SXK-RD70/RD80

Radar Vehicle Detector

A compact millimeter wave sensor for the area beneath a straight barrier boom. It detects targets in a configurable zone and provides relay contacts to the barrier controller to help prevent the arm from lowering while the zone is occupied.



Front and rear views | Cabinet mounted sensor for straight boom barriers

Model	Arm type support	Forward coverage	Protection	Setup interfaces
SXK-RD70	Straight/Folding arm	Up to 6 m	IP65	Bluetooth and RS485
SXK-RD80	Fencing arm	Up to 5m	IP65	Bluetooth and RS485

Product highlights

No buried detection loop. Surface mounting on the barrier cabinet simplifies installation where pavement cutting is undesirable.

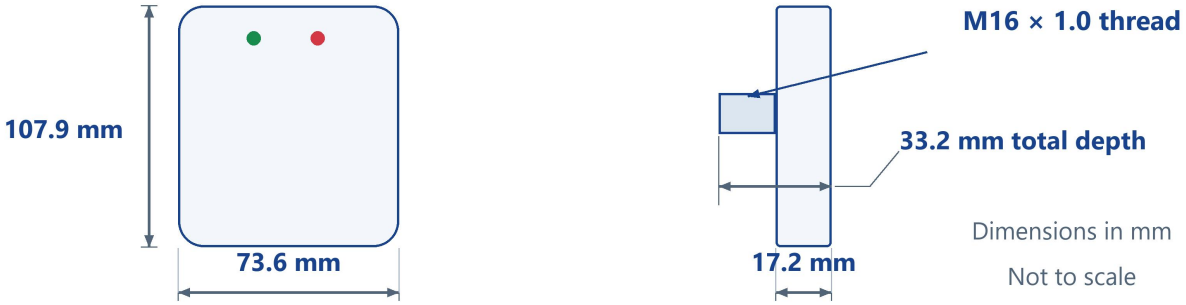
Configurable detection area. Adjust forward reach and left / right extents to suit the boom and lane. Settings are retained after power cycling.

Local setup and diagnostics. Use the mobile app or computer software for configuration, background learning, target information and firmware updates.

Technical specifications

Detection and enclosure data for the straight boom radar sensor. Set the operating area to match the lane and actual barrier arm length.

