



# MAGIC BUTTON

The PD130 and PD230 is a series of inductive loop vehicle detectors in a popular miniature housing for DIN rail and relay base mounting, yet they have all the features and benefits found on much larger models.

These detectors are most commonly used as devices to provide free exit and as a safety method for barrier gates, automatic gates and doors and to arm access control systems (I.E access control will only operate when vehicle is present).

With a building wire loop fitted in a suitable road surface and twisted feeder leading to the detector, a magnetic inductive field is created that provides reliable, accurate and trouble free vehicle detection.

## FEATURES

**Compact Size:** Miniature lightweight housing that saves space in newer compact equipment designs.

**Flexibility:** Front panel DIL switch provides many user selected functions. (PD230 series ONLY- channel multiplex circuitry eliminates crosstalk interference between the two loops connected to the dual channel detector regardless of proximity.)

**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.

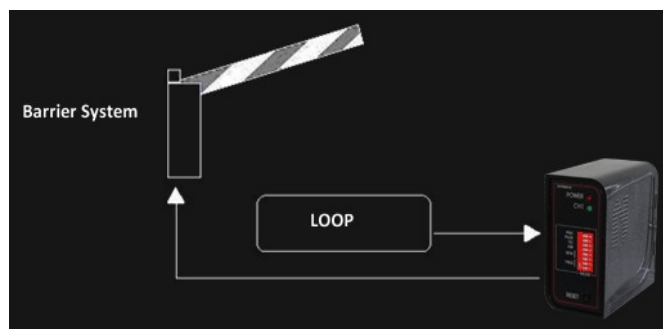
**Loop Frequency Indication:** The possibility of crosstalk (interference) between adjacent loops/detectors can be determined by an integral indication and eliminated by changing the frequency settings.

**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 (PD130 Series only):** The PD130 allows selection of a filter which provides a finite turn-on delay, thus allowing small objects (i.e. Bicycles, shopping trolleys etc.) to pass over the loop undetected.

**Fault Monitor:** A fault indication is provided in the event of a loop input becoming faulty or alternatively if the loop is out of tuning range. This feature will help in localising the fault in the event of a maintenance call-out.

**Selectable Relay Output (PD230 Series only):** The output relays of the dual channel detector may be internally programmed to operate in the presence or pulse mode.



PD132  
&  
PD134



PD232  
&  
PD234

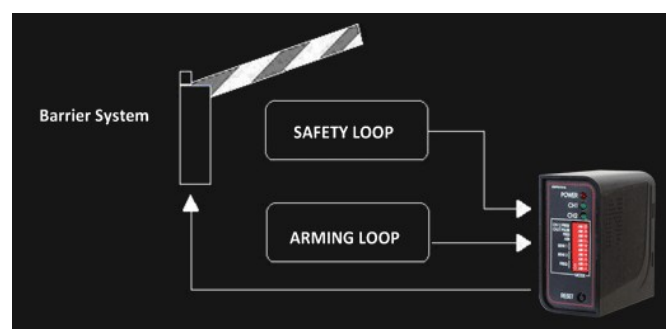


**A-B logic and Sensitivity (PD230 Series only):** Internal selection of A-B logic option to configure the detector in direction logic mode. In this mode the output relays give separate outputs depending on vehicle detection.

**Diagnostic Capabilities:** The software of these units allow comprehensive diagnostic capabilities in conjunction with a separate D100 hand held diagnostics readout.

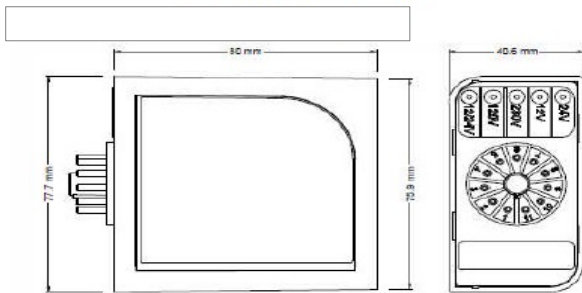
## APPLICATIONS

- Parking barrier control
- Rising Bollards
- Motorised gates and doors
- Industrial control systems



## MECHANICAL DETAIL:

Material: High heat ABS blend  
 Dimensions: 78(H) x 41(W) x 80(L)mm  
 Mounting: Shelf or DIN-rail socket  
 Connector: Single rear mount 11-pin submagnal (JEDEC No. B11-88)



## FUNCTIONAL SPECIFICATIONS:

Self tuning range: 20-1500 $\mu$ H  
 Operating temperature range: - 40°C to + 70°C  
 Sensitivity: Four step adjustable on faceplate  
 High – 0.02%  $\Delta$  L/L  
 Med – High 0.05%  $\Delta$  L/L  
 Med – Low 0.1%  $\Delta$  L/L  
 Low – 0.5%  $\Delta$  L/L  
 Frequency: Four step adjustable on faceplate, 12-80kHz (Frequency determined by loop geometry).  
 Pulse output duration: Approx. 150ms ( option 250ms ).  
 Protection: Loop isolation transformer, zener diode clamping on loop inputs and gas discharge tube protection.  
 Power requirements: 230V AC  $\pm$  15% 48-60Hz (PD132 & 232)  
 12-24V AC/DC  $\pm$  15% (PD134 & 234)  
 1.5VA max @ 230V

### PD130 & PD134

Output configuration: 2 output relays  
 Relay 1 = Presence output  
 Relay 2 = Pulse output  
 Presence time: 1 hour for 3%  $\Delta$  L/L and permanent presence option  
 Presence Output relay: 5A @ 230V AC  
 Change-over contacts (Fail safe)  
 Pulse relay: 5A @ 230V AC  
 Change-over contacts ( non -fail- safe)  
 Operating modes: 1. Limited / permanent presence  
 2. Pulse on detect / undetect  
 3. Automatic 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 – indicator off  
 3. Detect – on steady  
 4. Fault – on with short off

### 11-pin connector wiring

pin	designation
1	Live 230V AC 50/60 Hz
2	Neutral OR 12 - 24V AC/DC
3	Pulse Relay
4	Pulse Relay
5	Presence Relay
6	Presence Relay
7	Loop
8	Loop
9	Earth
10	Presence Relay
11	Pulse Relay

Normally Open contact  
 Common contact  
 Normally Open contact  
 Common contact  
 Twist this pair  
 Normally Closed contact  
 Normally Closed contact

### PD230 & PD234

Output configuration: 1 output relay per channel (fail safe in Presence mode)  
 Fail secure (optional model)  
 Presence time: Selectable – limited or permanent presence. (limited-presence 1 hour for 3%  $\Delta$  L/L ).  
 Output modes: 1. Presence or pulse outputs are independently selectable for CH1 & CH2  
 2. Direction logic output - A to B (CH1) & B to A (CH2) pulse or presence outputs available.  
*(internal selection)*  
 Indications: The following faceplate indications are provided:  
 Single power LED's plus individual channel LED's  
 1. Tuning -on (flashed) or slow flash in A/B logic mode.  
 2. Undetect – LED off.  
 3. Detect – LED on steady  
 4. Fault – on with short off pulse (manual reset required to restore).

### 11-pin connector wiring

pin	designation
1	Live 230V AC 50/60 Hz
2	Neutral OR 12 - 24V AC/DC
3	CH 1 Loop
4	CH 1 Loop
5	CH 2 Loop
6	CH 2 Loop
7	CH 2 Out
8	CH 2 Out
9	Earth
10	CH 1 Out
11	CH 1 Out

Twist this pair  
 Twist this pair  
 Normally Open Relay contacts  
 Normally Open Relay contacts