

# Allen-Bradley GuardShield 450L-B Safety Light Curtain



Patented Transceiver Technology Offers a Flexible, Scalable, Cost-effective Safety Solution

## Features and Benefits

- Patented technology allows each transceiver to be used either as a transmitter or receiver via an innovative plug-in module
- Active protective field provides sensing over the entire length of a transceiver
- 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 4 m (1.64...13.12 ft)
  - Hand resolution (30 mm): 0.9 to 6.5 m (2.95...21.33 ft)
- Compact design 30 mm x 30 mm (1.18 in. x 1.18 in.)
- Start mode, external device monitoring (EDM), scanning range are configured easily by DIP switches on the plug-in modules
- Two LEDs on the transceiver indicate the best alignment position
- Flexible mounting options allow for quick and easy installation
- Monitor and troubleshoot via Connected Components Workbench™ software
- IP65 enclosure rating
- TÜV certified PlE, Type 4 IEC 61496-1/-2, SILcl3 per EN ISO 13849-1, IEC 62061



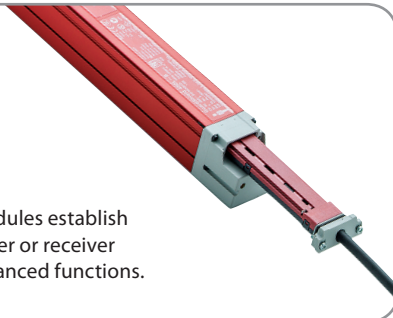
Rockwell Automation is proud to introduce the Allen-Bradley® GuardShield™ 450L-B Safety Light Curtain system. Unlike traditional safety light curtains which are based on separate transmitter and receiver units, this next generation light curtain system features a patented technology which allows each transceiver to be used as a transmitter or receiver via an innovative plug-in module. The functionality of a pair of 450L-B safety light curtains can be selected by inserting a plug-in module into the bottom of each transceiver. Once powered up, the transceiver learns its functionality from the plug-in module and begins operating as a transmitter or receiver. This advanced technology greatly reduces stock and provides a flexible, cost-effective safety solution. This compact, simple on/off solution is ideal for hand and finger detection and is offered in a wide range of protective heights from 150...1950 mm (5.9...76.7 in.) in increments of 150 mm (0.5 ft).

The advanced 450L-B light curtain system is equipped with an active protective field that provides sensing over the entire length of the transceiver. This feature can reduce the inactive sensing areas that generally appear at the top and bottom of other light curtains. For added convenience, functionalities such as start mode (manual or auto), external device monitoring (EDM) or scanning range can be activated with DIP switches located on the plug-in module.

To simplify positioning of the 450L-B system, there are two LEDs which indicate optimal alignment for the upper and lower portions of the transceiver, as well as two mounting kits. To monitor and troubleshoot this system, our free Connected Components Workbench™ software is available at [ab.rockwellautomation.com](http://ab.rockwellautomation.com).

LISTEN.  
THINK.  
SOLVE.™

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



The active protective field provides sensing over the entire length of a transceiver and allows for trouble-free installation in machine frames.



## General Ordering Information

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

Catalog Number <sup>1</sup>	Description
450L-B4FNxxxYD	Transceiver with finger resolution. 14 mm (0.55 in.) resolution. Top and bottom mounting kit included <sup>2</sup>
450L-B4HNxxxYD	Transceiver with hand resolution. 30 mm (1.18 in.) resolution. Top and bottom mounting kit included <sup>2</sup>

<sup>1</sup> xxx = 0150 ... 1950 mm (0.5 ... 6.4 ft) in increments of 150 mm (0.5 ft).

For example: "450L-B4FN0900YD" indicates an order for 900 mm finger detection light curtain system.

<sup>2</sup> Optional 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.

Catalog Number	Description
450L-APT-PW-5	Transmitter plug-in, M12 5-pin
450L-APR-ON-5	Receiver plug-in, M12 5-pin, On/Off
450L-APT-PW-8	Transmitter plug-in, M12 8-pin <sup>1</sup>
450L-APR-ED-8	Receiver plug-in, M12 8-pin, reset mode, EDM, scanning range.
450L-APU-UN-8	Universal plug-in, M12 8-pin, reset mode, EDM, scanning range <sup>2</sup>

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

<sup>2</sup> 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 <sup>1</sup>
889D-F8AB-x	M12 8-pin cable <sup>1</sup>

<sup>1</sup> 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 diagnostic information)
450L-AW-xxxx	Weld shield kit <sup>1</sup>
450L-ALAT-C	Mounting bracket for laser alignment tool 440L-ALAT
450L-AM-SM	Side mounting bracket kit

<sup>1</sup> xxx = 0150...1950 mm (0.5...6.4 ft) in increments of 150 mm (0.5 ft)

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[www.rockwellautomation.com](http://www.rockwellautomation.com)

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