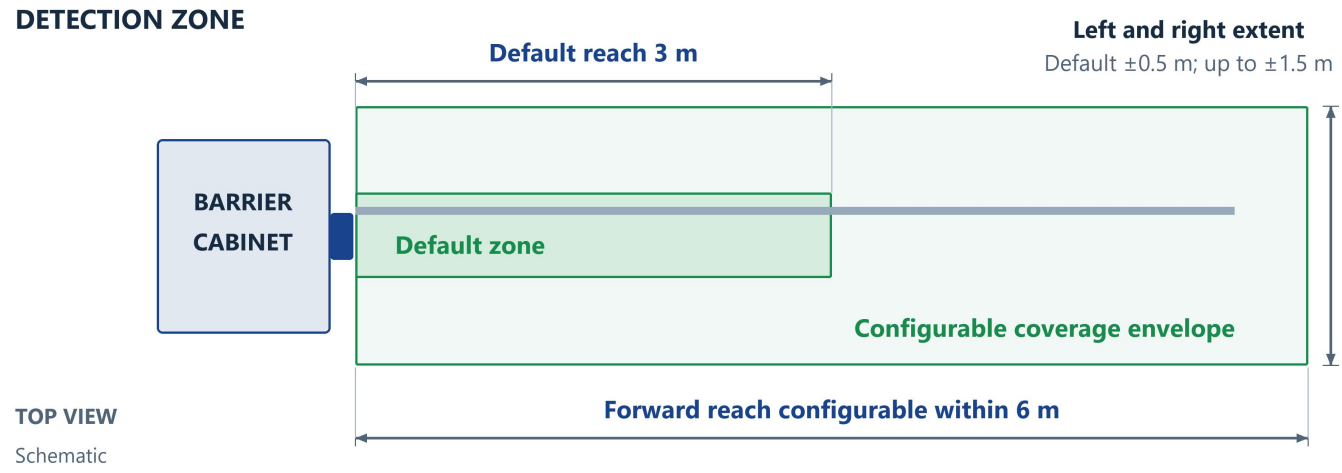
ENCLOSURE DIMENSIONS

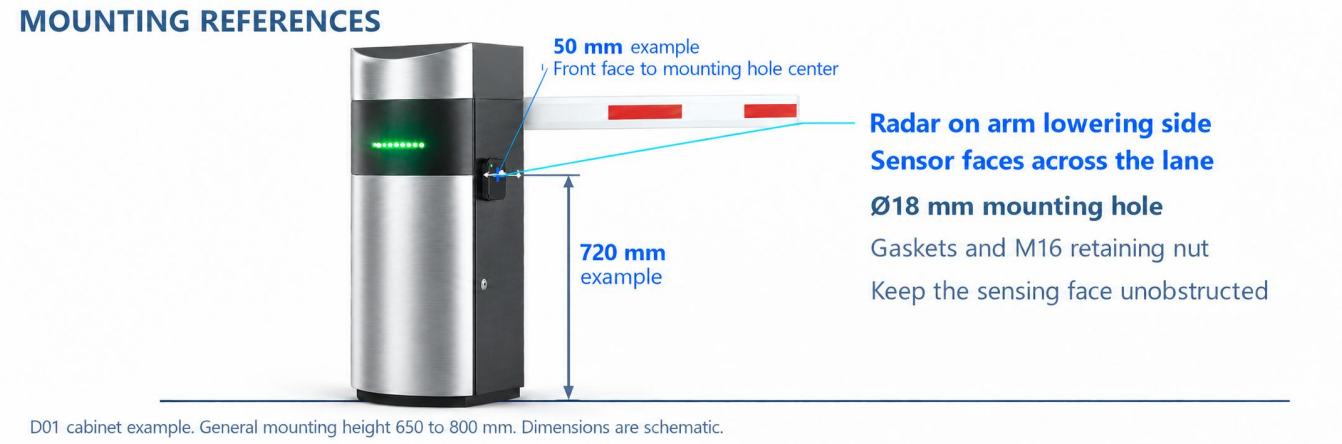


Parameter	Specification
Model	SXK-RD70 (Fence arm barrier refer to RD80)
Detection technology	Millimeter wave radar; multiple transmit and receive antenna design
Application	Presence detection beneath a straight barrier arm
Operating supply	9 to 36V DC; 12V DC / 1A supply recommended
Power consumption	Less than 2.5 W
Forward detection range	3 m default; configurable within 6 m
Left and right coverage	±0.5 m default; configurable within ±1.5 m
Relay contact pairs	NO1: blue / green; NC2: brown / purple
Communication and configuration	RS485 and Bluetooth; mobile app or computer software
Configuration retention	Latest settings restored after power off and restart
Firmware update	Via app or RS485; restart power after update
Enclosure protection	IP65
Operating temperature	-40 to +85 °C
Body dimensions	107.9 × 73.6 × 17.2 mm; height × width × body depth
Overall illustrated depth	33.2 mm including rear threaded projection
Mounting interface	M16 × 1.0 thread; Ø18 mm cabinet opening
Unit weight	104 g excluding packaging
LED indicators	Red: power; green: detected target in configured area

Detection zone and installation

Mount the sensor vertically on the arm lowering side of the barrier cabinet, with its sensing face directed across the lane. Keep fixed objects outside the configured area.





D01 cabinet example. General mounting height 650 to 800 mm. Dimensions are schematic.

Choose the mounting height. Use 650 to 750 mm for passenger cars and vans; 750 to 800 mm for vehicles with chassis above 700 mm. The overall installation reference is 650 to 800 mm.

Position and secure the unit. Install on the arm lowering side of the cabinet. In the D01 example, the mounting hole center is 720 mm above the cabinet base and 50 mm from the cabinet front face. Fit the rubber and metal gaskets and M16 nut, then connect the harness.

Match the zone to the boom. Set forward reach slightly shorter than or equal to the arm length. Keep fences, signs, cameras, walls and other strong reflectors outside the sensing area where possible.

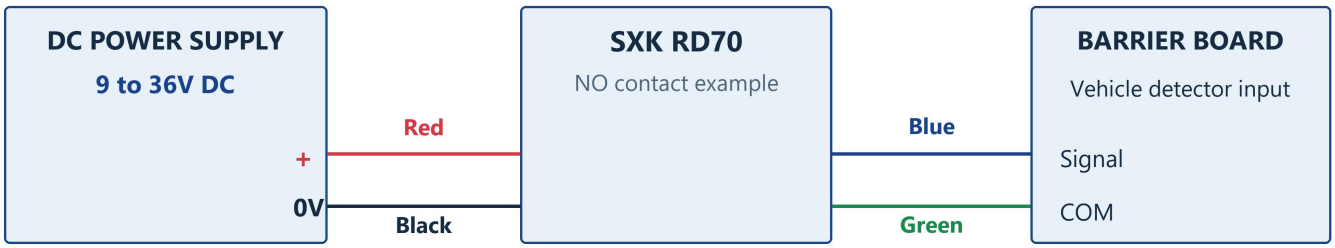
Learn the final environment. Perform background learning after installation, with the lane clear and the boom settled. Repeat learning after changes to the detection area or persistent false occupancy.

For semi-trailers, concrete mixers or chassis above 1 m, the manual recommends two sensors or controlled barrier operation. Evaluate these applications before commissioning.

Wiring and commissioning

Supply the sensor separately from the controller signal input. Select the NO or NC contact pair to suit the barrier board and verify the input response before enabling automatic closure.

POWER AND DETECTOR CONTACT



Blue and green form a contact pair. Match the barrier input logic; neither wire is a power feed.

Wire color	Cable label	Connection or function
Red	9 to 36V	DC supply positive
Black	GND	DC supply negative / 0V
White	B- / RX	RS485 B-
Gray	A+ / TX	RS485 A+
Blue	NO1	Normally open contact pair with green
Green	NO1	Normally open contact pair with blue
Brown	NC2	Normally closed contact pair with purple
Purple	NC2	Normally closed contact pair with brown
Orange	Input	Spare input in the reference harness
Yellow	GND	Spare ground in the reference harness

Setup and functional checks

01 Connect and configure. In the supplier app, connect to Radar assistant, using the factory password 88888888. Select the anti-smash / anti-fall application and configure the straight boom and detection area.

02 Learn and verify. Run background learning, then test representative vehicles at the center and edges of the zone. Confirm the barrier remains inhibited while the intended target is present and releases after it leaves.

03 Maintain the sensing area. Clean accumulated water, snow and dirt from the face. Recheck supply stability and background settings if the red LED flashes or the green LED remains on with an empty lane.

Package reference: sensor ×1, M16 nut ×1, gaskets ×2, harness ×1, inspection certificate ×1 and user manual ×1. Extreme weather and strong reflections can affect detection; verify the complete installation under site conditions.

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Specifications are subject to change without notice. Please confirm final configuration and certifications with our sales team before ordering.