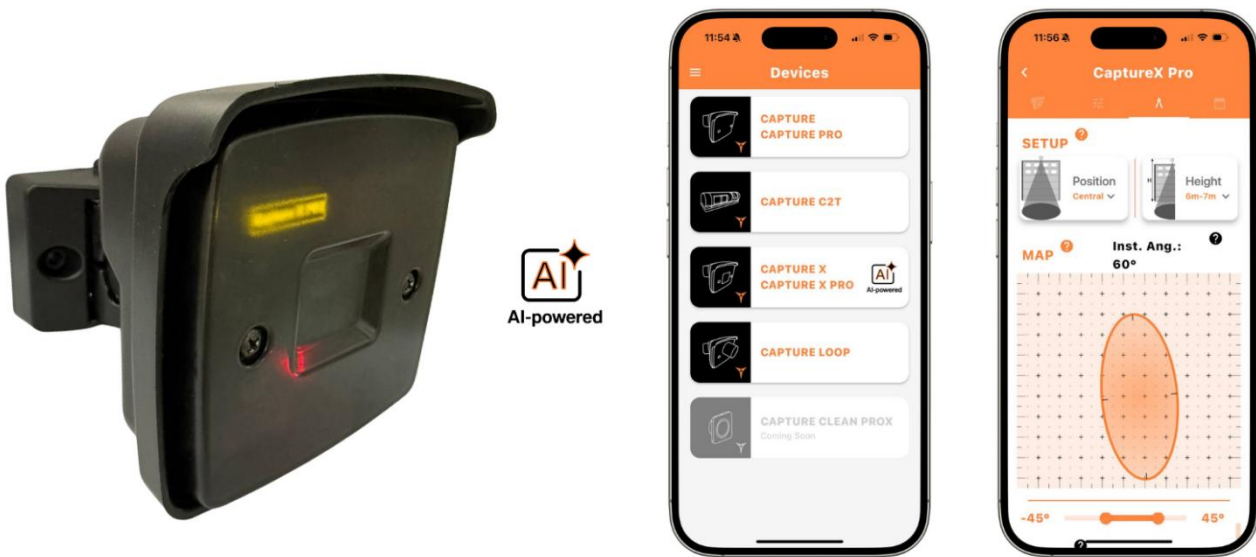


Art. 50500558 (CAPTURE X) Art. 50500559 (CAPTURE X PRO)

CAPTURE X / CAPTURE X PRO

Opening radar sensor for automatic industrial doors (2 m – 10 m)



Sensor + CaptureSensors App

Manual version: 1.0

Date: 20260429

i This manual applies to both models. Sections specific to the CAPTURE X PRO are clearly indicated in the text

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1. PRODUCT DESCRIPTION

CAPTURE X and CAPTURE X PRO are FMCW radar sensors designed to detect the movement of people and vehicles near automatic industrial doors. Thanks to the dual-joint system, they allow quick adjustment of both vertical and horizontal angles, adapting to ceiling or wall installations.

The CAPTURE X PRO model includes, in addition to the base CAPTURE X, an OLED display for local configuration and a Calendar function for scheduling operating times.

