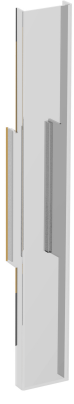
EZ-SCREEN LS Snap-On Shield

Datasheet

- Provides impact protection for EZ-SCREEN LS 14 mm, 23 mm, and 40 mm resolution emitters and receivers
- Clear PETG co-polyester lens shields snap into place; need no foam gasket for attachment
- Can be removed and reinstalled easily
- VHB strips included for shield mounting; only necessary for some bracket configurations
- Reduces sensing range by approximately 10% per shield (20% per pair)

Snap-On Lens Shields

Impact-resistant copolyester lens shields snap easily over entire length of sensor housing, protecting against direct contact with fluids and solid debris. The lens shields are not sealed at top and bottom, and decrease sensing range by approximately 20% when they are protecting both the emitter and receiver. Order one per sensor.

Sensor Model	Lens Shield Model	Sensor Model	Lens Shield Model	
SLL..-280..	EZLS-280	SLL..-1050..	EZLS-1050	
SLL..-350..	EZLS-350	SLL..-1120..	EZLS-1120	
SLL..-420..	EZLS-420	SLL..-1190..	EZLS-1190	
SLL..-490..	EZLS-490	SLL..-1260..	EZLS-1260	
SLL..-560..	EZLS-560	SLL..-1330..	EZLS-1330	
SLL..-630..	EZLS-630	SLL..-1400..	EZLS-1400	
SLL..-700..	EZLS-700	SLL..-1470..	EZLS-1470	
SLL..-770..	EZLS-770	SLL..-1540..	EZLS-1540	
SLL..-840..	EZLS-840	SLL..-1610..	EZLS-1610	
SLL..-910..	EZLS-910	SLL..-1680..	EZLS-1680	
SLL..-980..	EZLS-980	SLL..-1750..	EZLS-1750	
		SLL..-1820..	EZLS-1820	

Original Document
184212 Rev. A

28 September 2015

184212

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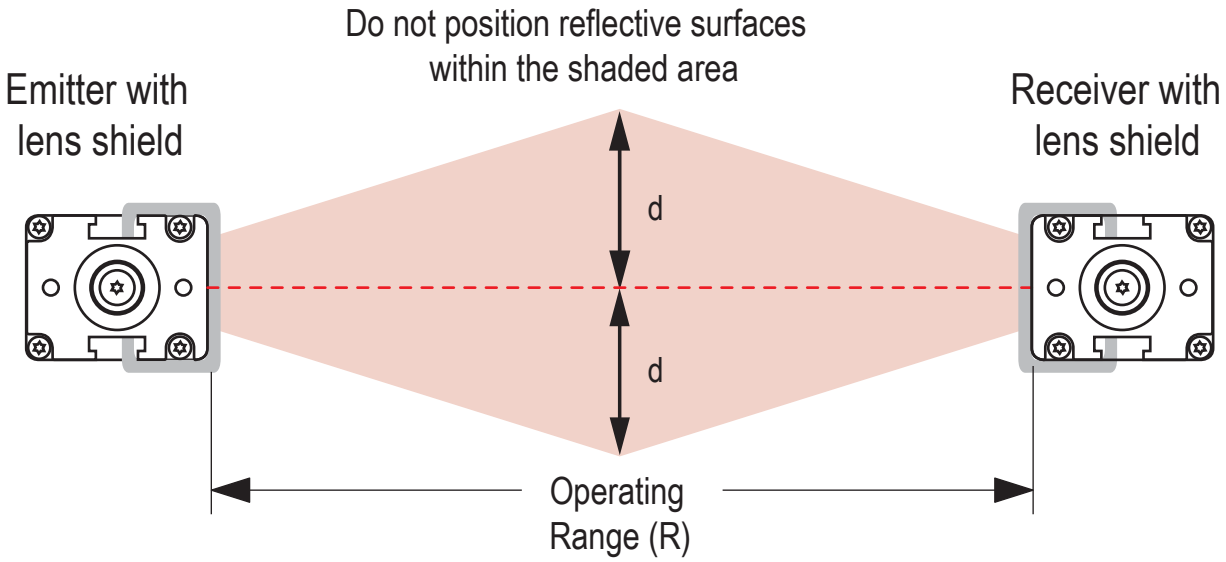
Adjacent Reflective Surfaces

Using lens shields may increase the distance *d* shown below. The surface of the shield may increase the potential angle of the beams from that shown in the figure (without the shield in place). It is important to perform the trip test with the lens shield in place. If the trip test indicates an optical short circuit, refer to the EZ-SCREEN Instruction Manual for information on eliminating problem reflections.

