

Detection Unit And Method Of Operation Thereof

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ABSTRACT

The present invention discloses a detection unit (100) for detecting traffic and/or obstacle on a surface. The detection unit (100) includes a housing (101), one or more resilient member (103) and at least one movable element (105). The housing (101) includes an open cavity (101b). The resilient members (103) are disposed within a first portion (101b1) of the open cavity (101b). The movable element (105) is coupled to the resilient member (103) and disposed within a second portion (101b2) of the open cavity (101b). The movable element (105), in a free state, partially protrudes out of the open cavity (101b) of the housing (101) and does not contact the second portion (101b2) of the housing (101). The movable element (105), in an impulse state, advances towards a lower surface (b1') of the first portion (101b1) of the open cavity (101b) and does not contact the second portion (101b2) of the open cavity (101b). The movable element (105), in a compressed state, rests on a second surface (b2'') of the second portion (101b2) of the open cavity (101b).

KEY APPLICATION AREAS

1. Road safety systems.
2. Intelligent transportation systems (ITS).
3. Smart traffic monitoring.
4. Obstacle detection and warning systems.
5. Smart city infrastructure.

POTENTIAL USE

1. Accident prevention at blind curves and hairpin bends.
2. Vehicle detection and speed monitoring.
3. Landslide and road blockage detection.

4. Tunnel traffic warning systems.
5. Real-time traffic data collection and road profiling.