



CARLO GAVAZZI



Quick start guide

LEYON-Safe-E

Door safety sensor

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LEYON-Safe-E door safety sensor quick start

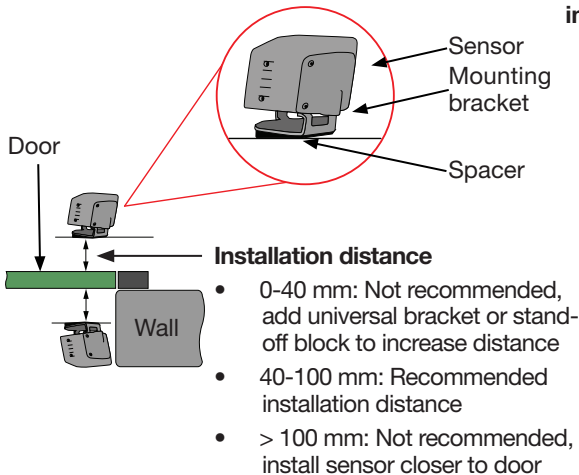
This manual is a reference guide for Carlo Gavazzi door safety sensor LEYON-Safe-E. It describes how to install, setup and use the product for its intended use. Translated versions of this quick start guide available via QR code, see last page.

1. Physical installation

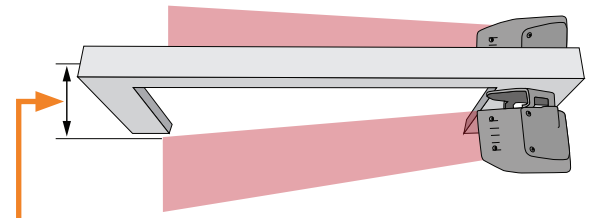
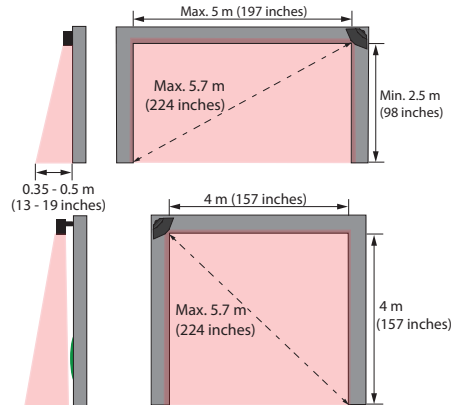
Box contents: LEYON-Safe-E sensor with 10 m cable, spacer, mounting bracket with front screw, stickers with QR code for Wi-Fi connection and web app, quick start guide that includes drill template

Other materials: Ladder or lift, level, measuring tape, drill and drill bit appropriate for the door frame, screwdriver and 3x DIN7991 M5 screws or similar, Allen key to access DIP-switches

1. Choose the mounting position of the sensor on the top-left or top-right of the door, at a minimum height of 2.5 m to fulfill the requirements of EN 12453
2. Set up a safe method of accessing the mounting location
3. Ensure the view from the intended placement is unobstructed
4. Use drill template to drill holes for the installation
5. Install spacer and bracket, making sure that the spacer is placed correctly. The spacer has left/right printed on it, showing the correct orientation for installation on the left/right of the door
6. It is important to ensure correct installation distance between spacer and the door according to figure below
7. If DIP-switches need adjusting, do this now. See section 4
8. Dock the sensor in the bracket and secure it with the front screw
9. Peel off protective plastic from front glass
10. Secure cable routing to door controller
11. Mount the QR code stickers on the sensor cable or near the door controller inside the control panel



Mechanical installation video



Warning: The installer must ensure that the “blind area” inside the door frame between sensors mounted on the front and rear of the door must be less than 20 cm, depending on the type of door and according to EN 12453 (annex D).

