

Single Channel Inductive Loop Vehicle Detector

PD172 / PD174



The PD170 is a single channel microprocessor based detector designed specifically for parking and vehicle access control application.

The PD170 incorporates a unique automatic frequency selection option that ensures trouble free installation and has improved sensitivity to facilitate reliable detection of high bed vehicles and SUVs

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

307FT0102	PD172 Nortech	240 V AC
307FT0103	PD174 Nortech	12-24V AC/DC

FEATURES

Automatic Frequency Selection:

Automatic Frequency Selection option allows the detector to automatically select the best operating frequency that will achieve the lowest loop noise and maximum signal strength.

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:

Using this feature, 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.

Configurable pulse outputs:

The pulse relay can be set to provide an output at the time of vehicle detect or on un-detect. Pulse output duration is switch selectable for either 150m.s. or 250m.s. duration..

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.

Fail Safe / Fail Secure:

The failure mode of the detector is now configurable from a switch on the front panel. In safety applications, a fault will produce an detection output, while for security applications it will not.

Extended Warranty:

The PD170 has a 5 YEAR Warranty from date of manufacture

APPLICATIONS

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

TECHNICAL DETAILS

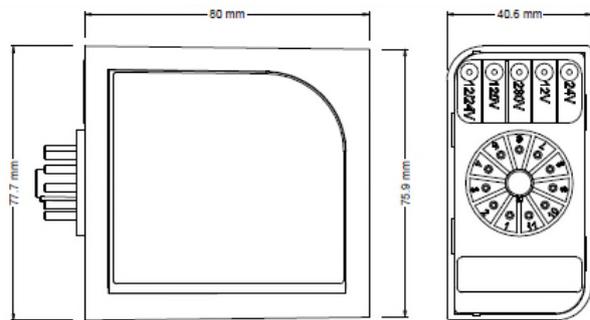
Self tuning range:	20-1000 μ H
Sensitivity:	Four step adjustable on face-plate Ranging from 0.01% Δ L/L to 1% Δ L/L with ASB override option
Frequency:	Automatic with AFS or manual with four steps adjustable on face plate, 12- 80kHz (frequency determined by switch setting and loop geometry)
Output Configuration	2 output relays: Relay 1 = Presence output Relay 2 = Pulse output
Pulse output duration:	150ms or 250ms switch selectable
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. Fail safe / Fail secure output selection
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:	240V AC \pm 15% 48-60Hz (PD172) 12-24V AC/DC \pm 15% (PD174) 1.5VA max @ 230V
Presence Output Relay:	1A @ 230V AC Change-over contacts (fail-safe)
Pulse relay:	1A @ 230V AC Change-over contacts (non-fail-safe)

PD172 / PD174

Operating temperature range: -40°C to +70°C

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)
Options:	1 metre flying lead 11 pin screw terminal Base



WIRING DETAILS

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

OPTIONAL ITEMS

301FT0041	1 metre flying lead
CTR 119090	11 pin Relay Base

