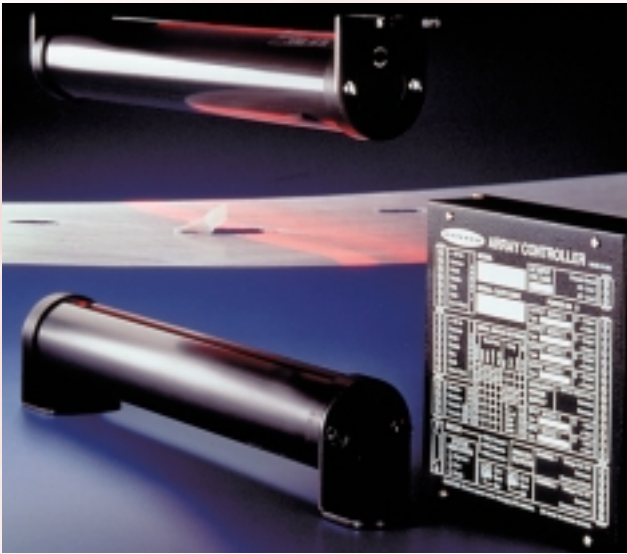


# BEAM-ARRAY™ Measuring Light Screens



## Rugged design for hostile environments.

BEAM-ARRAY™ measuring light screens are multiplexed emitter/receiver arrays which boast an extremely rugged design for use in hostile industrial environments, as found in lumber production and similar industries.

Features:

- Sensor separation up to 3 m (10')
- 6.4 mm (0.45") minimum object detection size
- Receivers offer three outputs:
  - Analog: 0 to +10V dc sourcing
  - "Trip": logic level output for "all light" condition
  - Serial data: serial RS232 data stream
- Optional BEAM-ARRAY controller may be added for setting several user-defined scanning response configurations and to provide output options to suit nearly any application (see selection chart)

## A choice of four array lengths.

Versatile BEAM-ARRAY sensors are available in four array lengths from 300 mm (1') to 1.2 m (4') to meet your application needs. They feature a beam spacing of 6.4 mm (0.25") to reliably detect objects as small as 11.4 mm (0.45") in cross section. BEAM-ARRAY sensors can "stand alone" to offer 0 to +10V dc analog or a logic-level "trip" output. BEAM-ARRAY sensor pairs can also be wired to available controllers, which provide discrete (switched) and analog outputs and respond to programmed scan analysis information.

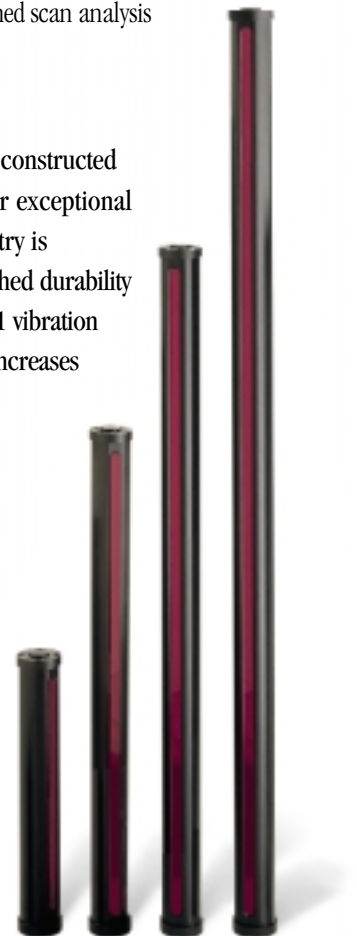
## Extra rugged, rock solid. UL 491.

BEAM-ARRAY emitters and receivers are constructed of 2¼" diameter tubular aluminum for exceptional durability. Emitter and receiver circuitry is encapsulated in solid epoxy for unmatched durability and vibration tolerance, meeting UL 491 vibration specifications. Factory burn-in further increases toughness and reliability.

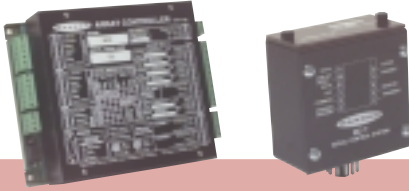


## Easier mounting and alignment.

Emitters and receivers are strong yet easy to handle. Simple right angle mounting brackets are easy to install and allow the tubes to be rotated easily during alignment. Anti-vibration mounts are also included. Because the BEAM-ARRAY has more power than competitive units, alignment is easier and is usually accomplished by simply mounting the emitter and receiver opposite each other, saving significant installation time.



