



EasyLoop

Vehicle Detection Sensor



This virtual loop radar sensor provides reliable gate and barrier arm activation and safeguarding, featuring easy installation and app-based operation. Active differentiation between vehicles and pedestrians ensures protection according to EN 12453 Type D.

**Smart
Sensing
Solutions**

Precision vehicle detection

The EasyLoop is a cutting-edge virtual loop vehicle detection sensor designed to efficiently manage entrance and exit operations in parking lots, business parks and beyond. Powered by FMCW (frequency-modulated continuous wave) radar technology and a compact design, it ensures reliable and precise detection, even in the harshest conditions.



EasyLoop D



Your benefits

Barrier systems in parking facilities, toll stations, industrial sites and beyond must operate smoothly and efficiently while preventing vehicle damage, pedestrian injuries, tailgating and accidental contact with any obstacle. EasyLoop provides reliable, application-specific performance, safeguarding both people and property without the need for costly constructions.

Advanced vehicle/pedestrian detection

It provides activation or presence detection and protects vehicles while accurately distinguishing objects, allowing pedestrian traffic to be filtered out in accordance with EN 12453 Type D. The high-resolution 79 GHz radar supports both uni- and bi-directional detection within a single sensor.

User-friendly installation

Configure sensitivity, detection range and operation modes directly via mobile app. Smart installation: above-ground setup at 0.8 m. No digging or surfacing work required thanks to a virtual loop setup. Bracket option for diverse applications.

Designed for all-weather accuracy

Stable, accurate detection in all conditions whether it's rain, fog, snow or dust. Superior design offers protection ratings of IP66 (high dust/water protection). Built to withstand rugged use while maintaining a slim form factor.

Reliable operation

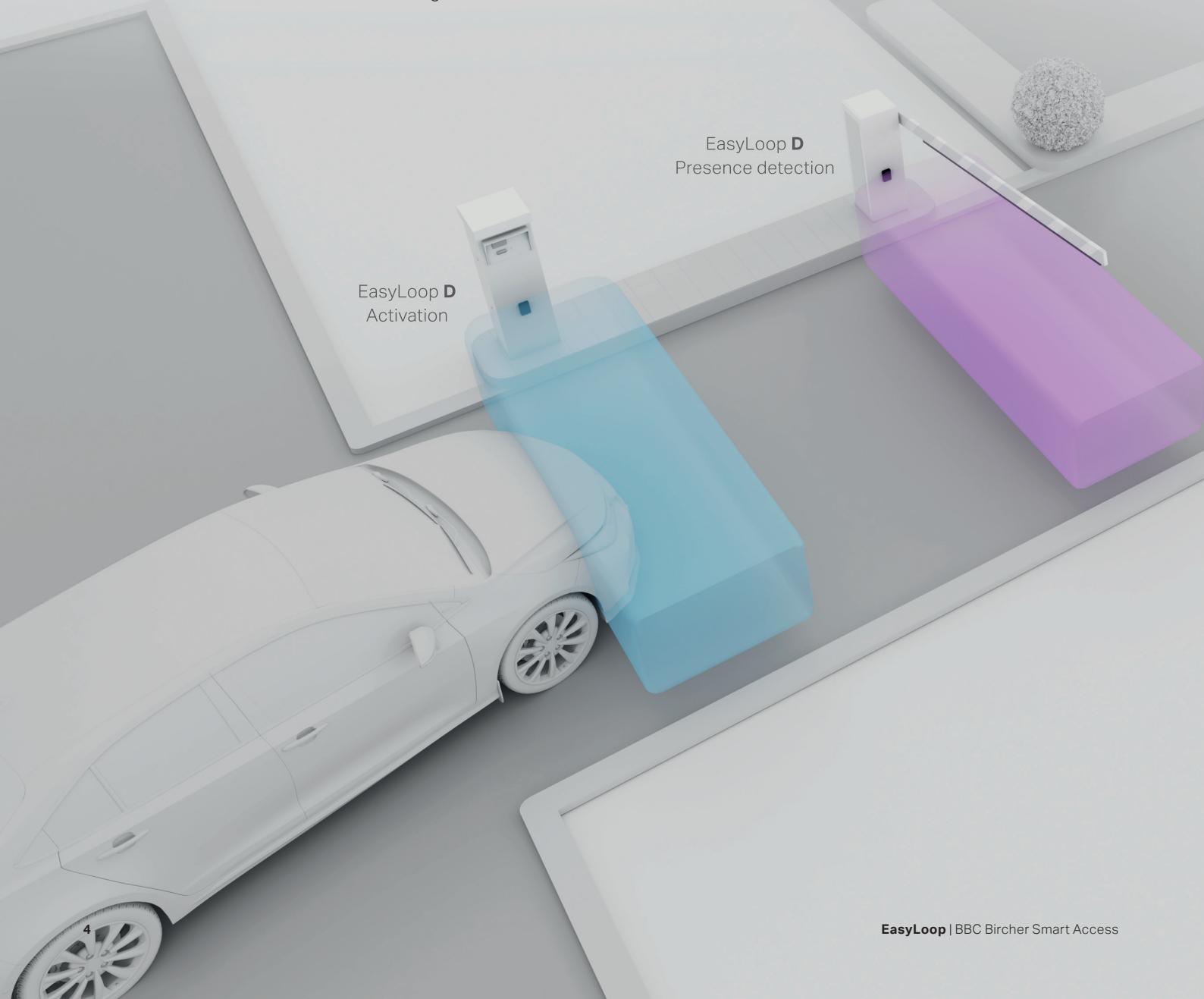
The sensor intelligently learns its surroundings and focuses only on the relevant detection zone to avoid false alarms. Very low sensitivity to optical or acoustic interference ensures a stable operation in various environments.

