BBC BIRCHER Smart Access

bircher.com



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



EasyLoop S



Your benefits

Barrier systems in parking facilities, toll stations, industrial sites and beyond must operate smoothly and efficiently while preventing vehicle damage, pedestrian injuries, tail-gating and accidental contact with any obstacle. Easyloop provides reliable, application-specific per-formance, 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.

Designed for all-weather accuracy

Stable, accurate detection in all conditions whether its rain, fog, snow or dust. Superior design offers protection ratings of up to IP67 (high dust/water protection). Built to withstand rugged use while maintaining a slim form factor.

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.

Reliable operation

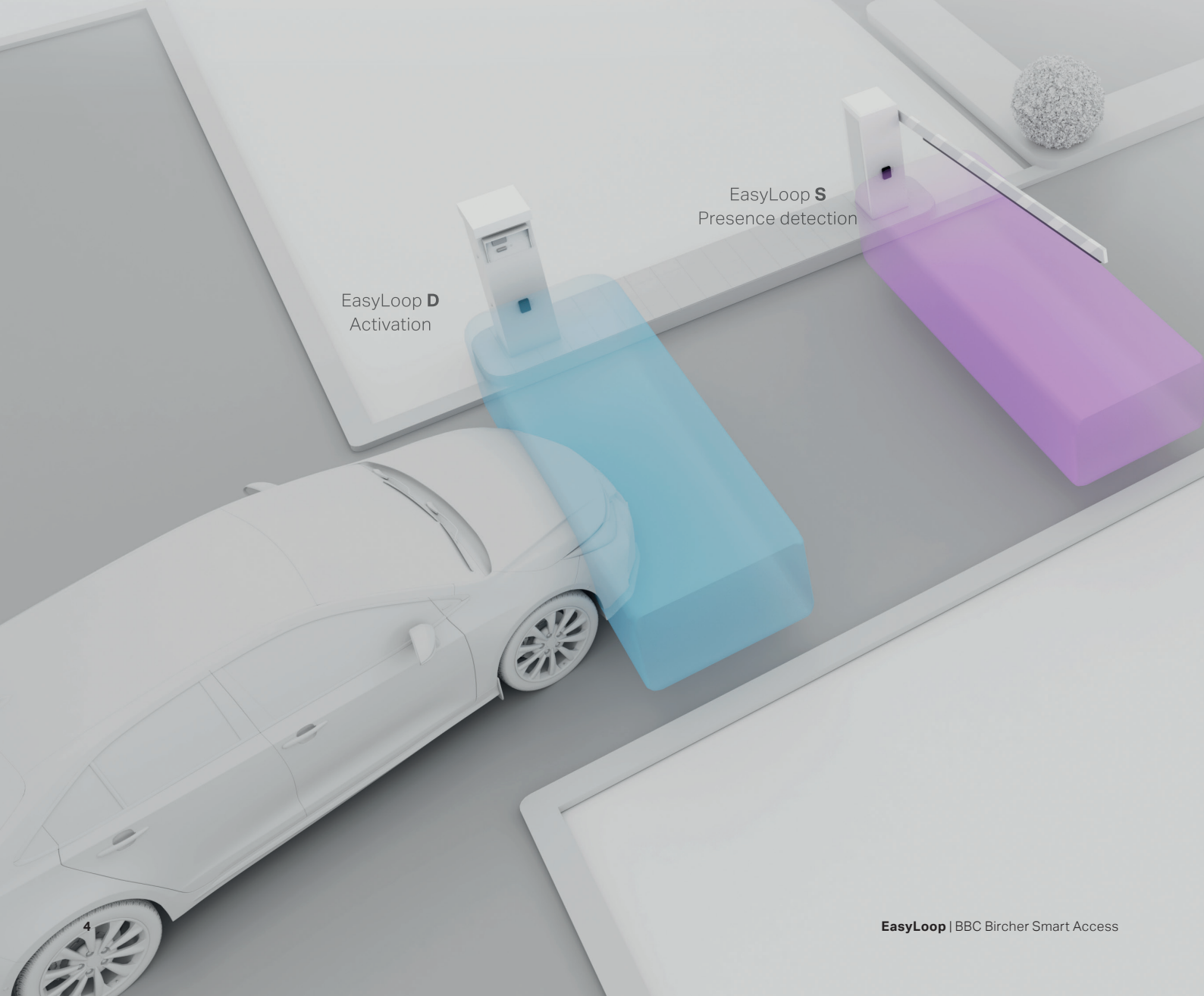
The sensor intelligently learns its surroundings and focuses only on the relevant detection zone to avoid false alarms. Very low sensitivity to optical or acoustic interference ensures a stable operation in various environments.

