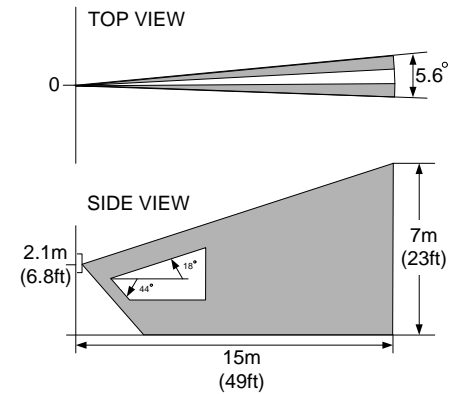
After conducting all the tests, notice to set the jumper W3 back to "WORKING MODE" position.



Wide angle lens



Curtain lens



The "Curtain lenses" are purchased additionally!

Technical Specifications:

- Detection speed range: 0.3 – 3.0m/sec
- Power input: 8.5 – 16 Vdc
- Current draw in standby mode: 18.4mA
- In active mode with LED on: 19.1mA
- In active mode with LED off: 14.4mA
- "Pulse" mode: automatic
- Alarm period: 3 sec
- Warm up period: 40 ± 2 sec
- Reset time: 5 ± 1 sec
- Relay output: 60V; 120mA; 16 Ohm

- PIR detection range: 15m x 110°
- Glass break detection range: 12m x 160° (radius)
- Light immunity no less then: 10000 LUX
- Operating Temp.: - 20°C to +50°C
- Storage Temp.: - 40°C to +80°C
- RFI immunity: 30 V/m 10 - 1000 MHz
- EMI immunity: 50 000 V
- Dimensions: 93 mm x 66 mm x 46 mm
- Weight: 85 gr.

Limited Warranty.

"G.S.N. Electronic Company Ltd." warrants to repair or a replace the product under normal use and absence of mechanical damages for a period five years from the date of sale.