Universal vehicle detector

EasyLoop combines advanced radar technology with a compact design to deliver a reliable and precise vehicle detection solution. The 79 GHz millimeter-wave radar sensor reliably monitors vehicle movements at entrances and exits.

The radar technology of the EasyLoop delivers the optimal resolution for barrier and gate applications, enabling precise, reliable differentiation between vehicles, pedestrians and environmental elements (curbs, railings, etc.).

It effectively prevents false triggers (such as pedestrians walking by) and ensures reliable presence detection, preventing the barrier arm from lowering if a vehicle or person is still underneath according to EN 12453 Type D.



EasyLoop solutions



Activation

Used for various applications as an activator for ticketing systems at barrier systems in parking or toll facilities as well as sliding gates.

To restrict access accordingly, operators can configure – via adjustable sensitivity settings – whether EasyLoop should be triggered by both vehicles and pedestrians, or by vehicles only.

The uni- and bi-directional recognition feature prevents tailgating and unauthorized entry.

Presence detection

Function to safeguard various barrier types, preventing any contact with vehicles, pedestrians or objects.

EasyLoop can be used for activation or presence detection of the following barrier types:

- Straight arm barrier
- Articulated/folding boom barrier
- Advertising and fence gate barrier

Radar module features

Advanced static object detection with latest 79 GHz FMCW radar technology.

FMCW (Frequency-Modulated Continuous Wave) radar sends out a continuous signal with a varying frequency.

By comparing the sent and received signals, it accurately determines an object's distance and speed, making it highly effective for real-time detection of vehicles, pedestrians and movement.

Due to its **high resolution** of 79 GHz the radar sensor can detect smaller objects more precisely compared to other radar frequencies and differentiate better between closely spaced vehicles, pedestrians or barriers.

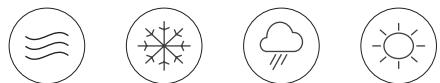
Higher frequencies also allow for smaller antenna structures, enabling more compact, integrated sensors with improved performance.

Simple installation, reliable operation

Designed to complement loops with versatility across all applications, EasyLoop eliminates the need for construction work. Using the latest radar technology, it provides advanced static object detection that remains unaffected by weather conditions such as rain, snow, fog or dust.

Consistent weather performance

EasyLoop delivers stable, reliable, all-weather performance unaffected by changing light conditions – ensuring dependable activation, presence detection and anti-collision functionality.



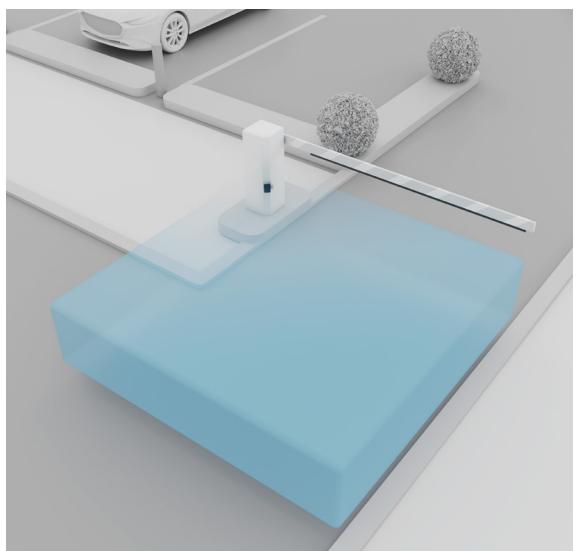
No ground loops needed

The detection sensor uses a customizable radar detection field (300 cm wide, 160 cm high and up to 600 cm deep) as a virtual loop. It can be mounted either on poles (side installation) or directly on the barrier housing. Since no ground loops are required, there is no need for construction work and no risk of failures caused by aging or damaged loops.



