

Vehicle Detector for Barrier Gate Control

The Challenge

The customer, a public transportation operator, seeks a system that will detect vehicles to automatically activate access gates and garage doors at its facility. The system must be able to allow access only to buses, not cars. The difficulty of this installation is thus to provide robust, selective access control (discriminating between different types of vehicles). Besides being cost-effective, the envisioned solution must meet outdoor installation requirements and be able to operate day and night, including under adverse weather conditions. In addition, it must ensure early detection of vehicles as they approach the barrier gate or garage door in order to improve traffic fluidity.

The LeddarTech Solution: Leddar™ Sensor

The Leddar™ Sensor uses a novel, inherently eye-safe technology that performs detection and ranging by time-of-flight measurement using pulses from visible or infrared LEDs.

Product features:

- Operates in all weather conditions (fog, rain, snow...), both day and night.
- Multiple measurements from diffused beam can be used for vehicle detection and classification at various distances/locations from the gate or door.
- Ensures robust detection on any surface of the bus.
- IP67 sensor enclosure allows for outdoor operation.

The Outcome

A 45° beam Leddar™ Sensor is installed at each access gate or garage door of the facility at a height of 2.5 m to detect only buses (Fig. 1). The sensor orientation ensures early detection of approaching vehicles to open the gate or door with minimal impact on the fluidity of traffic (Fig. 2).



Fig. 1: 45° sensor opens the barrier gate upon detection of buses only (front view)

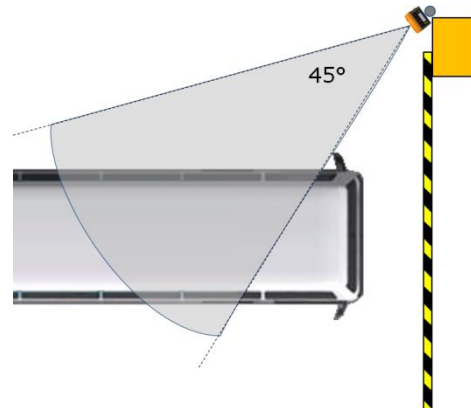


Fig. 2: Early detection of approaching vehicles is ensured by sensor orientation (plan view)

Product References

- Leddar™ Sensor (45° beam)
- Leddar™ Evaluation Kit (45° beam)