PATROL – 801PET

PROFESSIONAL COMBINED DIGITAL PIR & GLASS BREAK DETECTOR WITH PET IMMUNITY

INSTALLATION INSTRUCTIONS

CE OC03

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GSN Electronic Company Ltd.

FEATURES.

- Immune to pets up to 30kg
- Digital mathematical algorithm of signal processing
- High light immunity – no less than 10000 Lux
- High RFI & EMI immunity
- Two optoelectronic switch relays for glass break and PIR detectors
- Test mode for two acoustic channels
- Hermetically insulated PYRO sensor
- Automatic temperature compensation
- Pulse counter.

DESCRIPTION.

The PATROL-801PET is immune to pets of up to 30kg and 1m height.

The PATROL-801PET is a combination of PIR and acoustic glass break detectors.

The PIR detector analyzes the environment and detects the person's motion crossing the infrared beam.

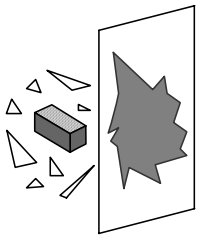
The acoustic glass break detector identifies the sounds of glass impact and breakage.

Due to unique program for processing incoming signals from PIR and GLASS BREAK detectors the PATROL-801PET enables an exceptionally reliable detection and stable "false alarms free" operation in extremely harsh environments.

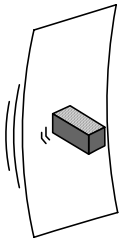
ALGORITHM.

Unique algorithm is based on recognition of sequence of low-frequency and high-frequency signals of framed pane glass breakage. Low-frequency signal is emitted upon the impact of glass. High-frequency signal occurs upon the glass breakage.

HIGH FREQUENCY SIGNAL



LOW FREQUENCY SIGNAL



For creating an alarm, both a low-frequency sound of the glass impact and a high-frequency glass breakage sound must be registered within a predetermined time frame.

Since both detector channels must register the actual glass breakage, false alarms are practically excluded.

The program of microcontroller, based on the mathematical algorithm, analyzes signals and detects only the actual breakage of all standard framed glass types.

PROTECTED GLASS TYPES.

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] (Triplex)	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 glass plates are broken.

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

SELECTING MOUNTING LOCATION.

Choose a location most likely to intercept an intruder.
The recommended installation height to gain maximum protection zone is 2.1 - 2.3 meters.
For protecting several windows mount the detector at optimal distance from them. If heavy blinds of curtains cover the glass, locate the detector so the blinds will not block the sound.

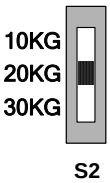
ATTENTION!

Avoid the following locations:

- Near sources of loud noises or vibrations (heating/air conditioning units, bells, fans, compressors, etc.)
- On the same wall as protected glass.

PET IMMUNITY SETTING.

Set the switch S2 according to the animal weight.

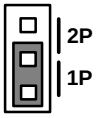


S2

PULSE COUNTER.

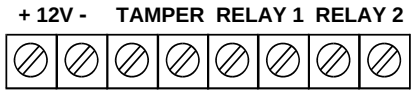
Set the jumper W5 to the "1P" position for premises with stable environment.

Set the jumper W5 to the "2P" position for locations with harsh environment.



W5

TERMINAL BLOCK CONNECTION.



Terminals "+12V-" – for connection to the power supply of the control unit.

Terminals "Tamper" – for connection to a 24-hour normally closed protective zone in the control unit.

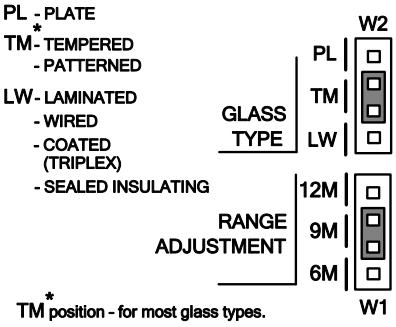
Terminals "Relay 1" – relay output of the PIR detector.

Terminals "Relay 2" – relay output of the glass break detector.

SELECTING GLASS TYPE AND COVERAGE RANGE.