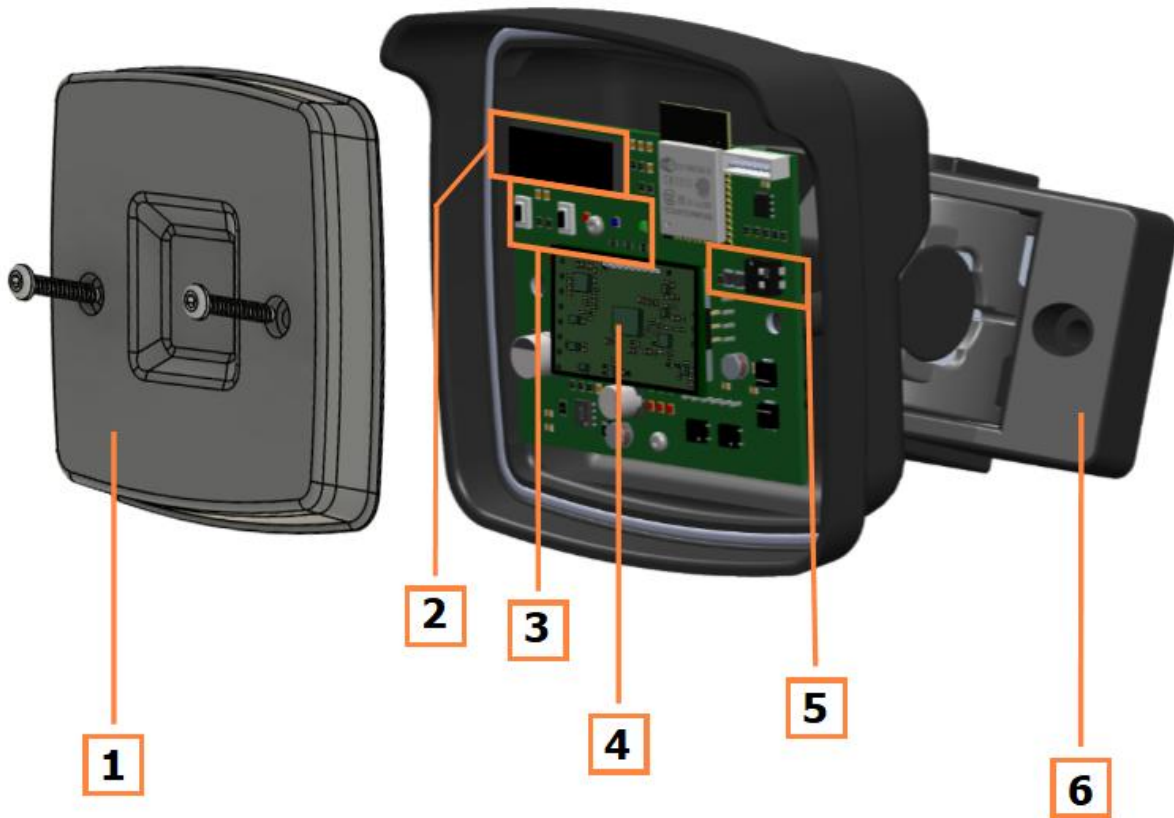
2. TECHNICAL SPECIFICATIONS

Technology	FMCW
Emitted frequency	58 GHz – 63.5 GHz
Emitted power	< 20 dBm EIRP
Emitted power density	< 5 mW/cm ²
Detection mode	Motion detection of up to 3 objects simultaneously
Detection discrimination	Parallel traffic filtering and people/vehicle distinction via artificial intelligence
Maximum detection field	Azimuth adjustable via app +45° -45°
Minimum detection speed	5 cm/s (under optimal conditions)
Power supply voltage	12/24 V AC/DC – install a 1 A fuse on the external line
Mains frequency	50 – 60 Hz
Power consumption	< 1 W
Outputs	2 configurable outputs NO/NC; 42 V peak or DC; 500 mA max
Installation height	2 – 10 m
Protection ratio	IP65
Temperature range	-20 °C to +60 °C
Tilt angle	-45° to +90° vertical; ±30° / ±15° / 0° horizontal
Material	ADA + Polycarbonate
Weight	240 g (without cable) – 637 g (with 10 m cable)
Cable length	10 m
Standards compliance	MD 2006/42/EC, RED 2014/53/EU, RoHS 2011/65/EU

Technical specifications may be changed without prior notice..

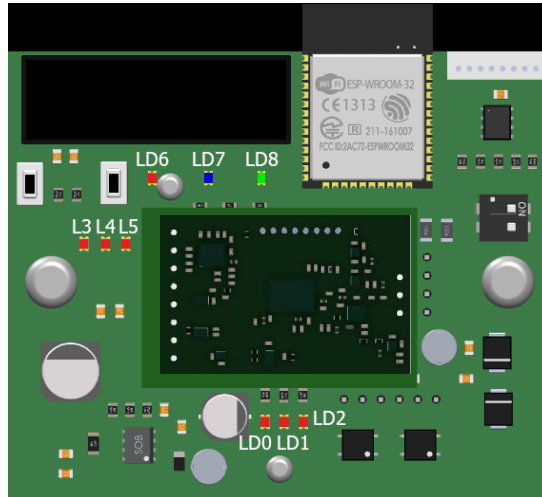
3. COMPONENTS DESCRIPTION

The sensor consists of a housing with a dual-joint mechanism that contains the electronic board. Below is the legend of the components identified in the exploded view.



