



MINI-ARRAY™

Measuring Light Screen System

MINI-ARRAY Sensor Specifications

Models		Array Length	Total Beams	Models		Array Length	Total Beams		
MINI-ARRAY Sensors - 16 beam/foot models with 0.75" (19.1 mm) beam spacing	BMEL616A	Emitter	143 mm	8	MINI-ARRAY Sensors - 32 beam/foot models with 0.38" (9.7 mm) beam spacing	BMEL632A	Emitter	133 mm	16
	BMRL616A	Receiver	(5.62 in)			BMRL632A	Receiver	(5.25 in)	
	BMEL1216A	Emitter	295 mm	16		BMEL1232A	Emitter	286 mm	32
	BMRL1216A	Receiver	(11.62 in)			BMRL1232A	Receiver	(11.25 in)	
	BMEL1816A	Emitter	448 mm	24		BMEL1832A	Emitter	438 mm	48
	BMRL1816A	Receiver	(17.62 in)			BMRL1832A	Receiver	(17.25 in)	
	BMEL2416A	Emitter	600 mm	32		BMEL2432A	Emitter	591 mm	64
	BMRL2416A	Receiver	(23.62 in)			BMRL2432A	Receiver	(23.25 in)	
	BMEL3016A	Emitter	752 mm	40		BMEL3032A	Emitter	743 mm	80
	BMRL3016A	Receiver	(29.62 in)			BMRL3032A	Receiver	(29.25 in)	
	BMEL3616A	Emitter	905 mm	48		BMEL3632A	Emitter	895 mm	96
	BMRL3616A	Receiver	(35.62 in)			BMRL3632A	Receiver	(35.25 in)	
	BMEL4216A	Emitter	1057 mm	56		BMEL4232A	Emitter	1048 mm	112
	BMRL4216A	Receiver	(41.62 in)			BMRL4232A	Receiver	(41.25 in)	
BMEL4816A	Emitter	1210 mm	64	BMEL4832A	Emitter	1200 mm	128		
BMRL4816A	Receiver	(47.62 in)		BMRL4832A	Receiver	(47.25 in)			
BMEL6016A	Emitter	1514 mm	80	BMEL6032A	Emitter	1505 mm	160		
BMRL6016A	Receiver	(59.62 in)		BMRL6032A	Receiver	(59.25 in)			
BMEL7216A	Emitter	1819 mm	96	BMEL7232A	Emitter	1810 mm	192		
BMRL7216A	Receiver	(71.62 in)		BMRL7232A	Receiver	(71.25 in)			

Emitter/receiver range:

3/8" Beam Spacing

0.6 to 6.1 m (2 to 20 ft) for sensors < 4 feet
0.6 to 4.6 m (2 to 15 ft) for sensors > 4 feet

3/4" Beam Spacing

0.9 to 17 m (3 to 55 ft) for sensors < 4 feet
0.9 to 14 m (3 to 45 ft) for sensors > 4 feet

Note: Maximum range is specified at the point where 3x excess gain remains

Minimum object sensitivity:

3/8" Beam Spacing

19.1 mm (.75 in)
Interlaced Mode: 12.7 mm (.5 in)*

3/4" Beam Spacing

38.1 mm (1.5 in)
Interlaced Mode: 25.4 mm (1.0 in)*

**Note: Assumes sensing is in middle one-third of scanning range (see page 4)*

Sensor Scan time

55 microseconds per beam, plus 1 millisecond processing time per scan.

Power Requirements:

12V dc ±3% supplied by controller

Emitter

0.10 amps max. @ 12V dc

Receiver

3/8-inch beam spacing - 0.75 amps max. @ 12V dc
3/4-inch beam spacing - 0.50 amps max. @ 12V dc

Note: Maximum current is for a 6-foot sensor

Connections:

Sensors connect to controller using two 5-conductor quick disconnect cables (one for emitter and one for receiver), ordered separately. Use only Banner cables, which incorporate a "twisted pair" for noise immunity on RS485 data communication lines. Cables measure .33-inch (8.1 mm) in diameter, and are shielded and PVC-jacketed. Conductors are 20-gauge. Emitter and receiver cables may not exceed 250 feet, each. See bottom of page 7.

Status indicators:

Emitter

Red LED lights for proper operation.

Receiver

Green = sensors aligned (> 3x excess gain)
Yellow = marginal alignment (1x < excess gain < 3x)
Red = sensors misaligned or beam(s) blocked

Enclosures:

Size: see Figure, page 5

Emitter and receiver:

Material: Aluminum, with black anodized finish; acrylic lens cover

Rating: NEMA 4, 13 (IP 65)

Operating Temperature:

-20 to 70° C (-4 to 158° F); 95% max. rel. humidity (non-condensing)