2. Connecting

1. Power off installation
2. Connect sensor supply wires (**RED** and **BLACK** wires) to door controller. Make sure the door controller can supply 24 VDC and 20 W, or use a separate power supply
3. Connect detection N.C. output wires (**GREY** and **GREEN** relay output) to input of door controller depending on controller logic
4. Connect test input wires (**BROWN** and **BLUE**) to door controller
5. Ensure unused wires do not cause short circuits, for instance by wrapping them individually
6. Power on installation. 4 LEDs will blink **GREEN** for approx. 30 seconds
7. Upon completing the start-up, 4 LEDs light up **BLUE** showing that the sensor is ready but no teach or set-up sequence has been performed yet
8. Remove all temporary and moving objects from area in front of door
9. Open the door if it is not already open
10. To start Auto-teach, connect 24 VAC/DC to **ORANGE** wire and ground to **BLUE** wire for >1 second, then disconnect
11. 4 LEDs blinking **BLUE** slowly (~1 Hz) indicate Auto-teach procedure in progress. The sensor scans the doorway and its immediate vicinity
12. When all 4 LEDs blink **BLUE** quickly (~4 Hz), close the door. Confirm the door is closed by connecting 24 VAC/DC to **ORANGE** and and ground to **BLUE** wire for >1 second, then disconnect
13. All 4 LEDs change to **GREEN** for 5 seconds and then go dark to confirm that the safety zone has been set up correctly and the Auto-teach procedure has been completed successfully
14. The sensor automatically exits Auto-teach procedure and the 4 LEDs light up **GREEN**
15. The sensor is ready to operate in Detection mode. 4 **GREEN** LEDs confirm the safety zone is free of objects
16. Verify that the sensor changes state when something enters the safety zone, shown by 4 **RED** LEDs
17. Verify correct sensor function. If all works as expected, the installation is ready for safety verification. If the installation needs further adjustments, please use web app. Refer to section 3.
18. Please refer to the instruction manual for cases not covered by the factory settings

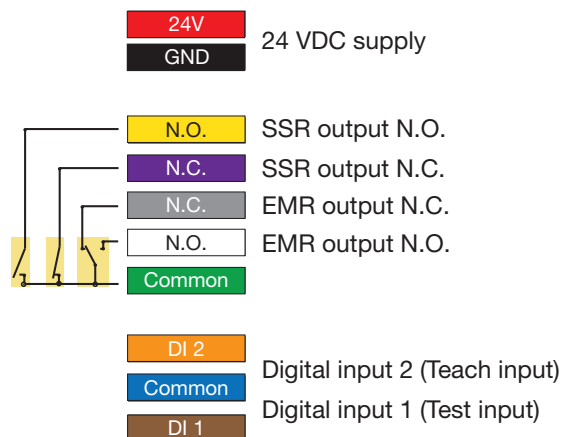
Connection video



Teach video



Wiring diagram



Warning: The installer is responsible for ensuring that the safety zone matches the door and that the installation complies with EN 12453 / EN 12978 / UL 325. Before commissioning, verify correct object detection and test the sensor, cabling, response times, and relay outputs.

3. Advanced set up with web app



To connect to the sensor, ensure it is powered and running, then scan the unique QR code found on the cable flags and stickers using a mobile phone, tablet, or PC equipped with Wi-Fi, a camera, and a web browser. The QR code contains the sensor Wi-Fi credentials and opens Web app in a browser.

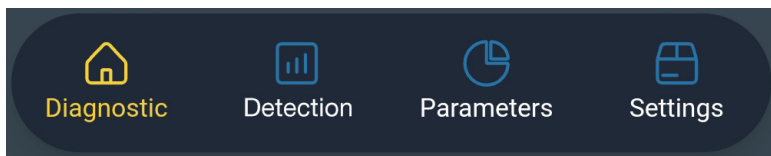
In case the browser does not open automatically, launch it manually and navigate to <http://192.168.4.1> or scan the QR code below.

The Web app can be used to define the safety zone, configure input and output functions, and perform the Auto-teach procedure without using the wires. The safety zone can be manually adjusted in the Detection Setup tab, while warning and alarm outputs are configured in the Parameters tab. Additional settings such as OFF-delay and output inversion are also available there.

The sensor's Wi-Fi connection automatically turns off after 30 minutes if no changes are made to the sensor settings, or when the connection to the Web app is terminated. To re-enable Wi-Fi, the sensor must be power-cycled by turning it OFF and ON again.

For more detailed information about configuration and operation, please refer to the manual.

Link to web app



CAUTION: In 'Set-up mode', the sensor is not a safety device. Ensure the door is not used. Remember to toggle back to 'Detection mode' after changing settings.

4. Settings via DIP-switches and push button

To access the DIP-switches, unscrew the back part using an Allen key.

