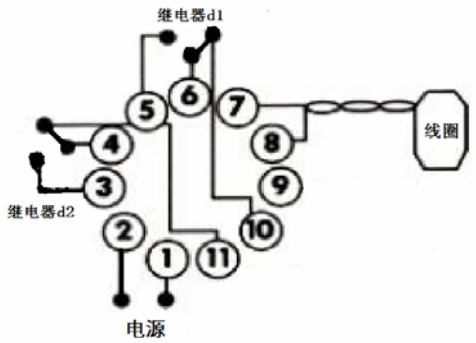
线圈型车辆检测器使用说明

KP1304-2022B

■ 安装检测器

车辆检测器必须安装在离检测线圈尽可能近的防水、防潮的干燥环境里。安装位置必须选择在远离热源、强磁场的地方，其四周应与其它装置保持至少 10 毫米的距离(请勿紧贴机箱安装)。检测器能否良好工作在很大程度上取决于它所连接的检测地感线圈。埋设线圈的几个重要参数包括：环境（回避高温、强磁、可移动金属等)、材料、线圈形状大小、匝数、埋设方法（参见《线圈安装指南》)。

■ 接线图

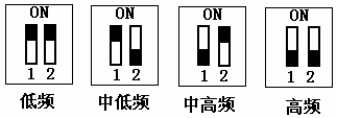


■ 使用及工作指示

接通电源后，检测器将会自动校准。校准过程约 2 秒。校准进行时，面板上的两个 LED 灯常亮。在校准期间，不应有车停在线圈上。当校准成功后，面板上的“检测”指示灯熄灭，当线圈上有车通过时，面板上的“检测”指示灯亮起，且继电器 d2（3、4 脚）吸合导通；若在校准过程中未检测到线圈，则面板上的“检测”指示灯将以 1Hz 的频率闪烁。

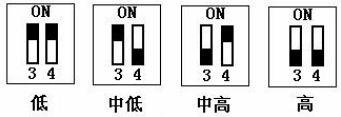
■ 工作频率调节

用户可以更改线圈的工作频率以避免相邻线圈或环境频率的干扰。本产品提供四种频率选择，可由面板上的拔码开关 DIP1、DIP2 参照右图进行设置。



■ 灵敏度调节

灵敏度调节使用面板上的拔码开关 DIP3、DIP4，共有四级。具体设置见下表。在试运行时，先将灵敏度设在较低档，在实际测试后如果车辆检测没有反应，则应将灵敏度调高一档，如此反复，直至车检器稳定、正常工作。



■灵敏度自动提升

当检测器检测到车辆时会自动将灵敏度提升到最高，当车辆离开线圈后恢复到之前设置的灵敏度。面板上的 DIP5 置为 OFF 时停用此功能。

■ 增强滤波设置

当环境电磁扰动较大，导致检测器频繁误动作时，可将 DIP6 拔至 ON 端，增大滤波系数，滤除扰动。但应注意，当环境正常时将 DIP6 拔至 ON 端，可能会降低检测器的灵敏度或增加检测延迟时间。正常情况下，DIP6 拔至 OFF 端以禁用此功能。

【注意】: 如果检测器工作不正常时，应首先检查线圈参数埋设是否合理、连线是否双绞、破损，其次再调整工作频率和灵敏度级别，最后再试着设置为增强滤波模式。

■ 继电器输出方式

当 DIP7 被拔到 OFF 时，则在检测到车辆进入线圈时继电器 d1（5、6 脚）和继电器 d2（3、4 脚）均吸合导通直至检测到车辆离开线圈时断开；

当 DIP7 被拔到 ON 时，则在检测到车辆进入线圈时继电器 d2（3、4 脚）吸合导通, 在检测到车辆离开线圈时继电器 d2（3、4 脚）断开，延时 500 毫秒后，继电器 d1（5、6 脚）吸合导通 500 毫秒再断开。

■ 存在输出时间设置

当 DIP8 被拔至 ON 时，为永久存在输出（即车压在线圈上时，一直有存在输出)；

当 DIP8 被拔至 OFF 时，为有限存在输出，有限时间为 10 分钟（即当车压在线圈上超过 10 分钟时，检测器会自动复位，重新初始化为无车状态)。建议使用时 DIP8 设为 ON 状态。

■ 检测器复位

当检测器上电时，或按下面板上的复位按钮时，或在有限存在模式下超过存在时间时检测器会进行复位操作。在复位后，检测器会被初始化为无车状态。

■ 技术参数

工作电压: 230V AC 、115V AC、24V DC/AC、12V DC/AC 可选，详见机身标签
电压公差: 交流: +10% / -15%
直流: ±15%
额定功率: 4.5W
输出继电器: 240V/5 A AC ；
工作温度: -20℃至+65℃；
存储温度: -40℃至+80℃；
工作频率: 20KHz 至 170KHz；
反应时间: 10 毫秒；
存在时间: 无限存在/有限存在 10 分钟 ；
灵 敏 度: 四级可调
线圈电感量: 50uH 至 1000uH（最佳 100uH 至 300uH)；
线圈连接线: 最长 20 米，每米至少双绞 20 次；
尺寸 (含底座): 78×40×108 毫米 (长×宽×高)。

