

# PATROL-USR

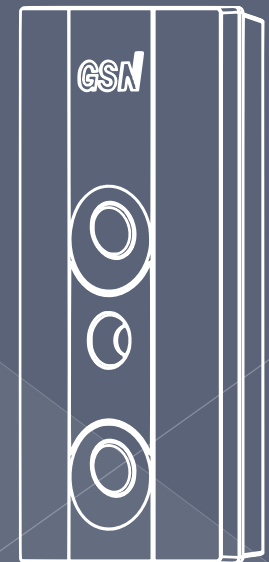
COMBINED  
ACOUSTIC & ULTRASONIC  
GLASS BREAK DETECTOR

DETECTS BREAKAGE  
OF VARIOUS TYPES OF  
MULTILAYER GLASS

**PATROL-USR** combined acoustic and ultrasonic detector recognizes the sound caused by breakage of any type of protected glass: plate, wired, tempered, laminated, patterned, multilayered<sup>1</sup>, sealed glazed windows<sup>1</sup> and glass blocks<sup>1</sup>; all with a thickness of 2.5 mm to 16 mm

<sup>1</sup> The detector registers breakage of multilayered glass that holds together when shattered, as well as sealed glazed windows and glass blocks if all glass layers are broken.

**PATROL-USR** provides reliable protection of multilayer glass, sealed glazed windows and glass blocks in places, where the use of acoustic glass break detectors is not reliable.

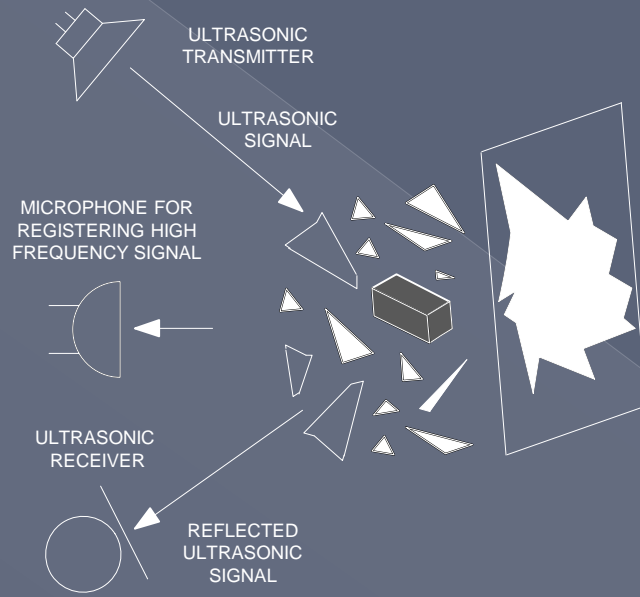


# ALGORITHM

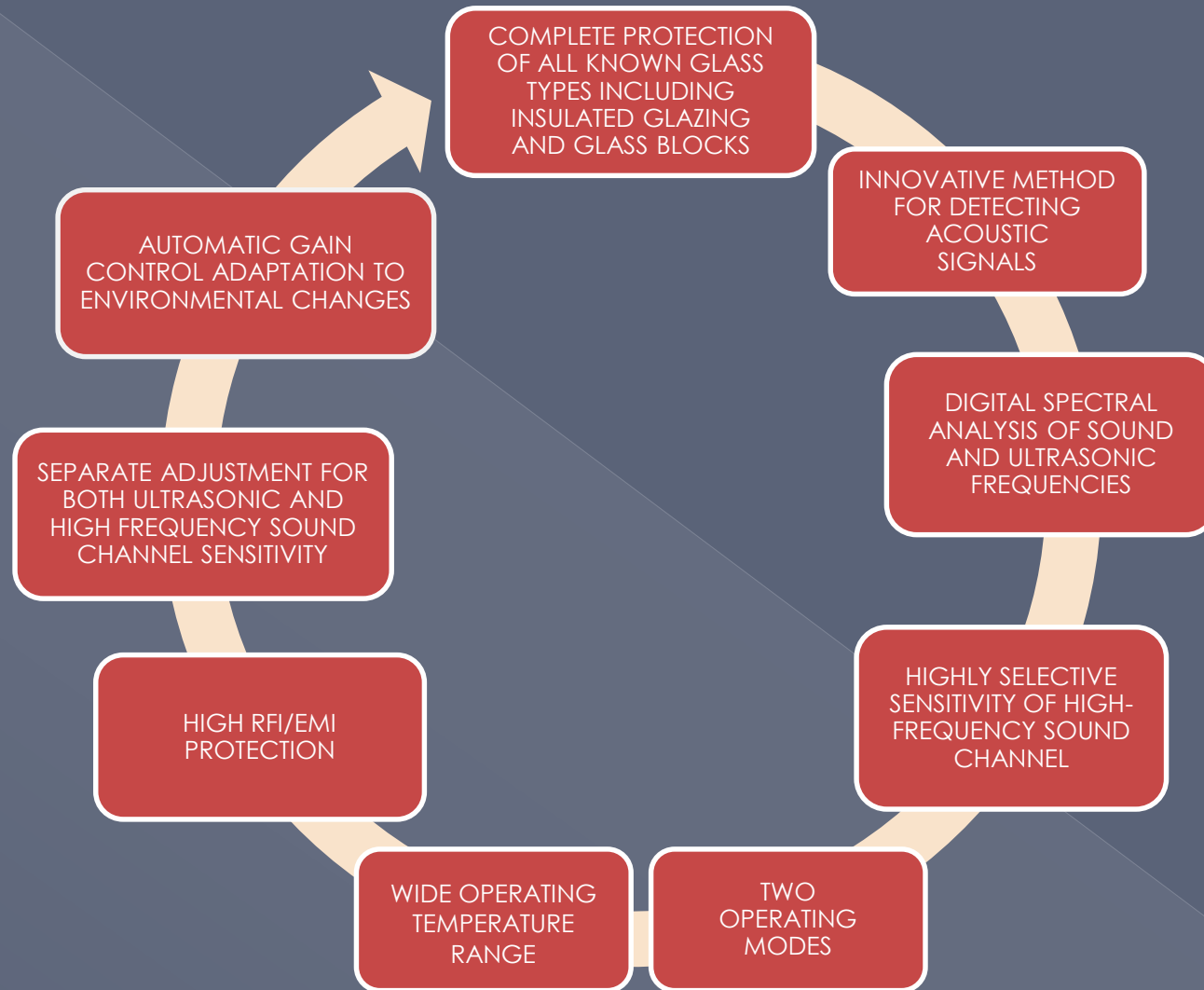
Dual-technology detector incorporates two physical means for determining glass breakage: registering the high-frequency acoustic signal and registering the change in frequency of ultrasonic signal (Doppler Effect).

