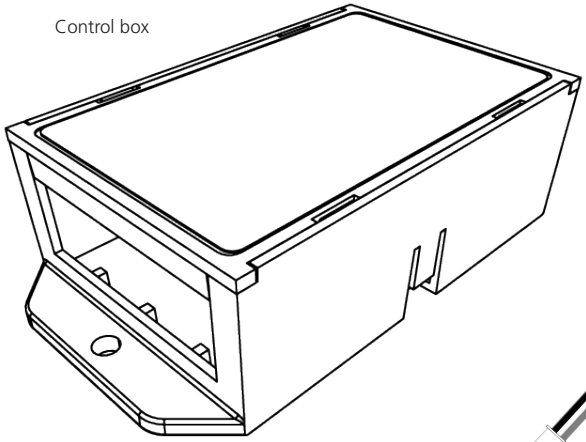
MICROCELL ONE

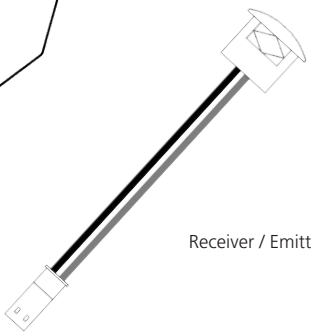
Infrared Safety beam

(US version)

DESCRIPTION

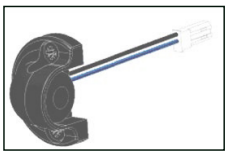
Control box





Receiver / Emitter

ACCESSORIES



JAMB CAP KIT (20.0045)

CAUTION

- ❑ Shut off all power going to header before attempting any wiring procedures.
- ❑ Maintain a clean and safe environment when working in public areas.
- ❑ Constantly be aware of pedestrian traffic around the door area.
- ❑ Always stop pedestrian traffic through the doorway when performing tests that may result in unexpected reactions by the door.
- ❑ Always check placement of all wiring before powering up to ensure that moving door parts will not catch any wires and cause damage to equipment.
- ❑ Ensure compliance with all applicable safety standards (i.e. ANSI A156.10) upon completion of installation.

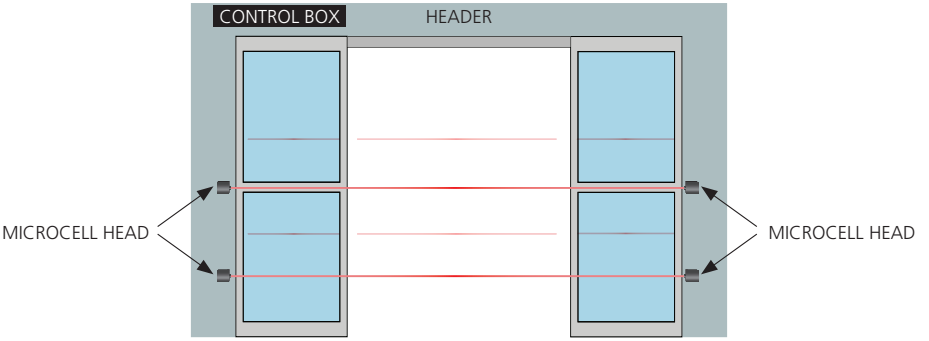
MECHANICAL INSTALLATION

SINGLE BEAM

1. Select a mounting height and mark it on both sides of the door. Ensure it is at least 1' above the floor.
2. Drill a 1/2" (13mm) hole in each side of the door frame.
3. Slide the heads and the cables into the vertical jambs.
4. Install the control box in the header and secure using double-sided, foam tape.
5. Connect the wires (see diagram on following page).

DOUBLE BEAM

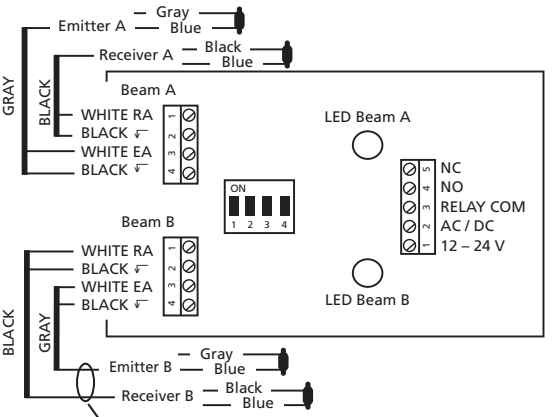
1. Select two mounting heights and mark each on both sides of the door. Ensure the beams are at least 1' apart, and that the lower beam is at least 1' above the floor.
2. Drill two 1/2" (13mm) hole in each side of the door frame, at least 1' apart.
3. Slide the heads and the cables into the vertical jambs. Ensure that you reverse the emitters and receivers for each beam. Emitter A should be on the same side of the door as Receiver B, and Emitter B should be on the same side as Receiver A. *See image below.*
4. Install the control box in the header and secure using double-sided, foam tape.
5. Connect the wires (see diagram below).



Microcell beam locations are for illustration purposes only

ELECTRICAL INSTALLATION

1. Remove the safety beam control box cover to access the connectors and DIP switches.
2. Connect the MICROCELL cables as shown below.
   BLACK cables = receivers ("R")
   GRAY cables = emitters ("E")



Gray and Black cables formerly Yellow and Green respectively.

