8310-812 BEAM SENSOR USER'S GUIDE

PHOTOELECTRIC BEAMS FOR GUIDE RAIL APPLICATIONS

1 Description

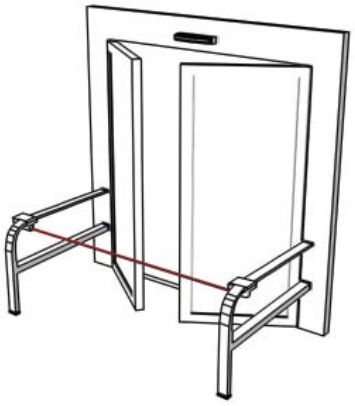
The Beam Sensor (8310-812) is a self-contained infrared beam set that may be used for various applications, most commonly automatic pedestrian doors. The beams fit easily into a pre-drilled ½" hole and are a snap fit. Wiring is by a quick disconnect cable that can be daisy-chained up to 30' (in 15' increments). The beams offer an LED indication at their back side for ease of alignment and troubleshooting.

EMITTER

RECEIVER

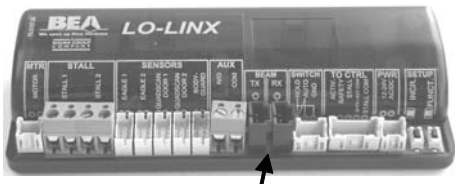
2 Installation

1. Pre-drill a ½" hole at the desired mounting location.
2. When using more than one set of beams, alternate the beam orientation as shown at right.
3. Route the long cable from its termination +point to the beam mounting location..
4. Plug the beam cable in via the snap together connector.
5. Install the beam into the ½" hole and press the beam until it clicks into the opening. Typically, the wall thickness of the drilled material should not exceed 1/8".



3 Wiring

If using a LO-Linx lockout module, simply plug each beam into the connection point at the module. Connection points are identified on the LO-Linx.



SENSOR BEAM CONNECTION

If using Sensor Beams directly, be sure the NPN/Light Operate output works with the door controller. The chart below shows wire color designations for the Emitter and Receiver:

RECEIVER EXTENSION CABLE	DESCRIPTION	EMITTER EXTENSION CABLE	DESCRIPTION
Black	Ground	Black	Ground
White	NPN/Light Operate*	Not Connected	Not Connected
Red	10 to 30 VDC	Red	10 to 30 VDC

*Light operate means ground is provided when receiver 'sees' emitter.

To wire directly to door control, cut off connector on extension cable and strip jacket from wires. Connect wires according to door control guidelines.

If the application requires a dry output, the IFB can be used. Simply plug one beam set into the IFB and wire the appropriate relay outputs (NO or NC) per the application.

IFB (InterFace Board)

SENSOR BEAM INTERFACE	DESCRIPTION
Red	+ 12 - 24 VAC/DC
Black	– 12 - 24 VAC/DC
White	COM
Green	NO
Brown	NC

4 Power ON

Upon powering, observe the back of the beams for LED indications. There should be a green LED illuminated at the back-side of the Emitter and the Receiver to indicate power ON. The Receiver should also have an orange LED illuminated when the beam is aligned and unobstructed.

Additionally, the Sensor Beam Interface LED also has indications of its own, depending on the switch selection and Sensor Beam status.

SENSOR BEAM BACK-SIDE LED DISPLAY		
	GREEN LED	ON = Power is applied
	YELLOW LED	ON=Beams are unobstructed OFF=Beam Broken
	RED LED	N/A

5 Troubleshooting

SYMPTONS	PROBABLE CAUSES	CORRECTIVE ACTION
No LED's visible at the back side of the beam heads	No Power.	Check power supply. Check for damaged cabling and connection points.
Beam output will not change state	Beams are misaligned. Faulty transmitter or receiver.	Check for yellow LED at receiver to confirm alignment. If an orange LED can't be obtained and green LED's are on at TX and RX, replace receiver. If green LED is off at TX, replace TX beam head.

6 Technical Specifications

	SENSOR BEAM	SENSOR INTERFACE MODULE
Technology	Active Infrared: 880nm	One Sensor Beam Set
Detection Mode	Presence Detection	N/A
Supply Voltage	10 to 30 VDC	12 to 24 VAC/DC
Current Consumption	Receiver: 15mA / Emitter: 9mA	53 mA MAX
Output Consumption	NPN Output, Light Operate	1 Relay, (NC/NO Contacts), 0-30 second adjustable hold time
Output Rating	100 mA max. Total Output Load	Rated Load: 0.3A@125VAC (NO Contacts) 0.3A@125VAC (NC Contacts) 1.0A@ 30VDC (NO Contacts) 1.0A@ 30VDC (NC Contacts)
Range (beam separation)	30 feet	N/A
Output Response Time	1 mS	3 mS
Material	Black ABS Plastic and Acrylic Lense	PCB with shrink rube
Connection	Molex 3-Conductor with 26 AWG Wire	One Beam Pair
Ingress Protection	IP65 (NEMA 4)	IP65 (NEMA 4 Enclosure)
Operating Temperature	-30F to +130F	-30F to +130F
Cabling	8" Cable on Beam / 15' Extension Cable	None Included

7 Accessories

Jamb Cap Kit
(included with Sensor Beam set)
May be used on sliding door applications or otherwise

Rail Mount Kit
(included with Sensor Beam set)
Used on 1.75" x 0.5" barstock-type guide rails.

InterFace Board (IFB)
(included with Sensor Beam set)
Converts an NPN output to a dry relay output capable of powering one Sensor Beam pair.

8 Company Contact

LCN®

CAUTION

Do not leave problems unresolved. If a satisfactory solution cannot be achieved after troubleshooting a problem, please contact LCN at 1-800-526-2400. If you must wait for the following workday to call LCN, leave the door inoperable until satisfactory repairs can be made. Never sacrifice the safe operation of the automatic door or gate for an incomplete solution.

For more information, visit www.lcn.ingersollrand.com.

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