1. The high-frequency acoustic signal occurs upon glass breakage.
2. The Doppler Effect occurs when the frequency of ultrasonic waves continuously emitted by the detector and reflected from different moving objects changes.
3. To activate the alarm, both high-frequency and ultrasonic signals must be successively sensed within a pre-determined time period.

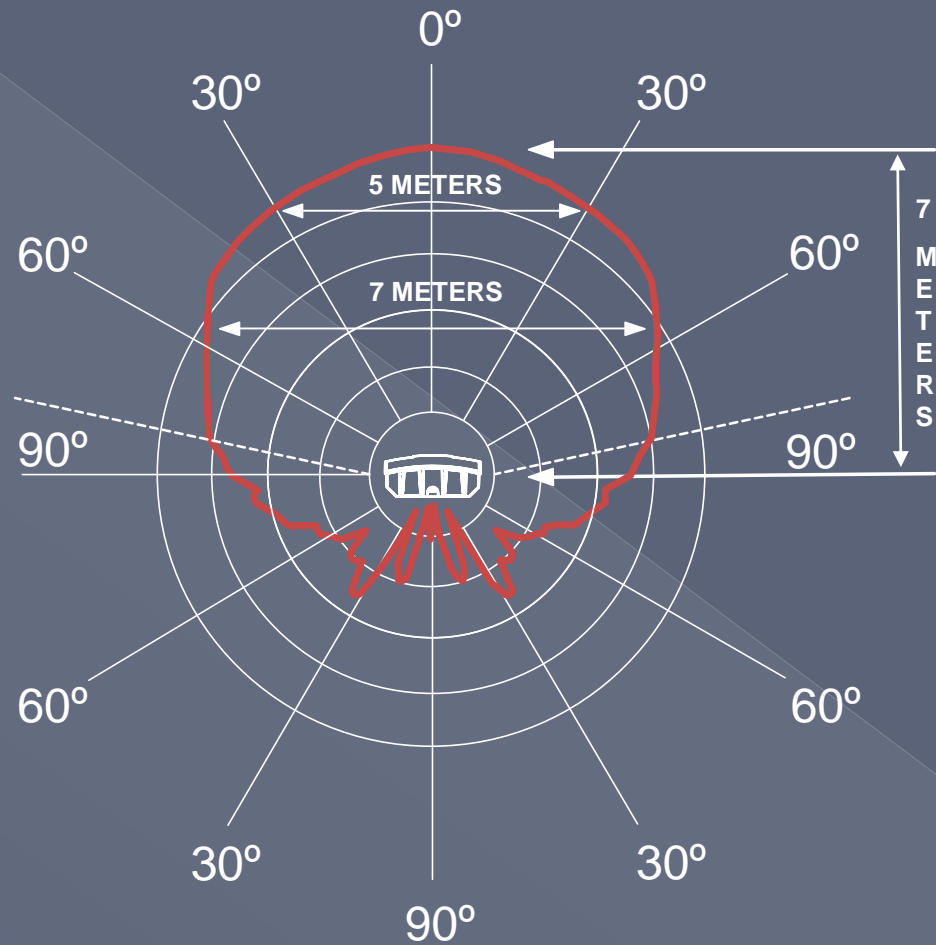
# Glass Breakage Detection



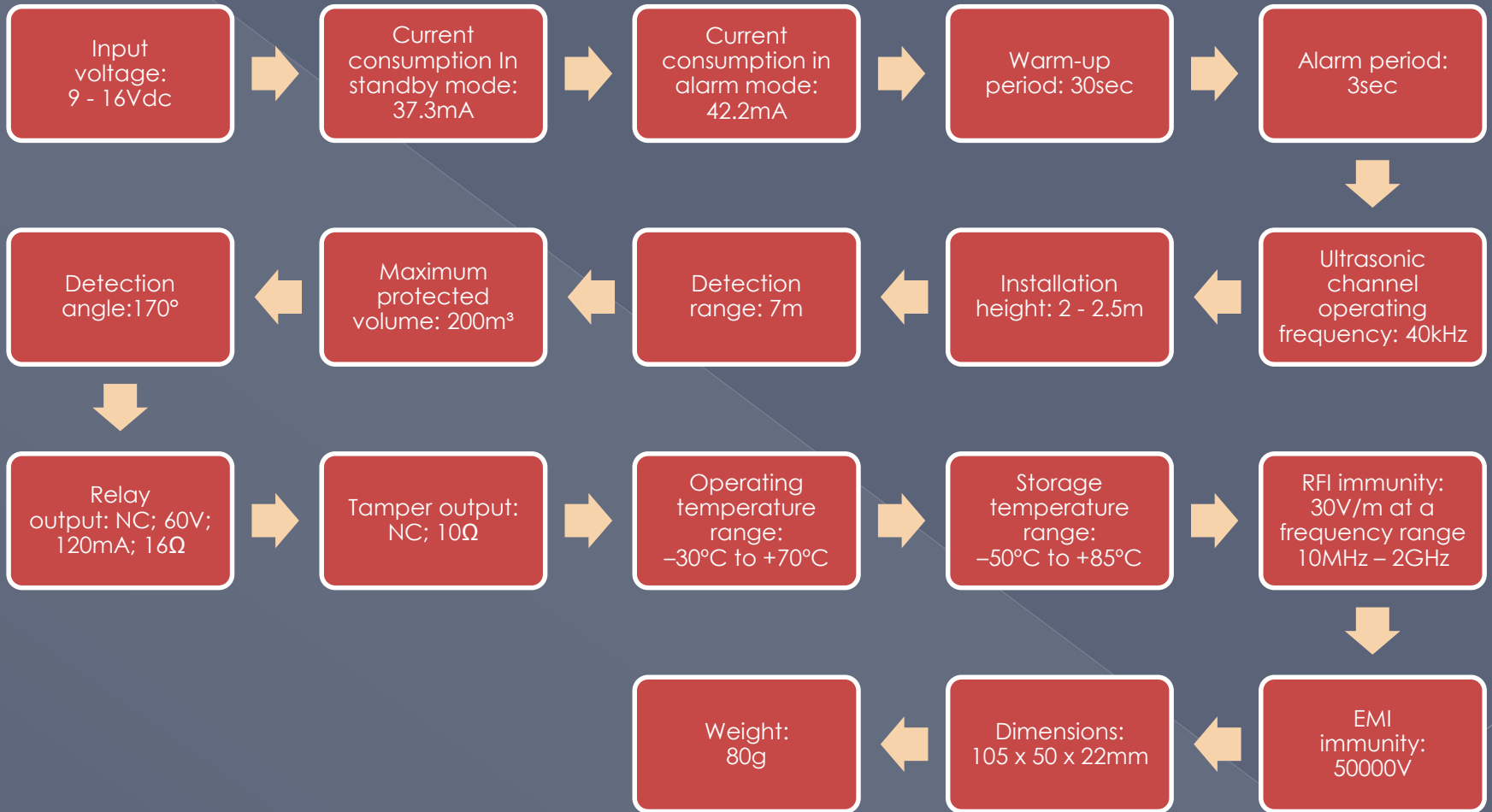
# FEATURES



# DETECTION ZONE



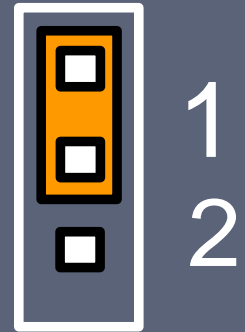
# TECHNICAL SPECIFICATION



# OPERATING MODES

**MODE 1**  
For premises with stable environmental conditions.

**MODE 2**  
To provide extra security measures for banks, safes, vaults, jewelry stores, pawn shops, museums and other facilities that store valuables.



MODE



# 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.