N°	Component	Description / Function
1	Front panel	Removable front cover (2 screws); protects the internal buttons
2	OLED display	Screen for configuration and diagnostics (CAPTURE X PRO only)
3	Buttons and LEDs	2 buttons + 3 LEDs (red, blue, green) for configuration
4	RADAR sensor	FMCW radar module for motion detection
5	Dip switch	2 switches for hardware configuration (battery, OTA)
6	Mounting base	Bracket with dual-joint system for angle adjustment

3.1 Electronic board – status LEDs



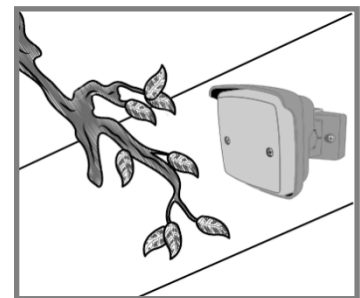
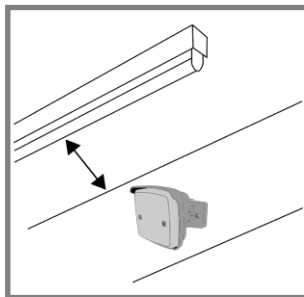
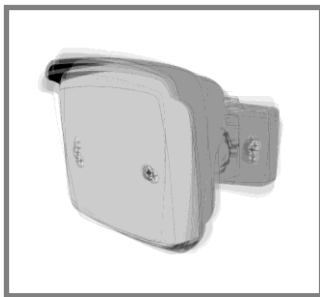
Capture X PRO board with status LEDs identification

LED	Function
LD0	Power OK
LD1	CH1 output activated
LD2	CH2 output activated
LD3 (L3)	Unused
LD4 (L4)	Unused
LD5 (L5)	Unused
LD6, LD7, LD8	Flashing at startup and during Bluetooth pairing
LD8 (Watchdog)	Flashing at a steady rate = firmware running

4. INSTALLATION

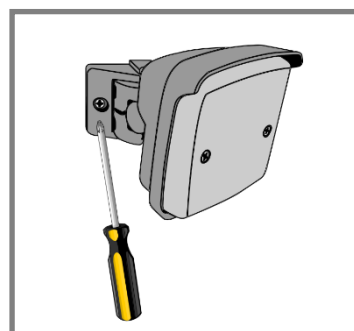
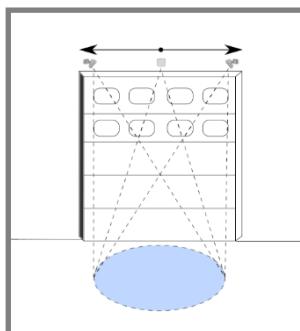
4.1 Mounting recommendations

- Avoid unstable surfaces subject to vibrations
- Do not install near neon lights or moving objects
- Ensure that objects (plants, fans, signs) do not obstruct the radar field
- The sensor can be mounted along the entire width of the automation



4.2 Physical mounting

To access the mounting holes on the base, fully rotate the sensor to one side.



- Secure the mounting base using anchors/screws suitable for the surface type.
- Adjust the vertical angle according to the installation type (ceiling or wall).
- Adjust the horizontal angle based on the position relative to the door.

4.3 Wiring – Cable color code

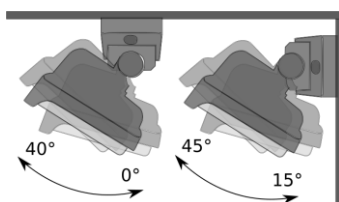
Wire color	Signal	Function
White	-	Power supply 12–24 V AC/DC
Brown	+	
Green		Output 1 (NO/NC)
Pink		
Yellow		Output 2 (NO/NC)
Grey		

Cable diagram

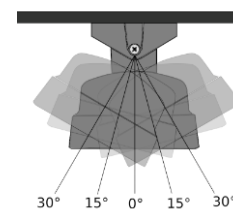
I Install a 1 A fuse on the external power supply line.

4.4 Detection field adjustments

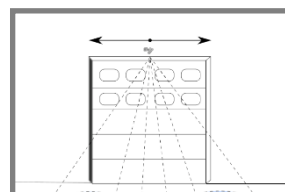
Adjust the vertical and horizontal angles using the dual-joint system to properly cover the area in front of the door.



Vertical angle (ceiling / wall)



Horizontal angle ($\pm 30^\circ / \pm 15^\circ / 0^\circ$)



Thanks to the dual-joint system, angle adjustment can be performed quickly and easily according to the installation requirements

5. CONFIGURATION

5.1 Configuration via CaptureSensors APP

The radar can be configured via CaptureSensors app, available for [Android](#) and [iOS](#).



[Android – Google Play](#)



App logo



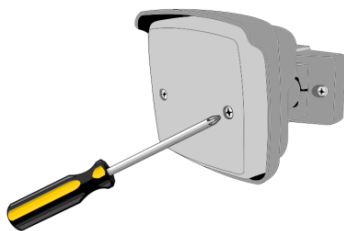
[iOS – App Store](#)

The app allows access to advanced parameters (requires a password provided by the distributor or manufacturer).