# BEAM-ARRAY™ Model Selection



## BEAM-ARRAY Controller Models

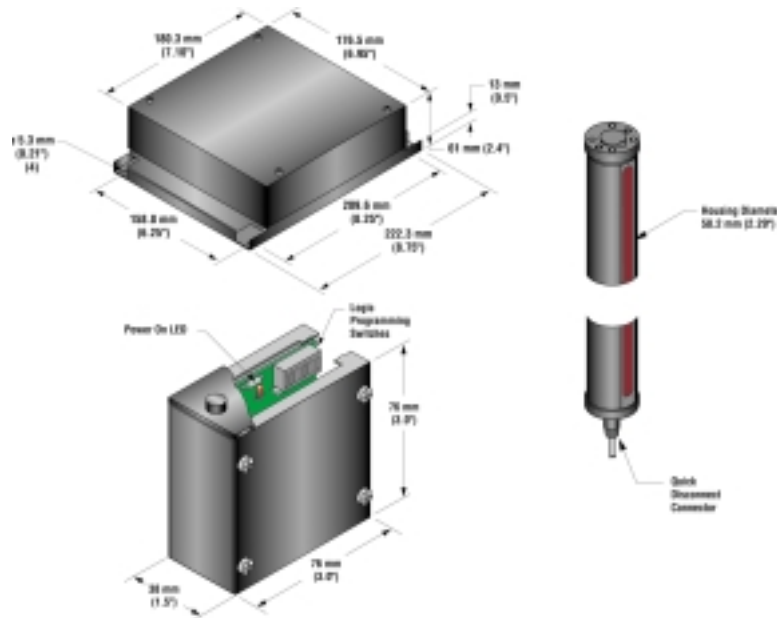
Models Data Sheet*	Supply Voltage	Inputs	Output	Dimensions (h x w x d)	Notes
<b>BC2A / 03575</b>	105 to 125V ac	2 sensor pairs 1 Gate** 1 Encoder**	4 Discrete** 2 Analog (voltage source or current sink)	61 x 222 x 177 mm (2.4 x 8.7 x 7.0")	**Gate and Encoder inputs and discrete outputs require optional I/O modules
<b>BC2B / 03575</b>	210 to 250V ac				
<b>BC1T / 03577</b>	15 to 20V dc	1 sensor pair 1 Gate	RS-232C serial	76 x 76 x 38 mm (3.0 x 3.0 x 1.5")	Wiring via 11-pin relay socket (model <b>RS-11</b> )

\* Download datasheet at [www.baneng.com](http://www.baneng.com)



## BEAM-ARRAY Measuring Light Screen Sensor Models

Models	Array Height	Total Beams	Minimum Object Size	Range	Cable	Supply Voltage	Output
<b>BME148E</b> <b>BME148R</b>	Emitter Receiver	305 mm (12.0")	11.4 mm (0.45")	3 m (10')	9-pin QD 5 m (15') cable (supplied)	15 to 20V dc	Analog 0 to 10V dc or Switched trip or Serial RS232  (Use of controller is optional)
<b>BME248E</b> <b>BME248R</b>	Emitter Receiver	610 mm (24.0")					
<b>BME348E</b> <b>BME348R</b>	Emitter Receiver	914 mm (36.0")					
<b>BME448E</b> <b>BME448R</b>	Emitter Receiver	1219 mm (48.0")					



A-GAGE™

# BEAM-ARRAY™ Model Selection



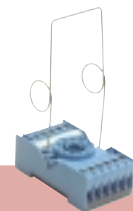
## BEAM-ARRAY Optional I/O Modules for BC2A and BC2B Controllers

Input Modules					
Models	Input Voltage	Input Current	Description		
BCM30T	4 to 28V dc	30 mA at 28V dc	Provides optically-isolated input for dc gate and encoder devices. Interfaces contact closures that switch any voltage between 4 and 28 volts dc. <b>Max. allowable leakage:</b> 2 mA at 1 volt <b>Input resistance:</b> 900 ohms		
BCM140A	90 to 140V ac	11 mA (rms)	Provides optically-isolated input for devices that switch 90 to 140 volts ac. <b>Allowable input current for output off-state:</b> 2 mA (rms) <b>Frequency range:</b> 50/60 Hz <b>Input impedance:</b> 20 kΩ min., 24 kΩ max.		
Output Modules					
Models	Load Voltage	Load Current	Surge Current	Off-state Leakage	Switching Response
BCD60T3	5 to 60V dc	0.02 to 3 amps	5 amps (1 sec)	1.0 mA max. at 60V	100 μs ON; 750 μs OFF
BCD280A3	24 to 280V ac	0.02 to 3 amps	80 amps (1 cycle)	5 mA (rms) at 240V ac (rms)	8.3 ms ON/OFF



## BEAM-ARRAY Power Supply

Model	Description	Notes
PSBA-120	<ul style="list-style-type: none"> <li>• Small light-weight switching type power supply</li> <li>• 85 to 130V ac input, 50/60 Hz, 21 watts</li> <li>• Regulated 15V dc output (±1V dc); 1 amp max.</li> <li>• Easily powers two BEAM-ARRAY systems</li> <li>• Safe, rugged, closed-frame construction; UL and CSA certified</li> </ul>	This power supply is not required when using controller models BC2A or BC2B.



## BEAM-ARRAY Socket

Model	Description
RS-11	<ul style="list-style-type: none"> <li>• 11-pole round-pin screw terminal relay socket which is used to make electrical connections to BC1T module</li> <li>• Provides in-line clamp screw terminals which will accept from one #24 AWG up to two #14 wires at each pin</li> <li>• May be mounted directly to a panel plate or via standard 35mm DIN-rail track</li> <li>• UL recognized and CSA approved</li> </ul>