450L GuardShield Light-Curtain Weld-Shield Installation Instructions

450L-AW-*xxxx* (see Table 1)

Original instructions in English

Allen-Bradley

Guardmaster®

⚠ **ATTENTION:** Read this document and the documents that are listed in the Additional Resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be conducted by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner that is not specified by the manufacturer, the protection that is provided by the equipment may be impaired.

Additional Resources

Resource	Description
450L-B GuardShield™ Safety Light Curtain User Manual	450L-UM001A-EN-P
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation® industrial system.
Product Certifications website, http://www.rockwellautomation.com/products/certification	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at http://www.rockwellautomation.com/literature/. To order paper copies of technical documentation, contact your local Allen-Bradley® distributor or Rockwell Automation sales representative.

Description

The 450L GuardShield weld shields are sold as pairs in the same lengths as the protective heights of the 450L GuardShield safety light curtain.

These polycarbonate weld shields are designed as disposable devices whose purpose is to help protect the front window of the GuardShield safety light curtain from damage.

Installation

It is necessary to attach Velcro® strips to each side of the 450L light curtain front window as shown in step 1 of Figure 1, before attaching the weld shield to the 450L GuardShield housing (step 2).

- Begin by peeling back and removing the protective inside liner from the weld shield.
- Select a piece of Velcro and remove one backing to expose the adhesive layer.
- Carefully place and firmly press each Velcro strip onto the safety light curtain window without blocking the lens and status indicator area as shown in Figure 1 and Figure 3. A recommendation for the positioning of the Velcro is provided in Figure 3 and Table 1. Locate the Velcro strips at the end of the safety light curtain and then equally space the remaining Velcro strips over the length of the safety light curtain front window. Be careful not to block the lens and status indicator area with a Velcro strip (for the status indicator area, shorten as required).

- After attaching all Velcro strips to the safety light curtain front window, remove all second Velcro backings, exposing the adhesive layers and carefully place the weld shield over the front of the 450L GuardShield safety light curtain (step 2, Figure 1).
- Assure that all Velcro strips are clear of the lenses and the status indicator areas (for the status indicator area, shorten if necessary).
- Firmly press on the weld shield at each Velcro strip position to assure good adhesion to the Velcro.
- Remove the protective liner from the front of each weld shield before installing and powering up of the 450L GuardShield light curtains.

IMPORTANT Each weld shield reduces the maximum scan range of the 450L GuardShield by 10%. For example, two weld shields (one transmitter and one receiver) would reduce the maximum scan range to 0.9 x 0.9 = 0.81 of the maximum scan range. The minimum working distance stays unchanged.

Cleaning

Use a soft, lint-free cloth and mild soap or detergent (such as Formula 409® cleaner) and lukewarm water.
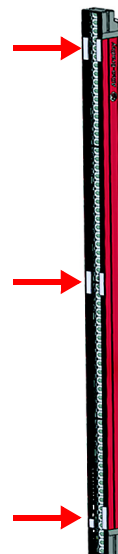
Paint, grease, oils, and so on, can be removed before drying by rubbing lightly with isopropyl alcohol and then washing with mild detergent and warm water.

⚠ **ATTENTION:** Abrasive or highly alkaline cleaners may damage the polycarbonate weld shields.

Figure 1 - Weld Shield Installation Steps

Step 1   Step 2

Each weld shield kit comes with a total of 24 Velcro strips. The 450L GuardShield, with smaller protective heights, may not require the attachment of all strips. See Table 1 for recommendations.

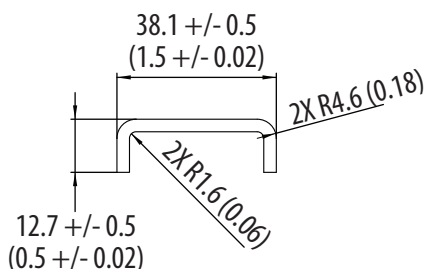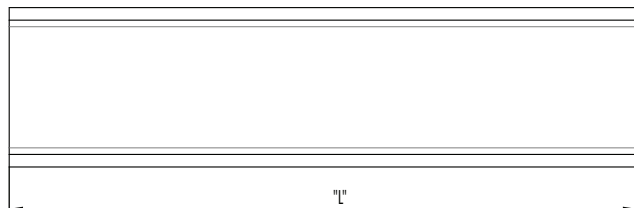## Dimensions [mm (in.)]

Figure 2 - Weld Shield

Figure 3 - Positions of Velcro Strips on Safety Light Curtain Front Window (for A and B dimensions see Table 1)
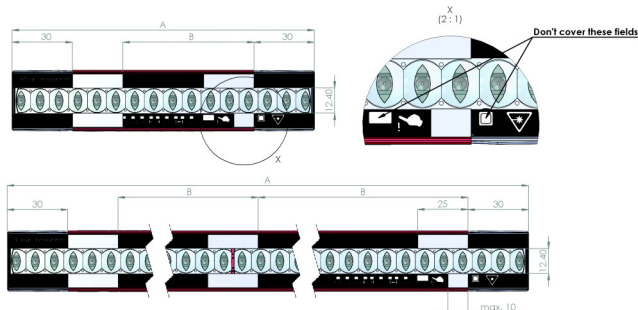

Table 1 - Recommended Dimensions for Velcro Positioning

A Dimension "L" [mm (in.)]	B [mm (in.)]	Recommended No. of Velcro Strips per Stick	Cat. No.
0150 (5.91)	65 (2.56)	4	450L-AW-0150
0300 (11.82)	215 (8.46)	4	450L-AW-0300
0450 (17.73)	365 (14.37)	4	450L-AW-0450
0600 (23.64)	258 (10.14)	6	450L-AW-0600
0750 (29.55)	333 (13.09)	6	450L-AW-0750
0900 (35.46)	408 (16.04)	6	450L-AW-0900
1050 (41.37)	322 (12.67)	8	450L-AW-1050
1200 (47.28)	372 (14.64)	8	450L-AW-1200
1350 (53.19)	422 (16.6)	8	450L-AW-1350
1500 (59.1)	354 (13.93)	10	450L-AW-1500
1650 (65.01)	391 (15.4)	10	450L-AW-1650
1800 (70.92)	429 (16.88)	10	450L-AW-1800
1950 (76.83)	466 (18.36)	10	450L-AW-1950

Installation and Operation Hints

The standard mounting kit (Cat. No. 450L-AM-TBM) and the side mounting kit (Cat. No. 450L-AM-SM) can be used in combination with the welding shield.

For the following cases the weld shield has to be removed:

- To operate the integrated laser alignment of a 450L GuardShield safety light-curtain stick
- To mount the optical interface device (Cat. No. 450L-AD-OID)
- To mount the 450L laser alignment tool clamp (Cat. No. 450L-ALAT-C) to operate the 440L laser alignment tool (Cat. No. 440L-ALAT)

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