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



EasyLoop D

Activation
Used for various applications as an activator for ticketing sytems at barrier systems in parking- or toll-facilities as well as sliding gates. The uni- and bi-directional recognition feature prevents tailgating and unauthorized entry.

EasyLoop D 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

EasyLoop S

Presence detection
Function to safeguard various barrier system applications, preventing any contact with vehicles, pedestrians or objects.

EasyLoop S can be used for safeguarding of the following barrier types:

- Straight arm 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

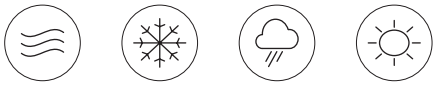
Designed to complement loops with versatility across all applications, EasyLoop eliminates the need for construction work. Using the latest radar technology, it provides advanced static object detection that remains unaffected by weather conditions such as rain, snow, fog or dust.

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.

Consistent weather performance

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



Flexible mounting and installation

Beside the standard 90° degree installation option, the EasyLoop D can be used in the 45° degree mode.
For maximum flexibility in any application, this software feature alters the detection field to 400 cm x 600 cm, 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.



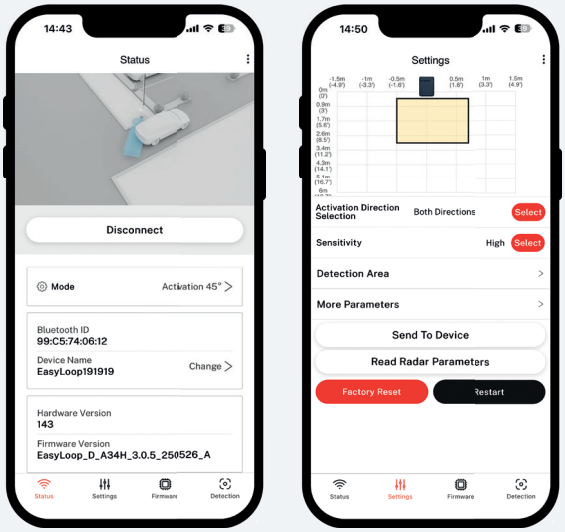
Simplified setup

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.

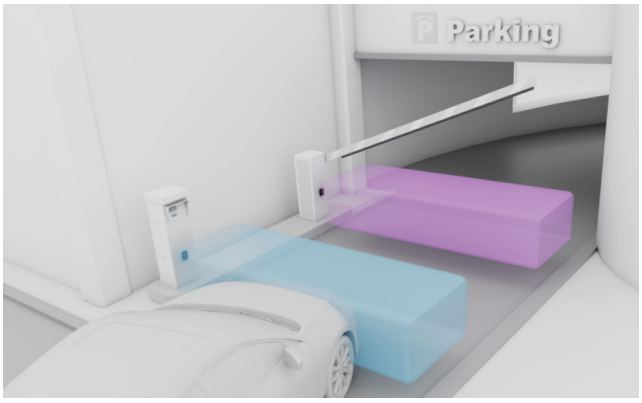
Remote debugging
Enabling fast and efficient troubleshooting.

Real-time adjustments
Instant adaptations ensure maximum flexibility for any application.