WARNING: Avoid Installation Near Reflective Surfaces

Avoid locating the defined area near a reflective surface; it could reflect sensing beam(s) around an object or person within the defined area, and prevent its detection by the EZ-SCREEN LS. Perform the trip test, as described in the manual, to detect such reflection(s) and the resultant optical short circuit. Failure to prevent reflection problems will result in incomplete guarding and could result in serious injury or death.



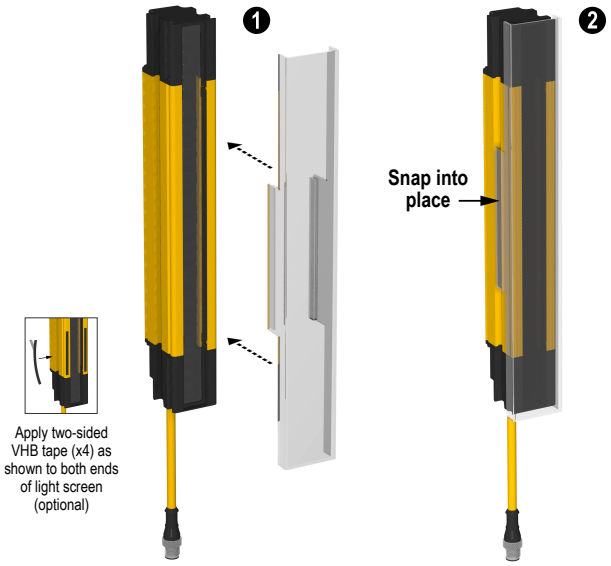
For distance *d*, with lens shields:

Operating Range to 3 m (10 ft): d = 0.26 m (10 in)
Operating Range greater than 3 m (10 ft): d = 0.0875 × R (m or ft)

Installing the Snap-On Lens Shield

Install the lens shield by sliding it over the emitter/receiver housing or by snapping it into place. Sliding it on must be done prior to installing the sensors; snapping it into place can be done after sensor installation. If side brackets are used, cut notches into the sides of the shield before snapping it into place. Each shield is 5 mm longer than the sensor housing length; it will overlap both end-caps when mounted properly.

For longer lens shields that will be installed on sensors mounted with the center bracket, cut a notch in the side of the lens shield to fit over the bracket. The location of the notch will vary depending on where you have your center bracket positioned.



To slide the shield onto the housing:

1. Remove the protective film from both the inside and outside surfaces of the shield. (NOTE: The shield's cut edges may be sharp.)
2. Carefully slide the shield onto the housing, aligning the shield's tabs in the sensor's T-nut slot, until it is centered along the housing length.
3. Perform the trip test with the lens shield in place, before using the system.

To snap the shield onto the housing:

1. Remove the protective film from both the inside and outside surfaces of the shield. (NOTE: Take care; the shield's cut edges may be sharp.)
2. If desired, install the optional VHB strips to the front surfaces of the EZ-SCREEN LS housing.
3. With the shield centered along the housing length, begin at one end by spreading the sides of the shield apart. Ease the sides of the shield around the housing, until the tabs are in the sensor's T-nut slots. From that end, gradually press the rest of the shield into place.
4. Perform the trip test with the lens shield in place, before using the system.

Maintaining the Lens Shield

To prevent loss of excess gain, clean the shields when they become dirty. Remove dirt and/or oil from the front face of the shield using a mild detergent or window cleaner and a soft cloth. Avoid industrial cleaning agents or cleaning agents containing alcohol, as they may damage the shield material or the sensor.

Replacing the Lens Shield

Replace the lens shield when it becomes pitted or scratched, otherwise excess gain will be decreased.

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