Flexible mounting and installation

Beside the standard 90° degree installation option, the EasyLoop can be mounted angled and used in the 45° degree installation mode. For maximum flexibility in any application, this software feature alters the detection field to 400 cm x 600 cm (W x L), allowing the detection of objects while being directly mounted on the barrier housing. This feature eliminates the need for a separate installation on a pole.



Power failure protection

If a vehicle is entering or exiting the parking lot while the barrier arm is closing, and the adapter power supply becomes unstable or fails, the radar will transmit a signal to the gate system instructing it to keep the barrier in the raised position.

EasyLoop mobile app

The EasyLoop mobile app makes sensor setup fast and effortless, giving users full control right from their phone. With an intuitive interface, real-time adjustments and easy access to documentation and firmware updates, it ensures smooth installation and maximum flexibility for any application.

Simplified setup

Easy setup, complete control: Install EasyLoop and download the app to setup and customise the detection field, operation mode and sensitivity of your application. Access product documentation or install sensor firmware updates, all directly with your phone.

Intuitive user interface

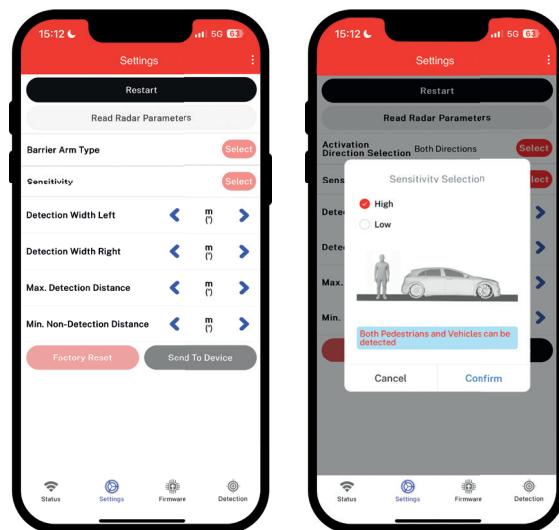
The EasyLoop app guides installers through the setup process to ensure correct device configuration.

Remote debugging

Enabling fast and efficient troubleshooting.

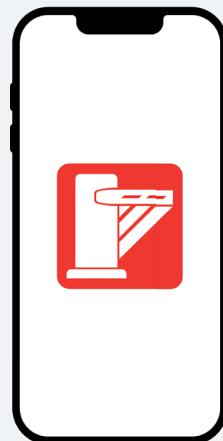
Real-time adjustments

Instant adaptations ensure maximum flexibility for any application.



Mobile App

Download the EasyLoop app today to configure your sensor, adjust operational settings and manage updates directly from your phone.



EasyLoop D

Datasheet

Function

Double function presence detection or activation sensor for safeguarding or activating barrier systems



Mechanical data

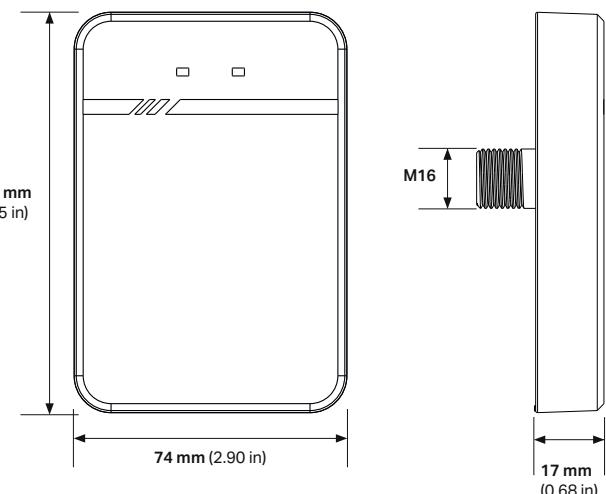
| | |
|------------------------|--------------------|
| Housing material | PC, PBT, GF20, ABS |
| Housing colors | black |
| Dimensions (L × W × D) | 108 × 74 × 17 mm |
| Weight | 131 g |

