

Allen-Bradley GuardShield 450L-E Safety Light Curtain

Enhanced Flexibility and Advanced Features in a Cost-Effective Safety Solution

Features and Benefits

- Extended features and functionality compared to the 450L-B such as cascading, built-in muting, blanking and multiple applications configuration
- Embedded functions configured quickly and easily via DIP switches or software, significantly reducing engineering effort. These include:
 - Muting, blanking, start mode, external device monitoring (EDM), scanning range
- Leverages patented transceiver technology – each stick can be used as a transmitter or receiver via innovative plug-in modules
- Enhanced Integrated Laser Alignment System (ILAS) for quick installation and reliable operation
- Active protective field provides sensing over the entire length of a transceiver
- Compact design 30 mm x 30 mm (1.18 in. x 1.18 in.)
- Wide range of protection heights 150...1950 mm (5.9...76.7 in.) in increments of 150 mm (0.5 ft)
- Resolutions:
 - Finger resolution (14 mm): 0.5 to 9 m (1.64...29.53 ft)
 - Hand resolution (30 mm): 0.9 to 16.2 m (2.95...53.15 ft)
- Supports cascading of multiple systems in series
- Flexible mounting options allow for quick and easy installation
- Configure, monitor and troubleshoot via Connected Components Workbench (CCW) software. Pre-configure multiple configurations.
- IP65 enclosure rating
- TÜV certified Type 4 IEC 61496-1/-2, Ple, SILcl3 per EN ISO 13849-1, IEC 62061

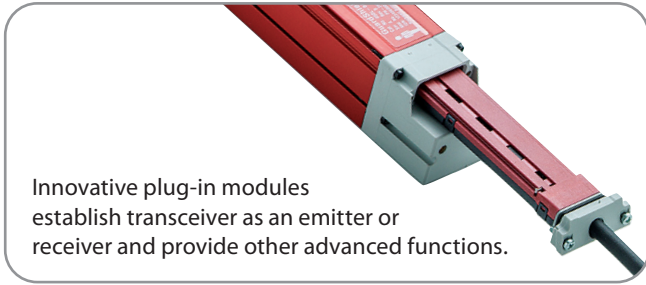


The Allen-Bradley® GuardShield™ 450L-E Safety Light Curtains from Rockwell Automation are based on a unique patented transceiver technology which allows each stick to be used as a transmitter or as a receiver. The full functionality of a transceiver is provided by plug-ins inserted at the bottom of the sticks. By using only one stick type with the optimal plug-ins selected based on the requirements of the application, the GuardShield 450L portfolio is a simple, cost effective solution that offers enhanced flexibility while maintaining the highest level of safety.

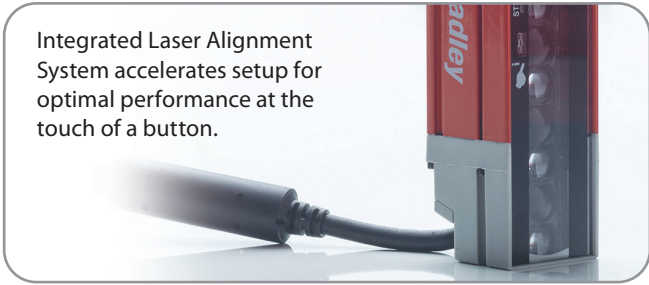
The enhanced Integrated Laser Alignment System (ILAS) of the GuardShield 450L-E reduces installation time by providing multiple visible laser points that optimize setup with a simple touch of the ILAS symbol on the front window of the stick. Plus, the compact design and full length protective field make it easy to integrate a GuardShield 450L-E system in hand and finger protection applications from 150 mm (5.9 in.) up to 1950 mm (76.7 in.) in increments of 150 mm (0.5 ft).

The enhanced GuardShield 450L-E light curtain system is also ideal for special applications requiring advanced functions such as muting and blanking, easily set up through DIP switches located on the dedicated plug-in modules. For muting, the common set ups like 4-sensor or 2-sensor with L- and T-configuration and override function can be selected. Blanking, reduced resolution, floating blanking and teach-in fixed blanking features are available. Configure up to eight protection zones via CCW software. A cascading plug-in can also be installed for series connection of additional GuardShield 450L Safety Light Curtain systems for multi-sided machine guarding (up to four sides). All these special functions combined with the inherent flexibility of the GuardShield 450L transceiver design help to simplify your engineering logistics and minimize the stock required to address your full range of applications.

