Sensor Array Bar

Datasheet

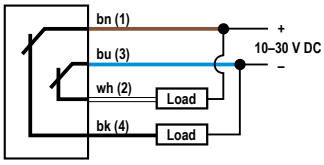
WARNING:
- **Do not use this device for personnel protection**
- Using this device for personnel protection could result in serious injury or death.
- This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A device failure or malfunction can cause either an energized (on) or de-energized (off) output condition.

Models

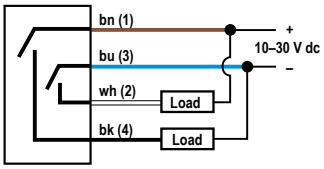
Model	Beams	Supply Current	Range	Sensing Mode	Output
SAB-497RB1LP6-Q5E	6	150 mA	1 m (39 in) when using a BRT-THG-2 reflector tape as a target 3 m (118 in) when using 5 side-by-side BRT-92×92C reflectors or 6 side-by-side BRT-77×77C reflectors as targets	Polarized Retroreflective, Visible Red 624 nm	Dark Operate, Bipolar
SAB-497AB1LP6-Q5E	6	150 mA			Light Operate, Bipolar
SAB-998RB1LP13-Q5E	13	150 mA			Dark Operate, Bipolar
SAB-484RB1LP10-Q5E	10	150 mA			Dark Operate, Bipolar
SAB-497RB1DS6-Q5E	6	150 mA	200 mm (8 in) when using a 90% white card as a target	Diffuse, Infrared, 940 nm	Dark Operate, Bipolar
SAB-497AB1DS6-Q5E	6	150 mA			Light Operate, Bipolar
SAB-998AB1DXL13-Q5E	13	325 mA	762 mm (30 in) when using a 90% white card as a target		Light Operate, Bipolar

Wiring Diagram

Dark Operate

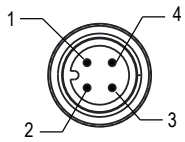


Light Operate



Key
1. Brown
2. White
3. Blue
4. Black

4-Pin Male Connector



Specifications

Supply Voltage and Current
10 V dc to 30 V dc (10% max. ripple)

Supply Protection Circuitry
Protected against reverse polarity and transient voltages

Output Configuration
Solid-state Bipolar: NPN and PNP (current sinking and sourcing)
Rating: 100 mA maximum each output at 25 °C
Off-state leakage current:
NPN: less than 200 µA at 30 V dc
PNP: less than 10 µA at 30 V dc
On-state saturation voltage:
NPN: less than 1.6 V at 100 mA
PNP: less than 3.0 V at 100 mA
Protected against false pulse on power-up and continuous overload or short circuit of outputs.

Sensing Beam
Polarized Retroreflective: Visible red, 624 nm
Diffuse: Infrared, 940 nm

Output Response
Polarized Retroreflective: 1.5 ms on/off
Diffuse: 3 ms on/off

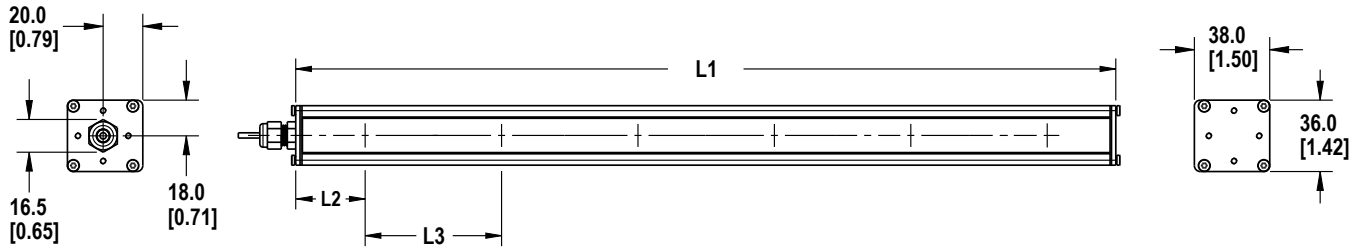
Operating Conditions
–20 °C to +55 °C (–4 °F to +131°F)
95% at +50 °C maximum relative humidity (non-condensing)

Environmental Rating
IEC IP50

Indicators
Green on: Power on
Amber on: Output on
Sensor Amber on: Light sensed

Connection
150 mm (6 in) PVC cable with a 4-pin M12/Euro-style male quick disconnect

Dimensions



Length L1	First Beam L2	Beam to Beam L3
496.3 mm (19.5 in)	42.0 mm (1.7 in)	82.6 mm (3.25 in)
998 mm (39.3 in)	42.0 mm (1.7 in)	72.6 mm (3.00 in)

Accessories

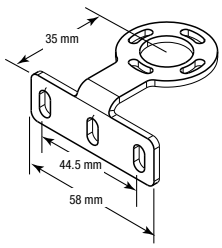
The SABRW is a replacement window for the diffuse model Sensor Array Bar. Replacement windows are available in the lengths listed below. The replacement window attaches using the pre-installed adhesive tape.

Replacement Window Model	Sensor Length	Window Material	Material Thickness
SABRW998P	998 mm	Polycarbonate [1]	1.5 mm (0.06 in)

Brackets

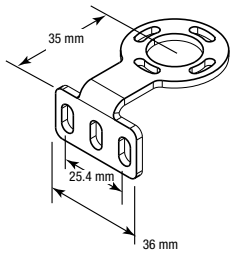
SMBSAB-IN

- Mounting bracket facing in
- 12 gauge steel



SMBSAB-OUT

- Mounting bracket facing out
- 12 gauge steel



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FCC Part 15 and CAN ICES-3 (B)/NMB-3(B)

This device complies with part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the manufacturer.

[1] For diffuse model Sensor Array Bars only