

Installation Instructions

Original Instructions



Allen-Bradley
by ROCKWELL AUTOMATION



SafeZone Singlezone and Multizone Safety Laser Scanner

Catalog Numbers 442L-SFZNSZ, 442L-SFZNMZ

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Added Declaration of Conformity	3

Safety Information

SafeZone™ Singlezone and Multizone Safety Laser Scanners are not suitable for these applications:

- Outdoors
- Underwater
- Explosive environments

Device Overview

Figure 1 - SafeZone Safety Laser Scanner

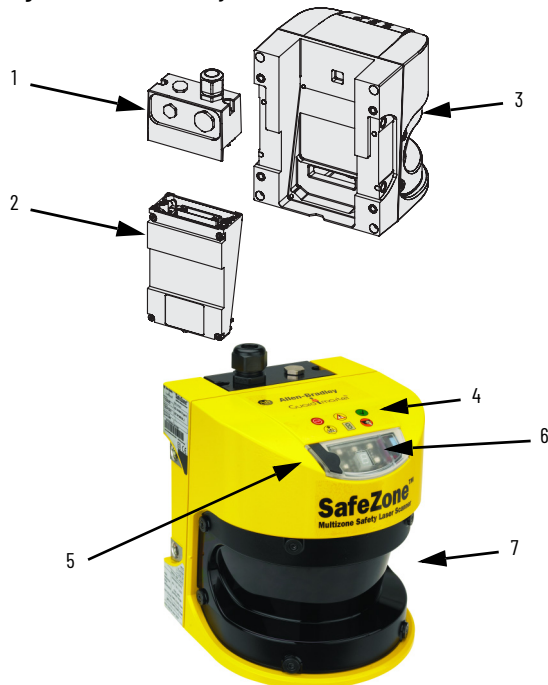


Table 1 - Overview Description

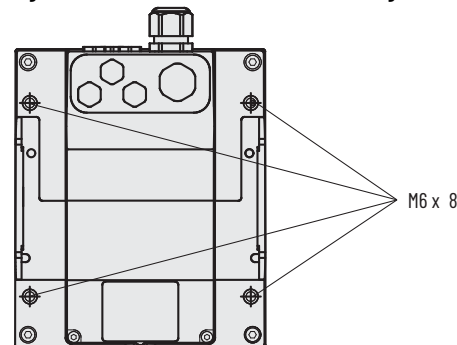
Item	Description
1	Prewired memory module
2	I/O module
3	SafeZone sensor head
4	Operational status indicators
5	USB port cover
6	Seven segment display
7	Field replaceable front window

IMPORTANT Remove power to the SafeZone 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-UM003](#).

Figure 2 - Threaded Holes for Direct Mounting



Direct Mounting

The SafeZone safety laser scanner has four threaded holes M6 x 8 on its rear face. Use these holes to mount the SafeZone safety laser scanner directly by drilling through the mounting surface from the rear.

Mounting Kits

Mounting kits are available to mount the SafeZone safety laser scanner.

There are four possible ways to mount the SafeZone safety laser scanner:

- Direct mount without mounting kit
- Mount with kit 1
- Mount with kits 1 and 2
- Mount with kits 1, 2, and 3

The mounting kits build upon each other. To mount with kit 2, you also need kit 1. To mount with mounting kit 3, you also need mounting kits 1 and 2. Part numbers for the mounting kits are listed in [Figure 3](#).

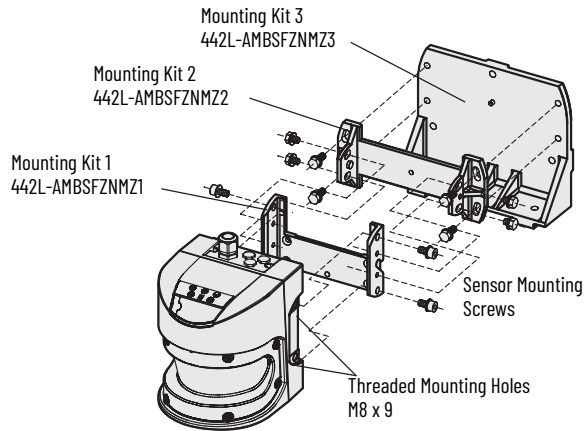
IMPORTANT Observe the maximum torque of the fastening hardware for the SafeZone laser scanner:
 M6 on rear = 12 N•m (106.2 lb•in) max
 M8 on side = 16 N•m (141.6 lb•in) max

Use mounting kit 1 to mount the SafeZone safety laser scanner to a surface in the back of the scanner.

