

VEHICLE LOOP DETECTOR

EP - BRD01



Vehicle loop detector is a device used in traffic and access control systems to detect the presence or movement of vehicles. It typically works in conjunction with an inductive loop installed beneath the road surface or driveway.

How Vehicle Loop Detectors Work

- 1. Inductive Loop Installation:** A loop of insulated wire is embedded into the road or pavement. This loop is connected to the loop detector.
- 2. Electromagnetic Field:** The loop detector generates an electromagnetic field around the wire loop.
- 3. Vehicle Detection:** When a vehicle passes over or stops above the loop, the metal in the vehicle disrupts the electromagnetic field, causing a change in the loop's inductance.
- 4. Signal Processing:** The loop detector processes this change and sends a signal to the connected system, such as a gate, barrier, or traffic light.

Applications of Vehicle Loop Detectors

1. **Access Control Systems:** To automatically open gates or barriers when a vehicle is detected.
2. **Parking Management:** For monitoring vehicle entry/exit in parking lots and triggering ticket dispensers or payment systems.
3. **Traffic Signal Control:** To optimize traffic light timing by detecting vehicles at intersections.
4. **Toll Booth Systems:** For vehicle detection and triggering toll collection processes.
5. **Industrial and Logistic Sites:** For automating vehicle entry in secure zones or warehouses.

SPECIFICATIONS

Body size:	115 * 54 * 59mm (L * W * H)
Weight:	130g
Material:	ABS
Installation method:	DIN rail, compatible with 35mm
Protection level:	IP20 (IEC 60529)
Working temperature:	20° C ~ + 80° C
Humidity:	90% RH
Working voltage:	AC220V ± 10%
Rated power:	1.5W
Inductance adaptation range:	20-1000uH(150-300uH optimal)
Length of the lead wire:	No more than 3 meters
Working frequency:	20-170KHz
Sensitivity level:	Four adjustable
Response time:	20 milliseconds