

Installation Instructions

Original Instructions



Allen-Bradley
by ROCKWELL AUTOMATION



SafeZone Mini Safety Laser Scanner Mounting

Catalog Numbers 442L-SFZNMN, 442L-SFZNMN3

Safety Information

This document applies to the SafeZone™ Mini safety laser scanner with catalog numbers 442L-SFZNMN and 442L-SFZNMN3.

Safety Information

The safety laser scanner is not suitable for the following applications:

- Outdoors
- Underwater
- Explosive environments

Device Overview



Item	Description
1	Optic cover
2	Seven-segment display screen
3	Operational status indicators
4	USB port cover
5	M5 mounting inserts (x4)
6	M12 8-pin male QD pigtail

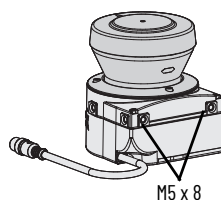
IMPORTANT Remove power to the SafeZone Mini safety laser scanner before making any changes or modifications to the safety laser scanner or system plug.

Mounting Overview

For full mounting information, see publication [442L-UM005](#).

Direct Mounting

The safety laser scanner has two M5 x 8 threaded inserts on the back of the device for direct mounting to a surface. If you can drill through the mounting surface from the rear, you can mount the safety laser scanner directly with these threaded holes.



Mounting Kits

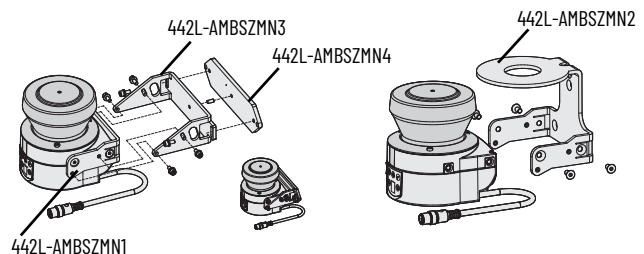
Mounting kits are available to mount the SafeZone Mini safety laser scanner with the M5 x 8 holes on both sides of the device (see [Figure 1](#)).

The SafeZone Mini mounting kit 1 is used to mount the device to a surface in the back of the scanner. It is possible to use additional mounting brackets that provide adjustment of the device in two planes. The maximum adjustment angle is $\pm 11^\circ$ in both planes.

It is necessary to use mounting kit 1 (442L-AMBSZMN1) with kits 3 (442L-AMBSZMN3) and 4 (442L-AMBSZMN4) to get the adjustability in mounting.

- Mounting kits 3 and 4 also work with mounting kit 2.
- Mounting kit 2 (442L-AMBSZMN2) is designed to help protect the optics cover of the SafeZone Mini safety laser scanner as it allows direct mounting to a surface in the back of the device.

Figure 1 - Mounting Kits



Connection Overview


Table 1 - Pin Assignment

	Pin	Signal	Function
	1	WF	Output for warning field 1
	2	+24V DC	Supply voltage
	3	I/O1	Universal I/O
	4	I/O2	Universal I/O
	5	OSSD1	Output signal switching device
	6	OSSD2	Output signal switching device
	7	0V DC	Supply voltage
	8	FE/shield	Functional earth/shield
Housing	FE/shield	Functional earth/shield	

- Shielded cordsets are required for connecting to the SafeZone Mini safety laser scanner
- Pin 8 is the ground connection for the braided shield
- Offered in lengths of 2.5 m [8.2 ft], 10 m [32.8 ft], and 20 m [65.6 ft]
- Catalog number 442L-ACABLx (replace x with a 2 [2.5 m (8.2 ft)], 5 [5 m (16.4 ft)], or 10 [10 m (32.8 ft)]).

USB Program Cable

USB programming cables are offered in the following lengths:

	Length [m (ft)]	Cat. No.
	2 (6.6)	442L-ACUSB-2
	10 (32.8)	442L-ACUSB-10

IMPORTANT The USB cable requires a software driver if the V3.0 or later version of the SCD program software is not used. The software driver is embedded in the SCD V3.0.0 and later SCD configuration software. See [Additional Resources](#) for the link to download the latest configuration software.

Clean and Replace the Optics Cover

The optics cover on the safety laser scanner should be cleaned regularly if it is contaminated.

- Do not use aggressive cleaning agents.
- Do not use abrasive cleaning agents.
- Static charges cause dust particles to be attracted to the optics cover. You can diminish this effect by using the anti-static plastic and the lens cloth.

Clean Optics Cover

- Use a clean or soft brush to remove dust from the optics cover.
- Moisten the optics cloth with the anti-static plastic cleaner and wipe off any residue on the window

Replace Optics Cover

- Only use a new optics cover (catalog number 442L-SZMNW).
- When replacing the optics cover, take ESD protection measures.
- Disconnect the round plug connector on the end of the connecting cable and remove the SafeZone Mini safety laser scanner.
- Take the SafeZone Mini safety laser scanner to a clean location (office, repair shop, or similar).
- First, clean the outside of the SafeZone Mini safety laser scanner to help prevent foreign bodies from entering the device when it is opened.

Waste Electrical and Electronic Equipment (WEEE)




At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

For technical support, visit rok.auto/support.

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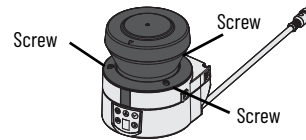
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- Undo the mounting screws for the optics cover and carefully remove the optic cover.



- Check whether the mirror on the motor is clean and remove any contamination with an optic brush.
- Place the new optics cover on the safety laser scanner and attach it with the new mounting screws. Verify that the arrow on the top of the cover points to the front and that the cover is in full contact without a gap.
- Tighten the mounting screws with the torque wrench set to 1.2 N•m (handtight).
- Use the SCD configuration software to perform an optics cover calibration.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
SafeZone Mini Safety Laser Scanner User Manual, publication 442L-UM005	Shows you how to mount, install, commission, operate, and maintain your SafeZone Mini safety laser scanner.
442L SCD configuration software: compatibility.rockwellautomation.com/Pages/MultiProductSelector.aspx?keyword=safezone	Provides downloads of the latest software.
SafeZone safety laser scanners product page: rockwellautomation.com/en-us/products/hardware/allen-bradley/safety-products/safety-presence-sensors/442l-safezone-mini.html	Provides the latest product selection and documentation information.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications .	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at rok.auto/literature.