

SafePass Vehicle Detector

MD102 Probe & MD102C Controller

Magnetic field vehicle detector

Compact Probe supplied with 30 metres of cable



The SafePass MD102 Vehicle Detector has been designed for parking and access control applications and is a cost effective solution for detecting vehicles to facilitate automatic opening of gates and boom gates.

The Probe can be buried underneath the road surface, alongside the road or mounted above the ground fixed securely to a wall next to the roadway.

Vehicle Detector Logic



Able to detect vehicles for a distance of 1.5 metres the MD102 is ideally suited to applications where it is not desirable to cut into or dig up an existing roadway to install an underground sensor such as vehicle ramps, existing driveways, carparks etc.

It is also a useful alternative for providing reliable vehicle detection on unsealed roads as the probe can be buried along the side of the road avoiding damage to the detector which would normally occur on dirt roads.

The **MD102 Probe** measures the earth's magnetic field. Changes in the magnetic field due to the presence of a vehicle are detected and result in a signal output.

The Probe can be used to produce a pulse output or a presence output. The presence out will detect the vehicle indefinitely.

The **MD102C** control unit enables configuration and testing of the MD102. DIP switches are used for configuration and LED's are used for visual indication of the operation of the Probe. A relay output switches ON when a vehicle is detected.

SafePass MD102 Vehicle Detector features include:

- **Reset Switch:** Allows the MD102 Probe to be manually reset during commissioning and testing. This results in the Probe adjusting to the environment and becoming ready for vehicle detection. The switch settings are also used to update the Probe. These settings are stored in non-volatile memory enabling the Probe to be used without the controller connected. The button must be pressed until the fault indicator comes ON.
- **Switch selectable Sensitivity:** The detect sensitivity is the minimum change in magnetic field required to produce a detect output. Four sensitivity settings are available on the switches to allow flexibility in configuration.
- **X, Y & Z Axis enable:** This feature enables the three axis. The output values from the axis are averaged to give a combined output. For normal use all of the axis should be enabled.
- **Filter Option:** This is used to provide a delay of 2 Seconds between detection of the vehicle and switching of the output relay. This delay is normally used to prevent false detection of small or fast moving objects.
- **Relay Mode:** This switch configures the relay to operate in presence or pulse mode.
- **Pulse Relay Selection:** The Pulse relay may be configured to energize on detection of a vehicle or to energize when the vehicle leaves the loop.
- **Motion Filter:** This feature will only activate the presence relay output once the vehicle has stopped moving for at least 1 second.
- **5 Minute Presence:** This feature will reset the detector after a 5 minute timeout.

Technical Specifications

Specification	MD102 Probe
Power supply	MD102 12-24 VDC 10mA
Presence/Pulse Output	Open Collector transistor output.
Response time	Approximately 100ms after vehicle enters loop.
Sensing Distance	The probe should be placed less than 1.5m from the side of the vehicle or in the ground under the vehicle.
Environmental tracking	Automatic Compensation
Cable	Cable length 5m, 10m, 15m, 30m. 5 Core + Earth
Dimensions	80mm X 18mm X 6mm
Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +85°C

Specification	MD102C Controller
Power supply	MD102C 12 - 24VAC/DC 50/60Hz 30mA
Presence/Pulse Relay	Change over contact 0.5A/220VAC
Response time	Approximately 100ms after vehicle enters PROBE area.
Indicators	LED indicators show: Power, Detect state and PROBE Fault.
Connector	11 Way Screw terminal block.
Dimensions	105mm X 90mm X 22mm
Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +85°C

Supplied with 5—30 metre Cable

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