For configuration, monitoring and troubleshooting, our free Connected Components Workbench software is available at our website. A separate optical interface tool is required if using Connected Components Workbench software for diagnostic information.



Innovative plug-in modules establish transceiver as an emitter or receiver and provide other advanced functions.



Integrated Laser Alignment System accelerates setup for optimal performance at the touch of a button.

General Ordering Information

Light Curtain System: Order two identical transceivers/catalog numbers.

Catalog Number ¹	Description
450L-E4FLxxxxYD	Transceiver with finger resolution. 14 mm (0.55 in.) resolution. Top and bottom mounting kit included ²
450L-E4HLxxxxYD	Transceiver with hand resolution. 30 mm (1.18 in.) resolution. Top and bottom mounting kit included ²

¹xxxx = 0150 ... 1950 mm (0.5 ... 6.4 ft) in increments of 150 mm (0.5 ft).

For example: "450L-E4HL0900YD" indicates an order for 900 mm hand detection light curtain transceiver.

²Optional side mounting bracket kit is available below.

Plug-in Modules: Order one transmitter and one receiver plug-in with the desired functionality for one system – **or** – Order two universal plug-ins for one system. Each universal plug-in can be used as a transmitter or a receiver. To cascade systems or for muting options use the cascading plug-in.

Catalog Number	Description
450L-APT-PW-5	Transmitter connection plug-in, M12 5-pin
450L-APR-ON-5	Receiver connection plug-in, M12 5-pin, On/Off
450L-APT-PW-8	Transmitter connection plug-in, M12 8-pin ¹
450L-APR-ED-8	Receiver connection plug-in, M12 8-pin, Reset mode, EDM, scanning range
450L-APR-BL-5	Receiver connection plug-in, M12 5-pin, Blanking
450L-APR-MU-8	Receiver connection plug-in, M12 8-pin, Muting, Blanking
450L-APU-UN-8	Universal connection plug-in, M12 8-pin, Reset mode, EDM, scanning range ²
450L-APC-IO-8	Cascading plug-in, M12 8-pin, I/O

¹ The 8-pin transmitter plug-in option allows two 8-pin cordsets to be used in one system.

² Order two universal plug-ins for one system. Each universal plug-in can be used as a transmitter or a receiver.

Required Accessories

Catalog Number	Description
889D-F5BC-x	M12 5-pin cable ¹
889D-F8AB-x	M12 8-pin cable ¹





¹ Replace the x with 2 (6.6 ft), 5 (16.4 ft), 10 (32.8 ft), 15 (49.2 ft), 20 (65.6 ft), or 30 (98.4 ft) for available lengths in meters

Optional Accessories

Catalog Number	Description
450L-AD-OID	Optical interface tool (required if using Connected Components Workbench software for configuration* or diagnostic information)
450L-AW-xxxx	Weld shield kit ¹ (pair)
450L-AM-RK	Conversion mounting bracket
450L-AM-SM	Side mounting bracket kit
450L-AMOD-MUT-8	Muting distribution block
450L-MUT-2-MS	Muting station
450L-AMUT-IL	Muting lamp

*Requires 450L fw version 4.00x and CCW R12 at minimum.

¹ xxxx = 0150...1950 mm (0.5...6.4 ft) in increments of 150 mm (0.5 ft)

Connect with us.    

rockwellautomation.com

expanding human possibility™

AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
 EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
 ASIA PACIFIC: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Allen-Bradley, Connected Components Workbench, Expanding human potential and GuardShield are trademarks of Rockwell Automation, Inc.
 Trademarks not belonging to Rockwell Automation are property of their respective companies.

Publication 450L-PP002B-EN-P - May 2020 | Supersedes Publication 450L-PP002A-EN-P - January 2018

Copyright © 2020 Rockwell Automation, Inc. All Rights Reserved. Printed in USA.