

GuardShield Light Curtain Optical Interface Device

Catalog Number 450L-AD-OID

Topic	Page
Additional Resources	1
Description	1
Installation	2
Indicators	2
Dimensions	2
Technical Data	3
Operation Hints	3



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 and requirements of all applicable codes, laws, and standards.

In accordance with applicable codes of practice, suitably trained personnel are required to install, make adjustments, put into service, use, assemble, disassemble, and/or maintain this equipment.

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

Additional Resources

Resource	Description
450L-B GuardShield™ Safety Light Curtain User Manual, publication 450L-UM001	
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

Catalog Number 450L-AD-OID is an interface adapter that allows communication to a 450L safety light curtain.

Figure 1 - Schematic Operation Mode



The adapter can be used to:

- Obtain detailed service information of a 450L-B or 450L-E safety light curtain
- Configure a 450L-E safety light curtain
- Upgrade firmware of a 450L-B or 450L-E safety light curtain.
- The required Connected Component Workbench™ software (available at <http://www.rockwellautomation.com/global/support/connected-components/workbench.page?>) must be installed on a personal computer.

A USB interface manages the communication between the personal computer and the optical interface device (OID). A one meter USB connection cable (Catalog Number 2711C-CBL-UU02) is supplied by default in each 450L-AD-OID package:

- Connector personal computer: Male USB Type A
- Connector OID: Male USB Type Mini-B



ATTENTION: USB connection length must be less than 3 m (9.84 ft). Do not attempt to extend the cable.

The communication between the OID and the 450L safety light curtain stick is optical (infrared light). No cable is required for the communication between those two devices.

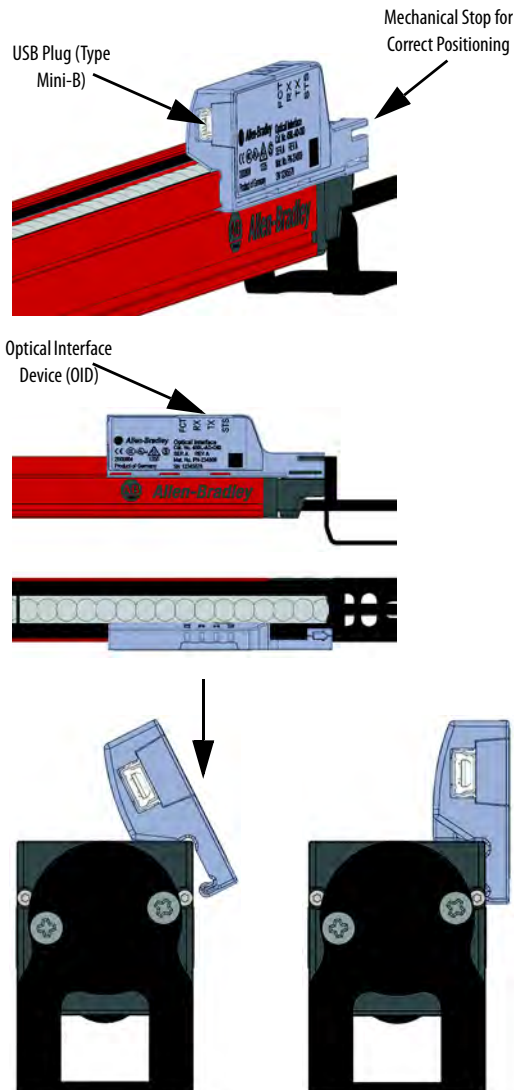
Installation

The device must be positioned correctly at the end of the protective field above the status indicators. This position allows an excellent optical communication between the safety light curtain stick and the OID interface.

First move the latch of the interface close to the bottom end cap so that it touches the end cap and then turn it so that it snaps in. A snapped on OID can still be shifted 2 mm (0.08 in.) up and down. This tolerance has no effect on the communication. Verify that power is applied to the 450L stick and to the personal computer. The green STS indicator on the OID turns on to indicate that the OID is receiving power through the USB port.

If it is the first time that an OID has been connected to the computer, you must install the Connected Component Workbench software first.

Figure 2 - Installation of the OID on a 450L Stick

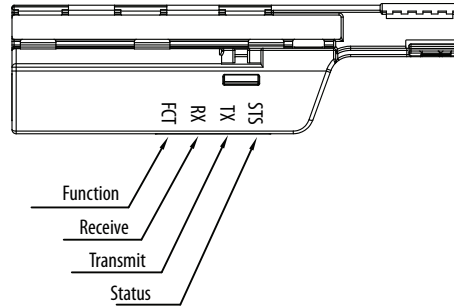


IMPORTANT The converter must not be installed in an area where the ambient atmosphere contains volatile or corrosive gas, vapors, or dust. If the converter is not going to be installed for some time, it must be stored in an area where it is exposed to a corrosive atmosphere.

