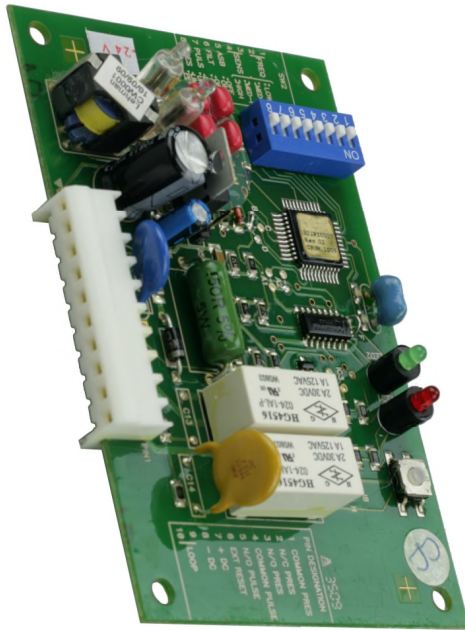


Single Channel Inductive Loop Vehicle Detector

PD139



The PD139 is a single channel microprocessor based detector designed specifically for parking and vehicle access control application. The PD139 has been designed using the most up-to-date technology in order to meet the requirements of diverse applications with a wide range of configurable options available.

The primary function of the detector is to detect vehicle presence by means of an inductance change caused by the vehicle passing over a wire loop buried under the road surface.

PART NUMBERS

301FT0130	PD139 - Standard	24 V DC
301FT0131	PD139 – (Bulwark)	12 V DC

FEATURES

Compact Size: This miniature circuit board is ideal for incorporating into a custom controller having a vehicle detection requirement.

The male molex connector may be mounted directly on the motherboard of the controller, making the detector a plug-in device, or the PD139 may be post mounted at four corners. An optional mating connector with flying lead is available for this application.

This detector format provides all the industry requirements regarding features and functionality and allows this detector to be incorporated into any new or existing vehicle detection system.

Diagnostic Capabilities: The software of this unit allows comprehensive diagnostics capabilities in conjunction with separate DU100 hand-held diagnostics readout. Advanced diagnostics features are covered by International patents.

Selectable Permanent Presence: With this feature selected the output of the presence relay will be maintained for an indefinite period, thereby eliminating premature barrier/gate/door closure and possible vehicle damage.

Loop Isolation Protection: The loop isolation transformer provides protection against lightning and transient damage and allows for operation with single point to ground sensor loops.

Loop Frequency Indication: The possibility of crosstalk (interference) between adjacent loops/detectors can be determined by an integral indication, and eliminated by changing the frequency settings.

Automatic Sensitivity Boost (ASB):

This feature facilitates the reliable detection of large truck-trailer combinations and high-bed vehicles by automatically boosting the sensitivity to maximum on detection of a vehicle.

Detect Filter:

Selection of the filter option will provide a finite turn-on delay, thus allowing small or fast-moving objects to pass over the loop undetected.

APPLICATIONS

- Parking boom gate control
- Rising Bollards
- Motorised gates and doors
- Industrial control systems

TECHNICAL DETAILS

Self tuning range:	20-1500 μ H
Sensitivity:	Four step adjustable on face-plate: High: 0.02% Δ L/L Medium High: 0.05% Δ L/L Medium Low: 0.1% Δ L/L Low: 0.5% Δ L/L
Frequency:	Four step adjustable on face plate, 12- 80kHz (frequency determined by switch setting and loop geometry)
Output Configuration	2 output relays: Relay 1 = Presence output Relay 2 = Pulse output
Pulse output duration:	Approx. 150ms Factory option 250ms
Presence time:	1 hour for 3% Δ L/L and permanent presence option
Operating modes:	1. Limited presence/ permanent 2. Pulse on detect/ undetect 3. Auto Sensitivity Boost off/on 4. Filter off/on (2 second delay)
Indications:	The following face-plate indications are provided: Red LED – power; Green LED – channel indicator 1. Tuning – on steady followed by flashing frequency count (x 10 kHz) 2. Undetect – off 3. Detect – on steady 4. Fault – on with short off
Protection:	Loop isolation transformer, zener diode clamping on loop inputs and gas discharge tube protection
Power requirements:	24V DC \pm 15 % Option 12V DC 1.5VA max
Presence Output Relay:	1A @ 230V AC Change-over contacts (fail-safe)
Pulse relay:	1A @ 230V AC N.O. contacts (non-fail-safe)

PD139

Operating temperature range: -40°C to +80°C

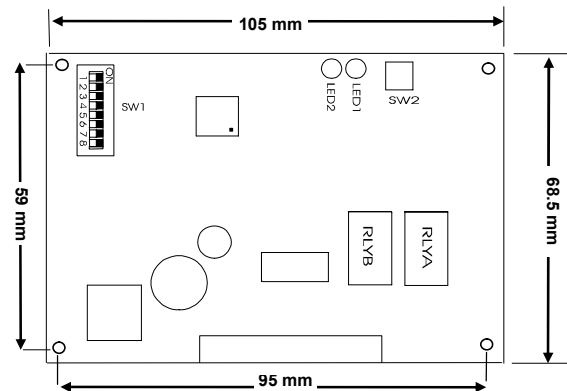
Mechanical detail:

Dimensions: 22mm(H) x 68.5mm(W) x 105,0mm(L)

Mounting: Pillar or plug-in mounting

Connector: 10-pin 3.9mm centre (side entry) female
PCB connector for 1.4 sq. mm pins (#2145/AA 10A)

Options: 1 metre flying lead



WIRING DETAILS

pin	designation	
1	Presence common	
2	Presence NC	
3	Presence NO	
4	Pulse common	
5	Pulse NO	
6	External reset	
7	24V DC +	
8	0V	
9	Loop	Twist this pair
10	Loop	

OPTIONAL ITEMS

301FT0046	1 metre flying lead
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