

## Cartell CP3-300

## Cartell CP4 Vehicle Sensor Kit Instruction Manual

Model: CP3-300 | Brand: Cartell

## PRODUCT OVERVIEW

The Cartell CP4 Vehicle Sensor Kit is an electronic vehicle detection device designed for automatic gate release. It operates based on the science of electromagnetic induction, detecting the movement of a vehicle to trigger gate operation. This system is supplied with underground burial cable and is specifically designed to respond to vehicles, making it unsuitable as a hold-open loop.

## INSTALLATION AND SETUP

Proper installation is crucial for the optimal performance of your Cartell CP4 sensor. Follow these guidelines carefully:

## Sensor Placement:

- The sensor is designed to cover a 12-foot wide driveway from the side of the drive.
- Position the sensor approximately 80 to 100 feet from the gate, depending on the length of the supplied cable (available in 100', 200', 300', or 500' lengths).
- Bury the sensor unit and its connecting pipe 3 to 5 inches below the surface.



Figure 1: Installation instructions and diagrams from the back of the product box, detailing sensor placement and wiring.

## Cable Protection:

- Insert the 1/2-inch PVC pipe inside the slip joint of the sensor. **DO NOT GLUE.**
- Smooth out the entire length of the cable and gently pull it through a 1/2-inch PVC pipe. This protects the cable underground.
- **NOTE:** Warranty may be void if the cable is not run in conduit.



Figure 2: The Cartell CP4 sensor unit with its extensive coiled cable, ready for installation.



Figure 3: A detailed view of the Cartell CP4 sensor unit, highlighting its robust design.

#### Wiring (CP-4):

The CP4 sensor requires a power supply of 8-24 VAC or 8-30 VDC. The current draw is 30-70  $\mu$ A in standby and 40-60 mA during alarm.

**CP-4 Wiring Connections**

Wire Color	Dual Exit Terminal	Single Exit Terminal
Red	Power +	Power +
Black	Power -	GND or COM
White	Common	GND or COM
Blue	Exit N.O.	Free Exit or Open Terminal
Yellow	Exit N.C.	(Not used for single exit)

For single exit terminal setups, the yellow wire is typically not used. Connect the black and white wires to a common ground, the red wire to the positive power supply, and the blue wire to the free exit or open terminal on your gate operator's control board.

**OPERATING PRINCIPLES**

The Cartell CP4 sensor utilizes electromagnetic induction to detect the presence of a vehicle. When a vehicle passes over the buried sensor, it triggers a signal to the gate operator, initiating the gate opening sequence. This system is designed for automatic gate release, providing a convenient exit without requiring manual intervention.



Figure 4: Illustration of a vehicle approaching a gate, demonstrating the sensor's function in triggering the gate to open automatically.

**Sensitivity Adjustment:**

In most cases, it is not necessary to adjust the sensor's sensitivity or remove its lid. The sensitivity is set to "High" by default (dip switch in "OFF" position). If adjustment is required, refer to the dip switch settings below:

- **High (Default):** Detects vehicles going 5 MPH 12-14 feet away. (Dip switches 1 & 2 OFF)
- **Medium:** Detects vehicles going 5 MPH 6-8 feet away. (Dip switch 1 ON & 2 OFF)
- **Low:** Detects vehicles going 5 MPH 2-3 feet away. (Dip switches 1 & 2 ON)

## MAINTENANCE

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The Cartell CP4 sensor is designed for durability and minimal maintenance. Ensure the area around the buried sensor and cable remains clear of heavy debris or obstructions that could interfere with its operation or damage the conduit. Regular visual inspection of exposed wiring and connections is recommended to ensure integrity.

## TROUBLESHOOTING

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If you encounter issues with your CP4 sensor, first verify all wiring connections according to the diagram in the Setup section. Ensure the sensor is buried at the correct depth and distance from the gate. For more detailed troubleshooting steps, including product issues that may require removing the sensor, please download the full online manual from [www.cartell.com](http://www.cartell.com) or scan the QR code provided on the product packaging.

For technical support, you may call Cartell at 717-832-0033.

## SPECIFICATIONS

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Feature	Detail
Maximum Range	100 Feet (cable length dependent)
Sensor Technology	Electromagnetic Induction Sensor
Power Required	6-31 VAC or 8-46 VDC
Relay Trip Time	2 seconds
Item Weight	4.4 pounds
Package Dimensions	16.3 x 8.23 x 3.03 inches
Model Number	CP3-300
Manufacturer	Cartell
Color	Black

## WARRANTY AND SUPPORT

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Cartell provides support for its products. As noted in the installation section, the product warranty may be void if the cable is not run in conduit. For any technical assistance or product inquiries, please contact Cartell directly. You can also find additional resources and the full online manual on the official Cartell website.

- Technical Support: 717-832-0033
- Official Website for Manuals: [www.cartell.com](http://www.cartell.com)