Use mounting kit 2 (only with mounting kit 1) to align the scanner in two planes. The maximum adjustment angle is $\pm 11^\circ$ in both planes.

Use mounting kit 3 (only with mounting kits 1 and 2) to mount the SafeZone scanner so that the scan plane is parallel to the mounting surface and is also used floor mounting.

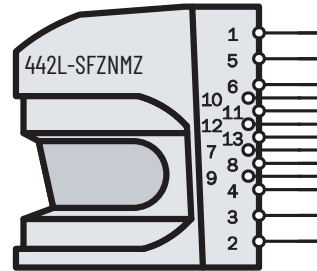
Figure 3 - Mounting Kits



IMPORTANT During mounting, observe the dimensional drawings in publication [442L-UM003](#).

Connection Overview

Figure 4 - Memory Module Wiring



Pin	Signal	Wire Color	SafeZone Singlezone	SafeZone Multizone
1	+24V DC	Brown	✓	✓
2	0V DC	Blue	✓	✓
3	OSSD1	Gray	✓	✓
4	OSSD2	Pink	✓	✓
5	RESET	Red	✓	✓
6	EDM	Yellow	✓	✓
7	ERR	White/black	✓	✓
8	RES_REQ	Red/blue	✓	✓
9	WF	White/brown	✓	✓
10	A1	White/red	–	✓
11	A2	White/orange	–	✓
12	B1	White/yellow	–	✓
13	B2	White/green	–	✓

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 on page 3](#) for the link to download the latest configuration software.

Clean and Replace the Front Window

You must clean the front window on the SafeZone safety laser scanner regularly.

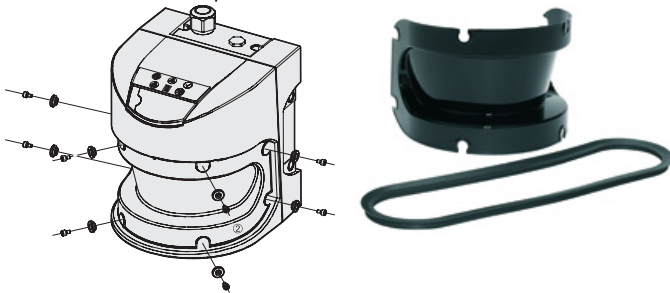
- Do not use aggressive cleaning agents.
- Do not use abrasive cleaning agents.
- Static charges cause dust particles to be attracted to the front window. You can use the anti-static plastic and the lens cloth to diminish this effect.

Clean the Front Window

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

Replace the Front Window

Follow the instructions in publication [442L-UM003](#).



- Only use a new SafeZone front window (catalog number 442L-SFZNMZW).
- Disconnect power and remove the prewired memory module from the SafeZone safety laser scanner.
- Take the SafeZone safety laser scanner to a clean location (office, repair shop, or similar).
- First, clean the outside of the SafeZone safety laser scanner to help prevent foreign bodies from entering the device when it is opened.
- When replacing the front window, take ESD protection measures.
- After replacing the front window, you must perform a calibration procedure before putting the scanner back into operation.

Declaration of Conformity

CE Conformity

Rockwell Automation declares that the products that are shown in this document conform with the Essential Health and Safety Requirements (EHSRs) of the European Machinery Directive (2006/42/EC) and EMC Directive (2014/30/EU).

For a comprehensive CE certificate visit: rok.auto/certifications.

UKCA Conformity

Rockwell Automation declares that the products that are shown in this document are in compliance with the Supply of Machinery (Safety) Regulations (2008 No. 1597) and Electromagnetic Compatibility Regulations (2016 No. 1091).

For a comprehensive UKCA certificate visit: rok.auto/certifications.

Additional Resources

To download publications, visit rok.auto/literature and search for the following publication numbers.

Resource	Description
SafeZone Singlezone and Multizone Safety Laser Scanner User Manual, publication 442L-UM003	Shows you how to mount, install, commission, operate, and maintain your SafeZone Singlezone and Multizone 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: www.rockwellautomation.com/en-us/products/hardware/allen-bradley/safety-products/safety-presence-sensors/safezone-laser-scanners.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.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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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.

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