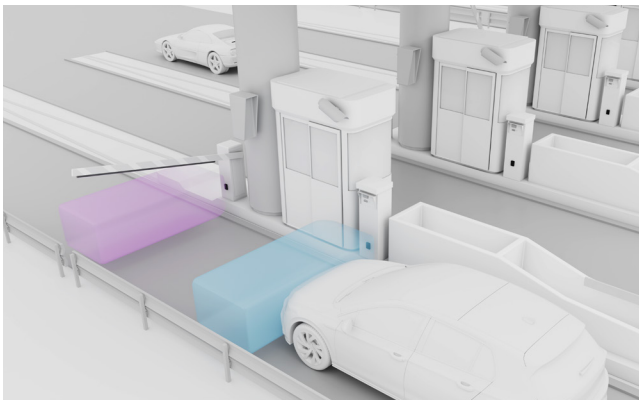
Areas of application

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



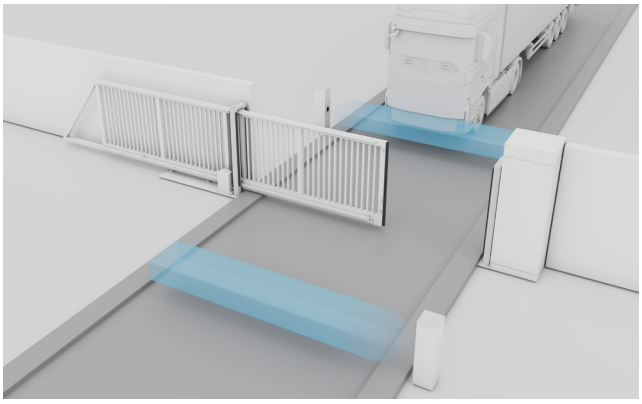
Barrier – Parking system

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 D 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 D 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 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 VDC (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 Installation position	min. 650 mm, max. 800 mm Barrier gate box install
Operating temperature	min. –40 °C, max. 85 °C (min. –40 °F, max. 185 °F)
Protection class	IP67

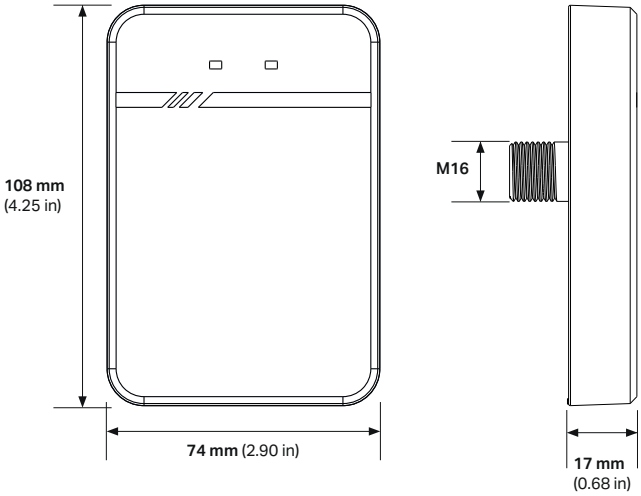
Conformity

According to	RoHS 2011/65/EU RED 2014/53/EU EN 12453 Type D



EasyLoop D

Product no. 487132



EasyLoop S

Datasheet

Function

Single presence detection sensor
for safeguarding barrier systems



EasyLoop S

Product no. 487134

Mechanical data

Housing material	PC, PBT, GF20, ABS
Housing colors	black
Dimensions (L × W × D)	108 × 74 × 17 mm
Weight	98 g

Technological data

Technology	Radar FMCW
Transmission frequency	Microwave 79 GHz
Detection width	1.0–6.0 m, default 3.0 m 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

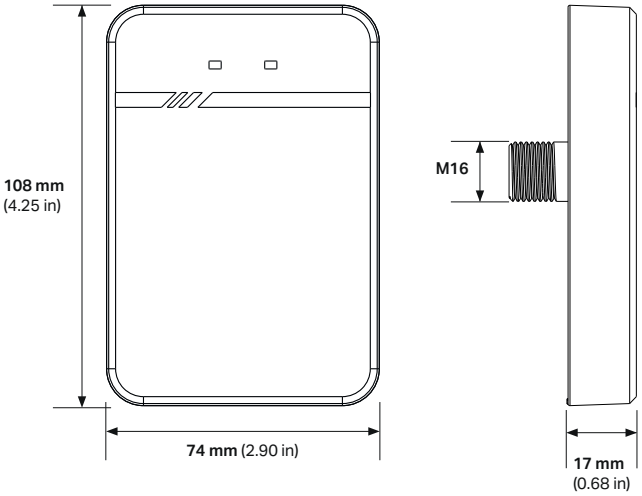
Supply voltage	9–24 VDC (12 V / 1 A preferred)
Power consumption	< 2.5 W
Output	NO/NC dual relay
Response time	100 ms
Wiring	10 pin
Connection type	1.2 m cable with plug connector

Surrounding conditions

Installation height Installation position	min. 650 mm, max. 800 mm Barrier gate box install
Operating temperature	min. –40 °C, max. 85 °C (min. –40 °F, max. 185 °F)
Protection class	IP67