Set the jumper **W1** according to the distance to the protected glass.

Set the jumper **W2** according to the protected glass type (see the figure).



GLASS BREAK TEST.

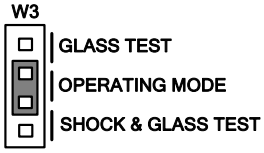
NOTE!

Testing should be conducted when the front cover of the detector is closed.

1. Set jumper W3 to "GLASS TEST" position. The PIR detector is off; the RELAY 1 and RELAY 2 are opened.

2. Replace the cover.

3. Use glass break simulator to simulate the high frequency signal of the glass breakage. The red LED will flash with each simulator activation.



SHOCK & GLASS BREAK TEST.

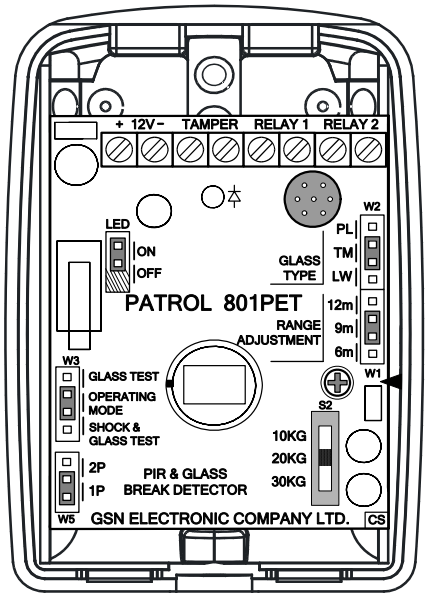
1. Set the jumper W3 to "SHOCK & GLASS TEST" position. The PIR detector is off; the RELAY 1 is opened, the RELAY 2 is closed.

2. Replace the cover.

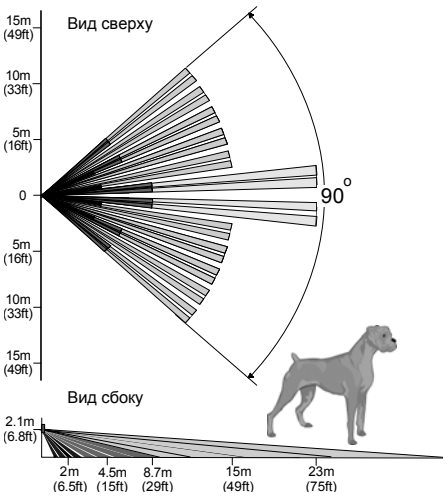
3. Tap gently the protected glass and activate the glass break simulator at the same time.
The red LED will be ON for 3 sec, the RELAY 2 will open.

NOTE!

After testing, set the jumper W3 to "OPERATING MODE" position. The PIR and Glass Break detectors are operating; the RELAY 1 and RELAY 2 are closed.



WIDE ANGLE LENS.



TECHNICAL SPECIFICATIONS.

Detection speed range:...0.3 – 3.0m/sec

Power input:……..……...8.5 – 16VDC

Current consumption in stand-by mode:……18.4mA

In alarm mode with LED on:……..……19.1mA

In alarm mode with LED off:…… 14.4mA

Pulse mode:……...1,2

Alarm period:..……...……3 sec

Warm up period:……...40 ± 2 sec

Reset time:……..5 ± 1 sec

Relay output:……..NC; 60V;120mA;16Ω

PIR detection range:..……...15m x 90º

Glass break detection range:…….…….....12m x 160º

Light immunity no less than:…… ……..10000 LUX

Operating temperature range:……– 30°C + 50°C

Storage temperature range:……– 40°C + 80°C

RFI immunity:……..30V/m at a frequency range 10MHz-1000MHz

EMI immunity:……..50 000V

Dimensions:……93x66x46mm

Weight:……..…97gr.

WARRANTY.

GSN Electronic Company Ltd. warrants the product to be free from defects in materials and workmanship under condition of observance of service regulations and to be repaired or replaced under absence of mechanical damages for a limited period of five years from the date of sale.

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