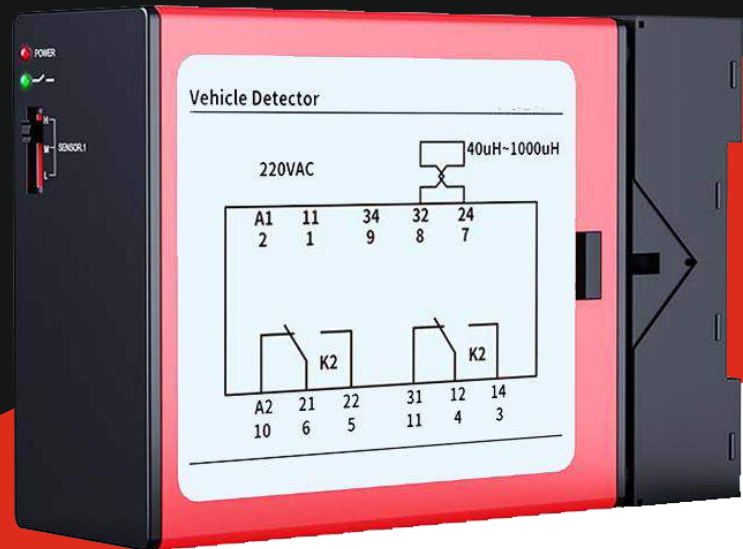


## AMT 110-B

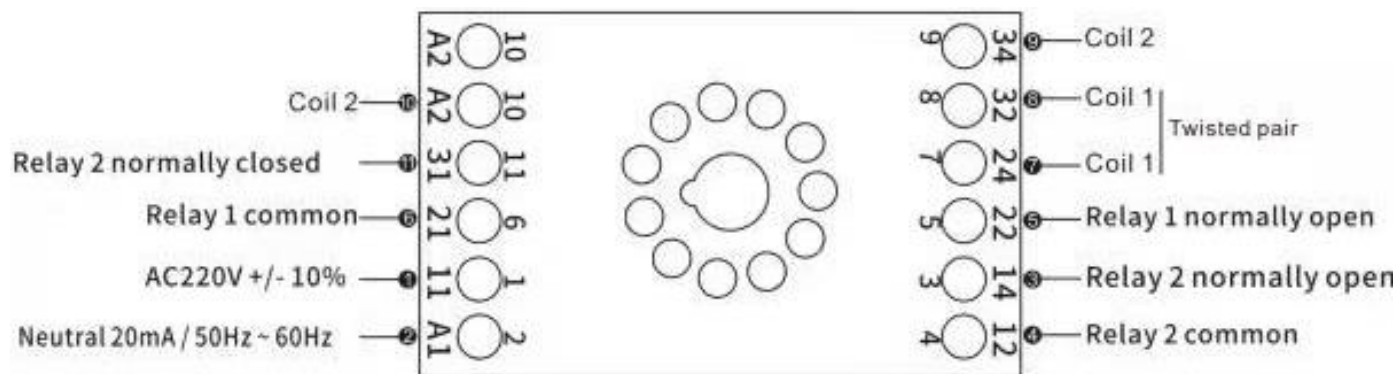
### Car Detector Manual



#### Technical Parameters

<b>Working Power</b>	AC220V / 50Hz, 4.5W (other voltages can be customized)
<b>Sensitivity</b>	Four levels adjustable
<b>Working Frequency</b>	20KH2~ 170KH2
<b>Response Time</b>	10ms
<b>Working Temperature</b>	-20? ~ +65?
<b>Relative Humidity</b>	=90% without condensation
<b>Existence time</b>	unlimited existence / limited existence 300ms
<b>Maximum coil</b>	m x 1m
<b>Output mode</b>	relay (contact withstand voltage 250V /10A)
<b>Detection lead</b>	best within 10 meters
<b>Appearance size</b>	38mm X 75mm x 115mm

## 2. Wiring Diagram



## 3. Function & Working Status Indication

When the power is turned on, the detector will automatically calibrate. The calibration process takes about 1 second, while the calibration is in Progress; the two LEDs on the panel are always green. No car should be parked on the coil during calibration. When the calibration is successful, the “detection” Indicator on the panel goes out. When a car passes on the coil, the “detection” Indicator 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 allowed range, the corresponding LED indicator on the panel will blink continuously.

## 4. 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 two kinds of frequency selection: When the DIP switches DIP 1 and DIP 2 on the panel are turned ON, the frequency is low, corresponding to coil one and coil two respectively.

## 5. Coil Sensitivity Adjustment

There are four levels of sensitivity adjustment using the DIP 3, DIP 4, DIP 5, and DIP 6 switches on the panel. See the figure below for specific settings. During trial operation, first set the sensitivity to a lower level. After the actual test, if the vehicle detects no output, the sensitivity should increase by one level, and so on until the vehicle detector works normally and stably.

Sensitivity Level	Coil 2		Coil 1	
	DIP 3	DIP 4	DIP 5	DIP 6
High	OFF	OFF	OFF	OFF
Middle & High School	OFF	ON	OFF	ON
Mid Lo	ON	OFF	ON	OFF
Low	ON	ON	ON	ON

## 6. Single- Double Conversion

When DIP 10 on the panel is turned ON, it can be used as two single channels.

## 7. Automatic Sensitivity Increase

When DIP 7 on the panel is set to ON, when the vehicle detector detects the vehicle, it will automatically increase the sensitivity to the highest level, and return to the previously set sensitivity when the vehicle leaves the coil. (The default setting is OFF)

## 8. Leave Output Time Setting

When DIP 9 is pulled ON, it is detected that the relay d1 (pins 5 and 6) has a limited output of 300ms after the vehicle leaves the coil.