Do not connect multiple OID to one computer.

Indicators

Figure 3 - Indicators at the OID



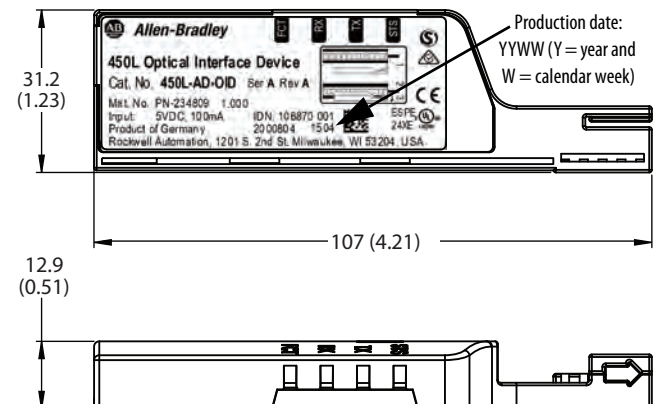
The optical interface device has four green status indicators.

Table 1 - Description of the Status Indicators

Name	Behavior	Description
STS	Off	No power from USB interface
	On	Normal operation
	Blinking	Error, use Rockwell Automation SW Control Flash to update FW
TX	Blinking	The OID transmits data to the 450L stick
	Off	The OID transmits no data
RX	Blinking	The OID receives data from the 450L stick
	Off	The OID receives no data
FCT	Off	OID and 450L stick not connected
	On	OID and 450L stick connected

Dimensions

Figure 4 - Dimensions and Product Label for 450L-AD-OID [mm (in.)]



Technical Data

Attribute	450L-AD-OID
Enclosure rating	IP20
Certification	CE Marked for all applicable directives; RCM UL listed when attached to light curtain
Housing Material	Polyamide
Size	31.2 x 12.9 x 107 mm (1.23 x 0.51 x 4.21 in.)
Weight	20 g (0.70 oz) (100 g (3.53 oz) with cable)
Operating temperature	0...55 °C (32...131 °F)
Storage temperature	-20...+65 °C (-4...+149 °F)
USB supply	100 mA @ 5V DC
Power consumption	<500 mW

Operation Hints

- The OID can be snapped and operated on an already powered on stick.
- The OID doesn't interrupt the protective field after installation. It can be used for online monitoring.
- Remove the weld shield to install and operate the OID.
- The standard mounting kit (Catalog Number 450L-AM-TBM) and the side mounting kit (Catalog Number 450L-AM-SM) can be used in combination with the OID.
- The integrated laser alignment can be operated when the optical interface is installed.
- Use the "Help" function of Connected Component Workbench software to find requested diagnostic information.
- To perform a FW update of the OID itself, be sure that the OID is connected to the USB interface only and not be installed on a 450L stick.

Rockwell Automation Support

Use the following resources to access support information.

Technical Support Center	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.	https://rockwellautomation.custhelp.com/
Local Technical Support Phone Numbers	Locate the phone number for your country.	http://www.rockwellautomation.com/global/support/get-support-now.page
Direct Dial Codes	Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.	http://www.rockwellautomation.com/global/support/direct-dial.page
Literature Library	Installation Instructions, Manuals, Brochures, and Technical Data.	http://www.rockwellautomation.com/global/literature-library/overview.page
Product Compatibility and Download Center (PCDC)	Get help determining how products interact, check features and capabilities, and find associated firmware.	http://www.rockwellautomation.com/global/support/pcdc.page

Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete the How Are We Doing? form at http://literature.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002_-en-e.pdf.

Rockwell Automation maintains current product environmental information on its website at <http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page>.

Allen-Bradley, Connected Component Workbench, GuardShield, Rockwell Automation, and Rockwell Software are trademarks of Rockwell Automation, Inc. Trademarks not belonging to Rockwell Automation are property of their respective companies.

Rockwell Otomasyon Ticaret A.Ş., Kar Plaza İş Merkezi E Blok Kat:6 34752 İçerenköy, İstanbul, Tel: +90 (216) 5698400

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

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

Publication 450L-IN003A-EN-P - May 2017

PN-306719
10003091407 Ver 00

Copyright © 2017 Rockwell Automation, Inc. All rights reserved. Printed in the U.S.A.