Technological data

| | |
|------------------------|--|
| Technology | Radar FMCW |
| Transmission frequency | Microwave 79 GHz |
| Detection width | 0.5–1.5 m per side, configurable via mobile app |
| Detection distance | 1.0–6.0 m (3.3–19.7 ft), default 3 m (9.8 ft), configurable via mobile app |
| Detection height | max. 1.6 m |
| Interface | Bluetooth® / RS485 |

Electrical data

| | |
|-------------------|----------------------------------|
| Supply voltage | 9–24 V DC (12 V / 1 A preferred) |
| Power consumption | < 2.5 W |
| Output | NO/NC dual relay |
| Response time | 100 ms |
| Wiring | 10 pin |
| Connection type | 1.2 m cable with plug connector |



Surrounding conditions

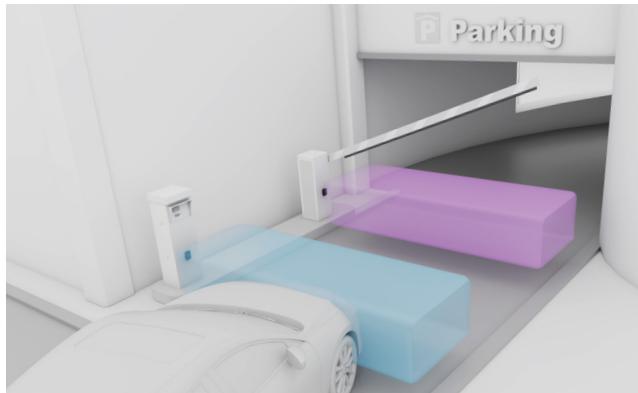
| | |
|-----------------------|--|
| Installation height | min. 650 mm, max. 800 mm |
| Installation position | Barrier gate box install |
| Operating temperature | min. -40 °C, max. 85 °C (min. -40 °F, max. 185 °F) |
| Protection class | IP66 |

Conformity

| | |
|--------------|---|
| According to | RoHS 2011/65/EU RED 2014/53/EU EN12453 Type D |
|--------------|---|

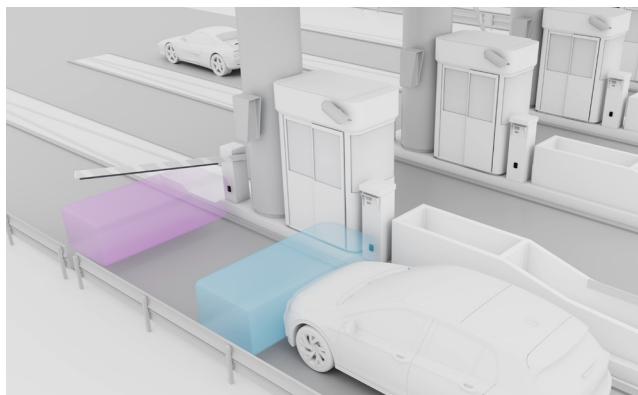
Areas of application

Ideal for barrier systems, parking facilities, toll stations or industrial sites, EasyLoop safeguards and activates gates or barriers when objects are present.



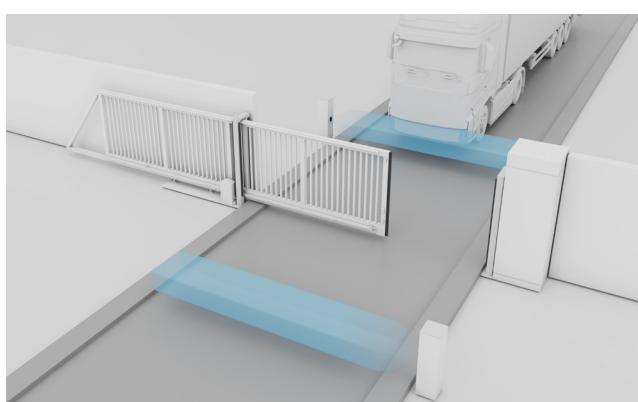
Barrier – Parking system

EasyLoop ensures efficient and reliable operation in parking areas by accurately detecting arriving vehicles and activating ticket dispensers. In presence detection mode, it can safeguard barriers to prevent accidental closures, while integrating seamlessly with existing systems to provide entry/exit tracking. The result is a smooth, dependable access flow that enhances both user convenience and system safety.



Toll stations

At toll stations, EasyLoop delivers fast and accurate vehicle detection to activate barrier gates, maintaining seamless traffic flow even in high-volume environments. With the mobile app, any remote adjustments can be made without onsite intervention, ensuring maximum efficiency and safety in demanding conditions.