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ELECTRICAL INSTALLATION (cont.)

3. Set the operation of the safety beams with the dipswitches.

DIPSWITCH	*ON*	*OFF*
#1	Double beams	Single beams
#2	Normally Closed - relay de-energizes upon detection	Normally Open - relay energizes upon detection
#3	Standard operating range (15')	Reduced operation range (10')
#4	Test	Default

NOTE 1: When using a single set of beams, connect beams to the Beam A connector and set dipswitch #1 to the OFF position.

NOTE 2: If the MICROCELL is connected to a safety circuit of an automatic door, it is recommended to place dipswitch #2 to the ON position and use the NC circuit (terminal 3 and 5).

4. Connect 12 – 24 V AC ±10% or 12 – 24 V DC -5% / +30% to terminals 1 and 2 of the control connector.

5. Connect the desired relay output to the door control.

6. Install the control box cover.

TROUBLESHOOTING

The control box is equipped with two LEDs to aid in troubleshooting. Each LED corresponds to one beam.

- *Both LEDs off = beams are uninterrupted --> No action needed.*
- *One/Both LEDs are on = Corresponding beam(s) is interrupted --> No action needed.*
- *Neither LED will illuminate = Power problem --> Verify power supply with a voltmeter.*

Visible LEDs are useful as indicators for head alignment during installation.

LED A is continuously illuminated	Improper wiring	Verify connection between emitter and receiver. Verify dipswitch 1 is in OFF position, if sing a single beam.
LED A and/or LED B is/are continuously illuminated	Improper wiring	Verify connection between emitter and receiver. Verify dipswitch positions. *Dual-beam applications:* Ensure wiring for emitter A corresponds to receiver A (likewise for set B).
	Poor alignment	Verify alignment of emitter and receiver (maximum allowed misalignment is 8°). Check distance of beam separation between emitter and receiver (maximum allowed distance is 15'). *Dual-beam applications:* Ensure a minimum of 1' separation between upper and lower beams. Ensure emitter and receiver sets alternate in pattern.
	Incorrect power supply	Verify power supply with a voltmeter.
LEDs functioning, but door does not respond	Improper wiring of output relay	Verify wiring of output relay. Verify dipswitch 2 is properly set.

TECHNICAL SPECIFICATIONS

Technology:	Microprocessed, active infrared
Mounting Height:	minimum 1' above floor
Distance between pairs of beams:	minimum 1' (beams must be crossed)
Distance between heads and plane of doors:	1"
Range of detection:	minimum 3' / maximum 15'
Alignment tolerance:	8°
Detection method:	presence (by beam interruption)
Response time:	≤ 40 ms
Hold time:	300 ms
Power supply:	12 – 24 VAC ±10% 12 – 24 VDC -5% / 30%
Consumption:	< 100 mA
Output contact rating:	1 relay (NC/NO contacts) Max. contact voltage: 50 VAC/VDC Max. contact current: 1 A (resistive) Max. switching power: 30 W (DC) / 60 VA (AC)
Displays:	2 red LEDs (illuminates when barrier is interrupted)
Adjustments:	DIP switches
Operating temperature:	-30 – 131 °F
Immunity: Ambient light Incandescent light Electromagnetic compatibility	 75,000 Lux 25,000 Lux with an angle of 8° in accordance with 89/336/EEC (CE)
Protection:	IP65 / NEMA 4 beam heads
Dimensions: Heads Control board	body: <15/32" (L embed) × 15/32" Ø harness: Ø 5/8" 3" (W) × 2" (D) × 1" (H)
Cable length:	18' (D) or 32' (L) – *specify when ordering*
Material:	ABS
Housing color:	transparent
Cable color:	emitter: gray (formerly yellow) receiver: black (formerly green)
Head color:	emitter: gray and blue (formerly yellow and black) receiver: black and blue (formerly green and black)

Specifications are subject to change without prior notice.
All values measured in specific conditions.

BEA INSTALLATION/SERVICE COMPLIANCE EXPECTATIONS

BEA, the sensor manufacturer, cannot be held responsible for incorrect installations or inappropriate adjustments of the sensor/device; therefore, BEA does not guarantee any use of the sensor outside of its intended purpose.

BEA strongly recommends that installation and service technicians be AAADM-certified for pedestrian doors, IDA-certified for doors/gates, and factory-trained for the type of door/gate system.

Installers and service personnel are responsible for executing a risk assessment following each installation/service performed, ensuring that the sensor system installation is compliant with local, national, and international regulations, codes, and standards.

Once installation or service work is complete, a safety inspection of the door/gate shall be performed per the door/gate manufacturer recommendations and/or per AAADM/ANSI/DASMA guidelines (where applicable) for best industry practices. Safety inspections must be performed during each service call – examples of these safety inspections can be found on an AAADM safety information label (e.g. ANSI/DASMA 102, ANSI/DASMA 107).

Verify that all appropriate industry signage and warning labels are in place.

AAADM ANSI DASMA DHI IDA