# PD232 Dual Channel Vehicle Detector Manual

1.Technical Parameters

Working power supply AC220V/AC110V/DC24V/DC12V
Four levels of sensitivity adjustable
Working frequency 20KHz ～ 170KHz
Response time 10ms
Working temperature -20℃ ~+65℃
Relative humidity ≤ 90% without condensation
Infinite existence/Limited existence 500ms
Maximum coil 8m×1m
Output mode relay
Ground sense lead is best within 10 meters (twisted pair)
Please refer to the body label for voltage details

2.Wiring diagram

Power input
Detection coil
Detection coil 40uH~1000uH
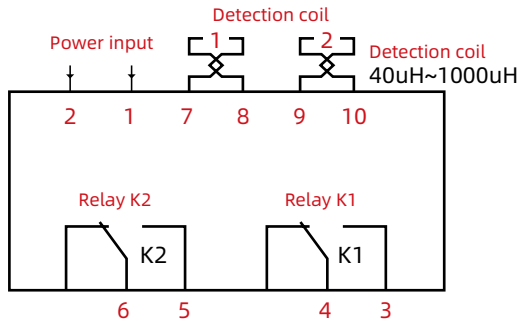
Relay K2
Relay K1

1. FireWire|AC220V+/-10%
2. Neutral line|20mA/50Hz
3. Relay K1 normally open contact
4. Relay K1 common contact
5. Relay K2 normally open contact
6. Relay K2 common contact
7. Coil 1
8. Coil 1
9. Coil 2
10. Coil 2
11. Relay K1 normally closed contact

4. Function and working status indication

After turning on the power, the detector will be automatically calibrated. The calibration process is about 3 seconds. When the calibration is in progress, the two green LEDs on the panel are always on. During calibration, no car should stop on the coil. When the calibration is successful, the "detection" indicator light on the panel goes out. When there is a car passing on the coil, the "detection" indicator light on the panel lights up and the corresponding relay outputs. If the coil is not detected during the calibration or the coil inductance value is not within the allowable range, the corresponding LED indicator on the panel will flash continuously.

5. Working frequency adjustment

The user can change the operating frequency of the coil to avoid interference from adjacent coils or ambient frequencies. This product provides 2 kinds of frequency options. The code switches DIP1 and DIP2 on the panel correspond to coil 1 and coil 2 respectively.
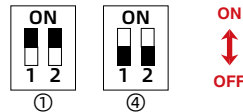
6. Sensitivity adjustment

The sensitivity adjustment uses the dial switch DIP3, DIP4, DIP5, DIP6 on the panel to have four levels. See the figure below for specific settings. During the trial run, first set the sensitivity to a lower gear. After the actual test, if the vehicle detects no output, then the sensitivity should be increased by one gear. Repeat this until the vehicle detector works normally and stably.
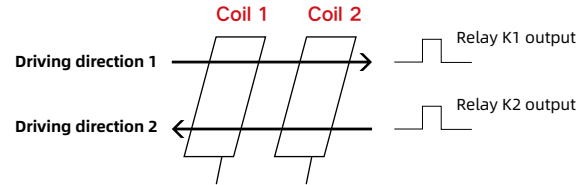

Coil 2
Coil 1
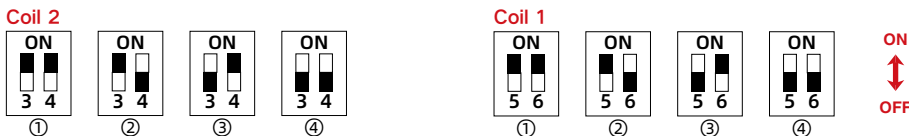
① Low frequency \ ② Low frequency \ ③ Medium and high frequency \ ④ High frequency

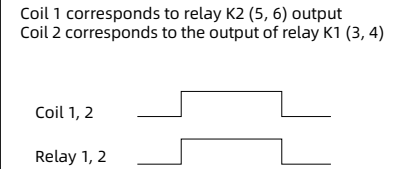## 7. Sensitivity is automatically increased

When the DIP7 on the panel is turned ON, the sensitivity will be automatically increased to the highest when the vehicle is detected, and the preset sensitivity will be restored when the vehicle leaves the coil.

8. Relay output function

Dual channel mode

Coil 1   Coil 2

Driving direction 1 — Relay K1 output

Driving direction 2 — Relay K2 output

Single channel mode

Coil 1 corresponds to relay K2 (5, 6) output
Coil 2 corresponds to the output of relay K1 (3, 4)

Coil 1, 2

Relay 1, 2

Existence setting

● DIP8 is turned ON: Relay K1 (pin 3, 4) is limited to output 500ms.
● Pull DIP8 to OFF: Relay K1 (pin 3, 4) and K2 (pin 5, 6) are in permanent existence mode

Leave output settings

● DIP9 is turned ON: After the vehicle leaves, the relay K2 (pin 5, 6) outputs 500ms.
● Turn DIP9 to OFF: turn off and leave the output mode.

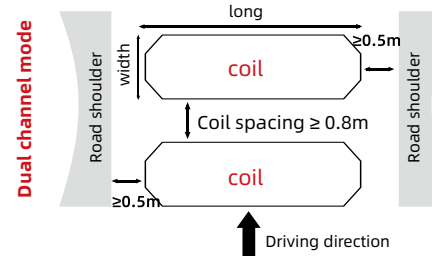## 9. Single and double conversion

When DIP10 on the panel is set to ON, it can be used as two single channels (refer to single channel mode).

10. Detector reset

When you press the reset button on the panel, the vehicle detector will automatically reset to a car-free state (please make sure it is a car-free state before operation).

11. Coil Embedding

The coil is generally cut into a rectangular groove, and buried with high temperature resistant Teflon wire for multiple turns. After the test is normal, it is potted with asphalt. When there are steel bars under the ground, add 1-2 turns to compensate, and the inductance of the coil remains between 80~500uH. The coil lead wires must be twisted tightly to prevent interference.

Dual channel mode

long
width
≥0.5m
coil
Road shoulder
Road shoulder
Coil spacing ≥ 0.8m
coil
≥0.5m
Driving direction

Coil width depends on the car model
The following are reference values

Car: 1.0m wide, 5-7 laps
Minivan: 1.2 meters wide, 5-7 laps
Medium-sized truck: 1.5 meters wide, 4-6 laps

The length of the loop depends on the lane (not less than 0.5 meters between the shoulders on both sides)
Coil spacing ≥ 0.8m