Sliding gates

Equipped with high-resolution radar technology, EasyLoop provides advanced activation for sliding gates. It intelligently differentiates between pedestrians and vehicles, ensuring reliable detection and preventing false triggers. This enhances efficiency of automated gate systems, while reducing the need for additional infrastructure.

EasyLoop

Order Details

Article No. Description

| | |
|--------|---|
| 487132 | EasyLoop D vehicle detection microwave motion sensor Function: activation or presence detection |
| 487135 | Mounting bracket EasyLoop |

Matching accessories & spare parts

**EasyLoop mounting bracket**

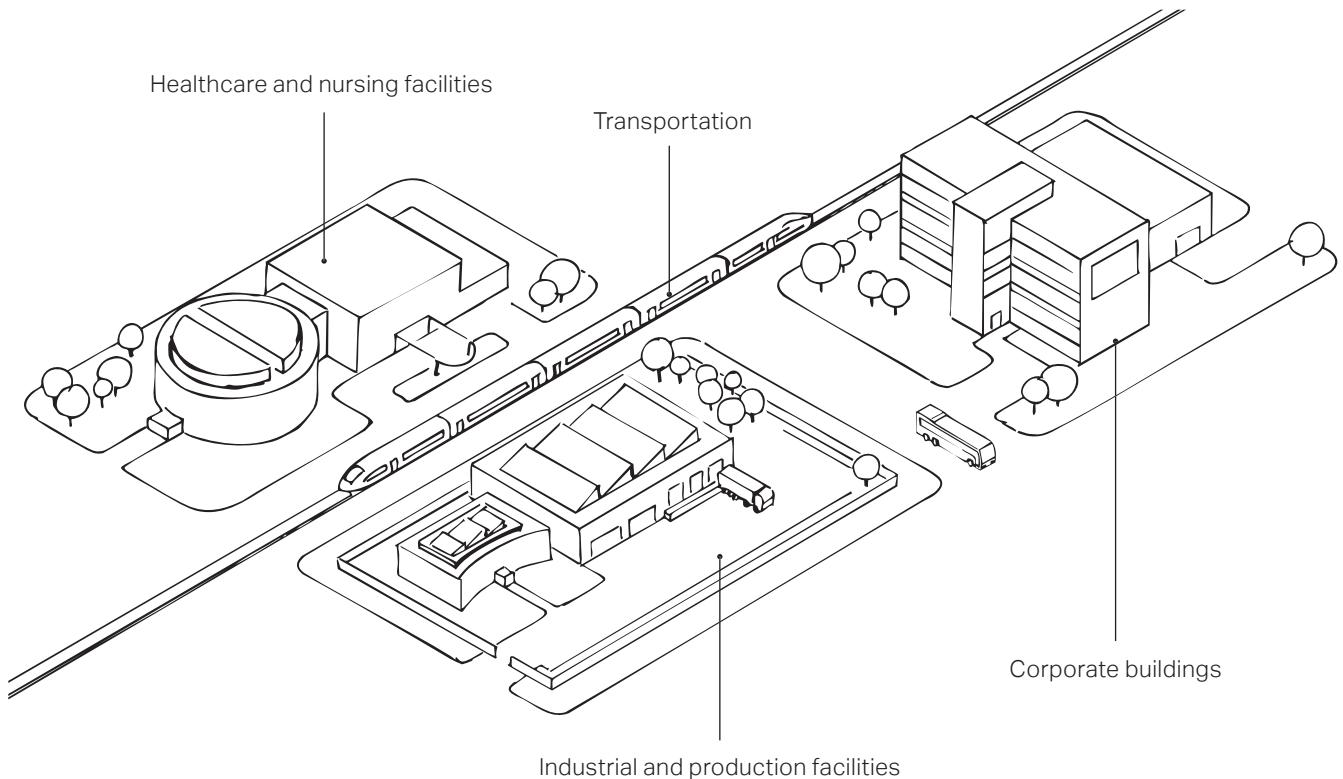
Allows horizontal adjustment and
45° detection

Article no. 487135

Sensor solutions for intelligent access systems

BBC Bircher Smart Access develops, manufactures and distributes sensor systems to secure the growing flow of people and vehicles worldwide and to make access systems convenient and energy-efficient.

As an innovative sensor manufacturer, BBC Bircher Smart Access is constantly developing new solutions for future challenges in industry, services, transport and healthcare.





We will find the right solution for your specific application and will help you ensure that your automatic access systems operate in a way that is energy efficient, secure and convenient.

Find out more about us: bircher.com