Conformity

According to	RoHS 2011/65/EU RED 2014/53/EU



EasyLoop

Order Details

Article No.	Description
487132	EasyLoop D vehicle detection microwave motion sensor Function: activation or presence detection
487134	EasyLoop S vehicle detection microwave motion sensor Function: presence detection
487135	Mounting bracket EasyLoop

Matching accessories & spare parts



EasyLoop D&S mounting bracket
Allows horizontal adjustment and 45° detection
Article no. 487135

Mobile App

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

Download on the App Store

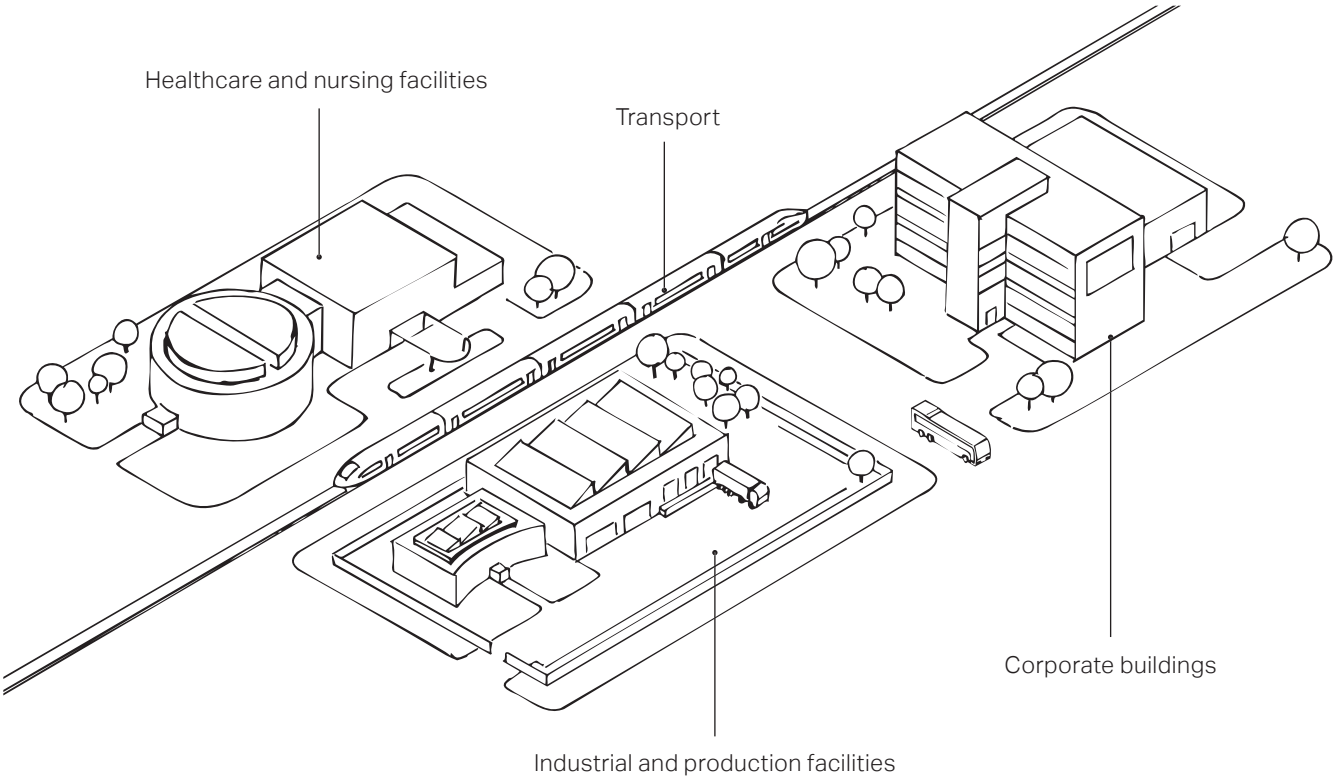
GET IT ON Google Play



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.



BBC BIRCHER Smart Access

bircher.com



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**

BBC Bircher Smart Access
Wiesengasse 20
8222 Beringen / Schweiz

T +41 52 687 11 11
info@bircher.com

Smart Sensing Solutions

D01 045 EN 10/26