- Search “CaptureSensors” on [Google Play](#) or [App Store](#).
- Connect the app to the radar using the default password: **capture**.
- For the quick guide: side menu icon > APP guide

5.2 Configuration via buttons

To access the buttons, remove the two screws on the front panel, Programming uses 2 buttons and 3 LEDs (red, blue, green)



Front panel removal




Programming buttons and LEDs

- **Press and hold the left button until the 3 LEDs flash twice.** Start / end session
- **Press the left button. Count the LED flashes to identify the parameter.** Select the parameter
- **Press the right button.** Modify value
- **Press both buttons until the LEDs flash (long acoustic signal).** Restore factory settings

i End the configuration session before performing the reset.

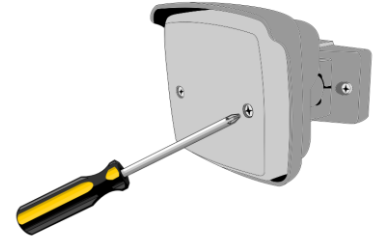
Each parameter is identified by a combination of colored LEDs. The number of LED flashes indicates the selected parameter. The factory default value is shown in parentheses.

N°	Parameter	Parameter N°			Value
		Red	Blue	Green	Default
1	FIELD DIMENSIONS	●	—	●●●●●●●●	(4)
2	RADAR SENSITIVITY	●●	—	●●●●●●●●	(1)
3	HOLD-OPEN TIME	●●●	—	●●●●●●●●	(3)
4	MOUNTING HEIGHT	●●●●	—	●●●●●●●●	(4)
5	CROSSTRAFFIC FILTERING 	●●●●●	—	●●	(1)
6	OUTPUT 1 CONFIGURATION	●●●●●●		●●	(1)
7	OUTPUT 1 DETECTION TYPE	—	●	●●●	(1)
8	OUTPUT 1 DETECTION MODE	—	●●	●●●	(1)
9	OUTPUT 2 CONFIGURATION	—	●●●	●●	(1)
10	OUTPUT 2 DETECTION TYPE	—	●●●●	●●●	(2)
11	OUTPUT 2 DETECTION MODE	—	●●●●●	●●●	(1)

LEDs flash table for parameter identification

5.3 Configuration via OLED display (CAPTURE X PRO only)

To access the configuration buttons, remove the two screws on the front panel. Configuration is performed using the two buttons next to the OLED display.



Button operation:

Normal display state: "CAPTURE X PRO" appears

- Right = next parameter / increase value
- Left = previous parameter / decrease value
- Both = select / confirm parameter

Action	Procedure
Enter the menu	Press either button (acoustic signal)
Scroll parameters	Right = next Left = previous
Select parameter	Press both buttons (acoustic signal)
Modify value	Right = increase left = decrease
Confirm	Press both buttons (acoustic signal)
Cancel modification	Hold right button for 3 seconds (acoustic signal)
Exit configuration	Select 13) EXIT or wait 30 seconds
Factory reset	Press both buttons until the LEDs flash

6. OPERATION

6.1 Parameters list

N°	Parameter	OLED DISPLAY icon	Possible values	Default
1	FIELD DIMENSIONS <i>Radar coverage area width</i> 		1 = ±15° 2 = ±20° 3 = ±25° 4 = ±30° 5 = ±35° 6 = ±40° 7 = ±45°	(4) = ±30°
2	RADAR SENSITIVITY <i>Sensitivity and anti-interference filter</i> 1 = max sensitivity / min filter 7 = min sensitivity / max filter		1 2 3 4 5 6 7	(1)
3	HOLD-OPEN TIME <i>Time before re-closing. Above 7s configurable only via APP</i>		1s 2s 3s 4s 5s 6s 7s	(3) = 3s

4	MOUNTING HEIGHT <i>Radar mounting height</i>		2–2,4m 2,5–2,9m 3–3,9m 4–4,9m 5–5,9m 6–6,9m 7–7,9m 8–8,9m 9–9,9m	(4) = 4–4,9m
5	CROSSTRAFFIC FILTERING <i>Ignores traffic parallel to the door. Specify the position in the app: center, left / right corner</i>		Off = always opens 1 = opens often 2 = opens rarely 3 = ignores almost everything	(1)
6	OUTPUT 1 CONFIG. <i>Output 1 contact type</i>		NO (Normally open) NC (Normally closed)	(1) = NO
7	OUTPUT 1 DETECTION TYPE <i>What detects output 1 People detected until 7.5m</i>		1 = Vehicles 2 = People 3 = People + vehicles	(1) = Vehicles
8	OUTPUT 1 DETECTION MODE <i>Output 1 detection direction</i>		1 = Forward → 2 = Backward ← 3 = Both ↔	(1) = Forward
9	OUTPUT 2 CONFIG. <i>Output 2 contact type</i>		NO (Normally open) NC (Normally closed)	(1) = NO
10	OUTPUT 2 DETECTION TYPE <i>What detects output 2 People detected until 7.5m</i>		1 = Vehicles 2 = People 3 = People + vehicles	(2) = People
11	OUTPUT 2 DETECTION MODE <i>Output 2 detection direction</i>		1 = Forward → 2 = Backward ← 3 = Both ↔	(1) = Forward
12	CALENDAR <i>CAPTURE X PRO ONLY. Configuration via APP or OLED display</i>		YYYY-MM-DD HH:MM:SS	—
13	EXIT <i>CAPTURE X PRO ONLY. Exit from configuration menu</i>		—	—