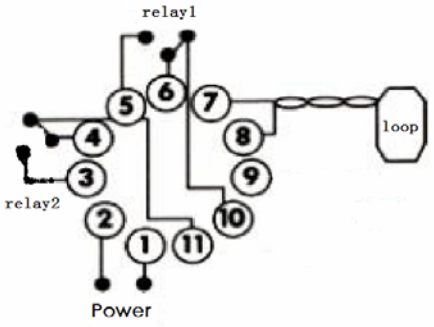
VEHICLE LOOP DETECTOR USER′S GUIDE

NO：9001-0132A-200

■ Install Detector

The detector must be installed in a convenient weatherproof location as close to the loop as possible. Installation location must choose to stay away from the heat source, it around other devices must maintain a distance of at least 10mm (mustn't fix cling to the cabinet). A correct loop configuration and detector installation will ensure a successful inductive loop detection system. Loop of several important parameters include: loop figure, size, and turns, install methods (details as "Loop installation guide").

■ Wiring Diagram

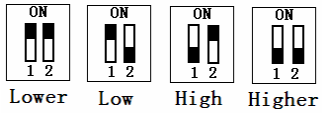


■ Operation and Indication

While the detector is tuning, the green Channel LED and red Power LED will be turn on. It remain about 2 seconds, then the green LED turn off. If a loop fault exists the Channel LED will come on and flash indicating a fault. If the fault is self-healing the detector will continue to operate. The green channel LED will also glow whenever a vehicle is detected passing over the inductive loop. The red Power LED at the top of the unit will remain on to indicate that the unit is powered.

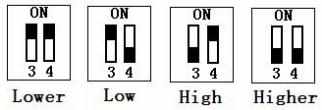
■ Frequency

To eliminate interference of two neighbouring wire loops or loop detectors, the frequency can be altered.



■ Sensitivity

The sensitivity of the detector allows the detector to be selective as to the change of inductance necessary to produce an output. There are four sensitivity selections and are set as follows by DIP3 and DIP4 Switch.



■ Automatic Sensitivity Boost

Automatic sensitivity boost is selected by DIP5 switch on the front of the enclosure and is set as follows: OFF - Disabled, ON – Enabled.

Automatic sensitivity boost causes the sensitivity to be boosted to a maximum on detection on the vehicle, and maintained at this level during the presence of the vehicle over the loop. When the vehicle departs the loop and detection is lost the sensitivity reverts to the pre-selected level.

■ Filter

To eliminate interference of the bad environment, the filter mode is activated by setting the DIP6 Switch to "ON" site. In this mode, the reaction time of the detector is delayed, and the sensitivity is reduced. Usually, the filter mode is disabled by setting the DIP6 Switch to "OFF" site.

【Attention】 If the detector isn't working normally, you must check the loop and wiring at first, and then alter the frequency or the sensitivity. At last, try to set it to filter mode.

■ Output Relay

If DIP7 is "OFF" site, when a vehicle is detected passing over the inductive loop, the relay1 and relay2 are energized; When the vehicle is detected departing the loop, the relay1 and relay2 are de-energized.

If DIP7 is "ON" site, when a vehicle is detected passing over the loop, the relay2 is energized; When the vehicle is detected departing the loop, relay2 is de-energized , and delay 500 ms, the relay1 is energized for 500 ms.

■ Presence Time

The presence time may be set to permanent presence or to limited presence. In permanent presence mode the detector will continuously compensate for all environmental changes whilst there is a vehicle present over the loop, the presence mode is set with DIP8 Switch and is configured as follows: OFF：Limited Presence (10 minutes), ON：Permanent Presence

■ Reset Switch

The detector automatically tunes to the inductive loop connected to it when the power is applied, whether on initial installation or after any break in power supply. Should it be necessary to retune the detector, as may be required after changing any of the switches or after moving the detector from one installation to another, momentary operation of the RESET switch will initiate the automatic tuning cycle.

■ Technical Data

Supply voltage：	230V AC , 115V AC, 24V DC/AC, 12V DC/AC (See the label on the detector)
Voltage tolerance AC:	+10% / -15%
Voltage tolerance DC:	±15%
Power Consumption:	4.5VA
Output relays:	240V/5A
Operating temperature:	-20°C to +65°C
Storage temperature:	-40°C to +85°C
Frequency range:	20 kHz to 170 kHz
Reaction time:	10ms
Signal holding time:	Unlimited / limited when loop is permanently covered 10 minutes
Sensitivity:	Adjustable in 4 increments
Loop inductance:	Total loop plus connection wiring: 50μH to 1000μH. Ideal is 100μH to 300μH
Loop connection wiring:	Maximum length 20 meters, twisted at least 20 times per meter
Size of Housing:	78x40x108 mm (L x W x H)