When OIP 9 is pulled OFF, both relay d1 (pins 5 and 6) and relay d2 (pins 3 and 4) are turned on when the vehicle is detected to enter the coil, and it is turned off when the vehicle is detected to leave the coil.

## 9. There is an Output Time Setting

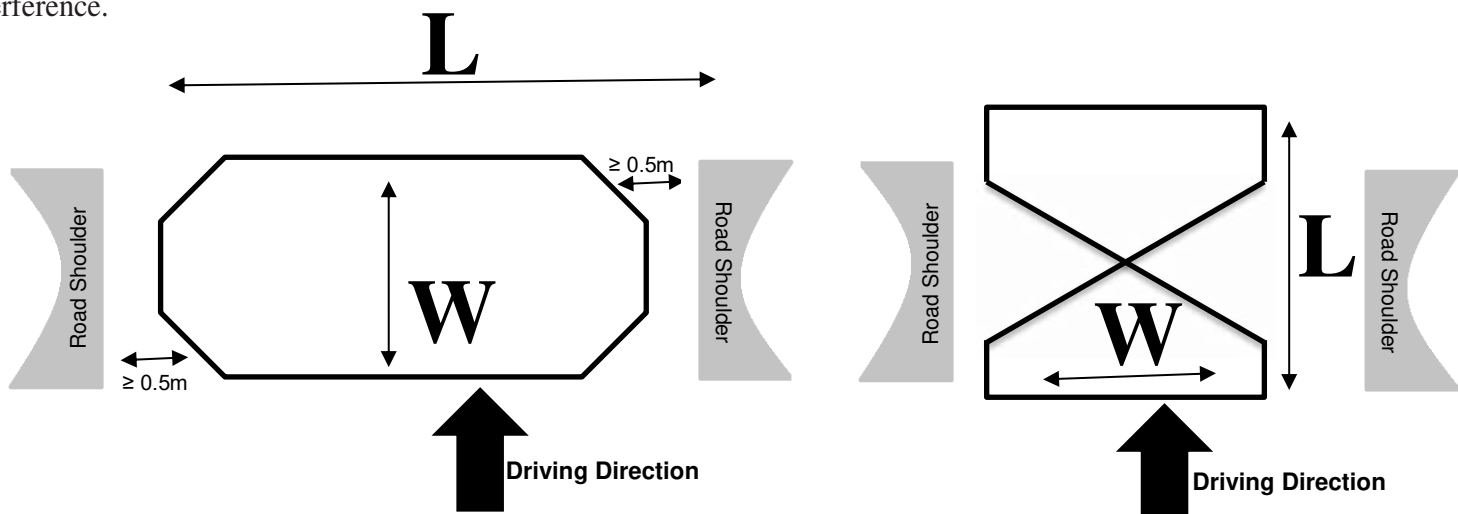
By default, DIP 8 is pulled to OFF, and relays D1 (pins 5 and 6) and D2 (pins 3 and 4) are permanently present outputs (that is, there is always an output when the car is pressed on the coil); Relay D2 (pins 3 and 4) has a limited output of 300ms. Relay D1 (pins 5 and 6) is not controlled. It is recommend using permanent presence output under normal conditions.

## 10. Detector Reset

The detector will reset when the vehicle detector is power on, when the reset button on the panel is pressed, and when the presence time is exceed in limited presence mode. After reset, the detector will be initialize to a car free state.

## 11. Coil Embedding

The coil generally cut into a rectangular groove, and the high temperature resistant Teflon wire is use to bury multiple turns. After testing, it is fill with asphalt. When there is reinforcing steel under the ground, 1-2 turns will be add for compensation, and the coil inductance will remain between 80 and 500uH. The coil leads must tightly twisted to prevent interference.



The length of the coil depends on the lane  
(Not less than 0.5 meters from the shoulders on both sides)  
**Car: 1.0 meter wide, 5-7 turns**  
**Minivan: 1.2 meters wide, 4-7 turns**  
**Medium truck: 1.6 meters wide, 4-6 turns**

The length of the coil depends on the lane  
(Not less than 0.8 meters from the shoulders on both sides)  
**Large truck or trailer: 1.8 meters wide, 4-6 turns**

**Tips: Two adjacent coils must not be placed in the same number of turns.**

## 12. Key points for coil construction

1. Grooving shape: generally rectangular (four corners beveled)	6. Wire section: more than 0.15 square millimeter
2. Coil width: about twice the detection height	7. Coil lead: no conductor, must be twisted 20 times per meter
3. Groove on the round: about 4mm wide and 30-50mm deep	8. Adjacent coils: the number of turns should not be the same
4. winding method: cut, clean and dry before winding the coil	9. Adjacent distance: Coil-to-coil distance = 1 meter
5. Wire material: Teflon high temperature resistant multi-strand tinned copper wire	10. Encapsulation material: Encapsulated with asphalt after normal testing.

### 13. Coil material

Taking into account the mechanical strength, high and low temperature-aging resistance, acid and alkali corrosion resistance of the actual project, it is recommended to use a Teflon high temperature flexible wire with a square millimeter or more, with a total resistance less than 10 ohms. For projects with severe environmental conditions and long lead wires, 25 square millimeters of nylon sheathed wire coil inductance: 80uH to 500uH recommended; coil specifications Recommended not less than 1 \* 2 meters: coil connection wires: recommended not to exceed Meters, twisted at least 20, Times per meter.