6.2 DIP switch

DIP	STATUS	Function
DIP 1	OFF (default)	Backup battery disabled
DIP 1	ON	Enable backup battery (for calendar function and installation; prevent battery discharge)
DIP 2	OFF (default)	Normal operation
DIP 2	ON	Enable OTA (Over The Air) firmware update

6.3 OTA firmware update procedure

- Disconnect the power supply and set DIP switch 2 to ON.
- Reconnect the power supply and wait until all 3 LEDs flash at a steady rate.
- Set DIP switch 2 to OFF and create a mobile hotspot: SSID "Capture" / Password "password".
- The radar connects; the LEDs stop flashing. During download, only the green LED flashes.
- Once the download is complete, all LEDs flash twice.

i Alternatively, the OTA update can be started directly from the smartphone app.

6.4 Calendar function (CAPTURE X PRO ONLY)

Allows programming the daily operating schedule of the radar. Initial setup via the CaptureSensors app (Android/iOS) is required. After launching the app, connect to the radar to automatically synchronize date and time.

- Enter menu 12 "Calendar" by pressing both buttons.
- Select the day (Right/Left = scroll, both = confirm).
- Set the start time (Right = +30 min, Left = -30 min, both = confirm).
- Set the end time using the same procedure.
- For continuous 24 h operation: set start time = end time.
- To disable a day: press the left button during day configuration.

7. TROUBLESHOOTING

Symptom	Cause	Solution
Door remains closed; LEDs off	Radar not powered	Check cable integrity and power supply voltage
Door does not respond correctly	Incorrect output configuration for operator logic	Check and modify output configuration
Door opens and closes continuously	Radar disturbed by door movement or vibrations	1) Secure the detector properly 2) Increase angle between automation and radar 3) Reduce field size
Door opens without apparent reason	Radar detects weather conditions or vibration	Reduce sensitivity
Door remains open	Incorrect NO/NC output configuration	Change output contact settings
Door does not distinguish vehicle from person	Mounting height not correctly set	Adjust installation height settings
Cross Traffic Filter not working (corner installation)	Installation type not set	Connect to the app and select the correct installation type
Door opens itself in rain or snow	Default configuration altered	1) Detection mode = approach 2) Inhibit detection of the first meter 3) Reduce sensitivity
Radar time is not accurate	Internal clock desynchronized	Connect to the app to synchronize time
Time resets after each power-off	Backup battery depleted	Replace backup battery
Calendar function not working	Time not synchronized with app	Connect to the app and synchronize time
Daylight saving / standard time change not working	Function calibrated for Central Europe	Set calendar considering the offset relative to Central European time

8. ACCESSORIES AND SPARE PARTS

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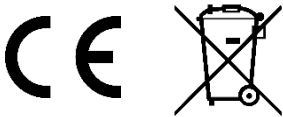
9. CONTACT INFORMATION

Company	Startec S.r.l.
Address	Via Francesco Pescatori, 5/a – 43126 Roncopascolo (Parma) – Italia
Phone	+39 0521 63 11 01
Fax	+39 0521 63 11 02
Website	www.startec-automazioni.it
E-mail	info@startec-automazioni.it

10. CERTIFICATIONS

Hereby Startec S.r.l. declares that the CAPTURE X RADAR complies with the essential requirements and other relevant provisions established by the following directives:

- 2014/53/EU (Radio Equipment Directive – RED)
- 2011/65/EU (RoHS)



⚠ Devices bearing the WEEE symbol must be disposed of separately, in accordance with national laws for the recovery and recycling of electrical and electronic equipment.

Safety instruction: it is the installer's responsibility to perform a risk assessment and install the detector in compliance with national and international regulations. The sensor must only be installed by professionally qualified personnel.