If sensors are installed in close proximity to each other, for instance one inside and one outside on a door frame, they must be set to different channels to avoid cross talk. The LEYON-Safe-E sensor has 2 channels to chose from, defined by the first dip switch. The blue background in the figure below indicates factory settings.

Reset to factory settings

A push button is located just above the DIP-switches, press and hold for 10 seconds to reset sensor to factory settings



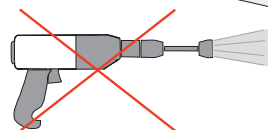
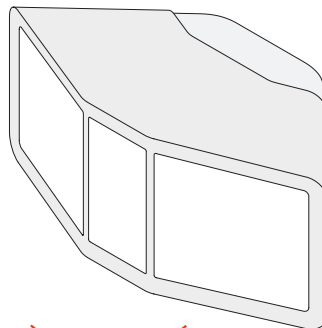
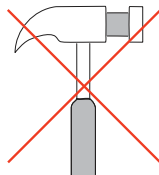
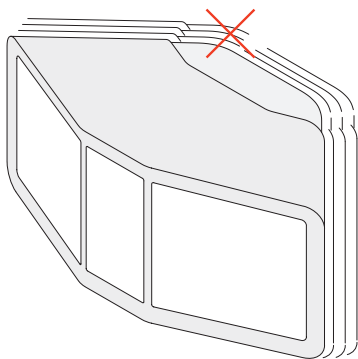
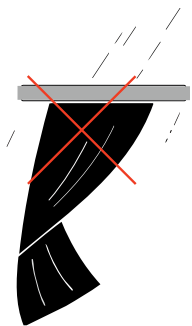
CAUTION: The DIP-switches are small and delicate. Use a rounded tip and gentle movements to avoid damage to the sensor.

IR light modulation frequency		
Channel	1	2
DIP 1		
Output inverter		
Output	Not inverted	Inverted
DIP 4		
Wi-Fi		
Wi-Fi	Enabled	Disabled
DIP 5		
Not used		
DIP 2		
DIP 3		
DIP 6		

5. Other written materials

Manual		Quick start guide French		Quick start guide German		Quick start guide Chinese	
http://cga.pub/?97cf65		http://cga.pub/?bf2f87		http://cga.pub/?cd9bf3		http://cga.pub/?9fd1e1	
Datasheet		Quick start guide Italian		Quick start guide Spanish		Quick start guide Danish	
http://cga.pub/?7edfea		http://cga.pub/?ea6e75		http://cga.pub/?41e23c		http://cga.pub/?864316	

6. Laser safety and maintenance



Avoid moving objects in the safety zone

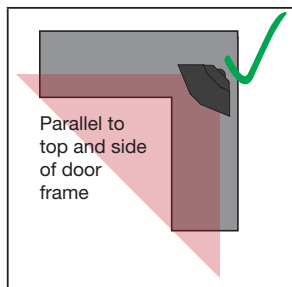
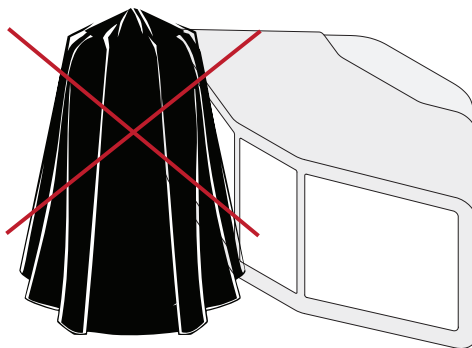
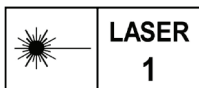
Avoid strong vibrations

Prevent direct impacts

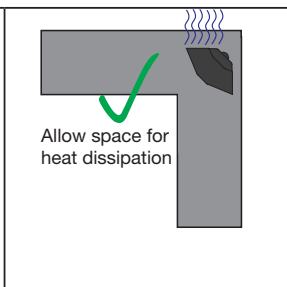
No harsh chemical cleaners

No pressure washing

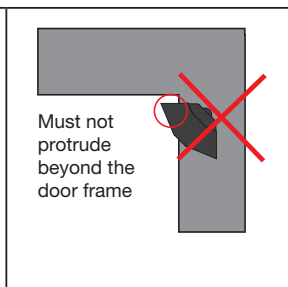
Do not cover front glass



Parallel to
top and side
of door
frame



Allow space for
heat dissipation



Must not
protrude
beyond the
door frame

