



38244_ins_Light_Level

Outdoor Light Level Sensor

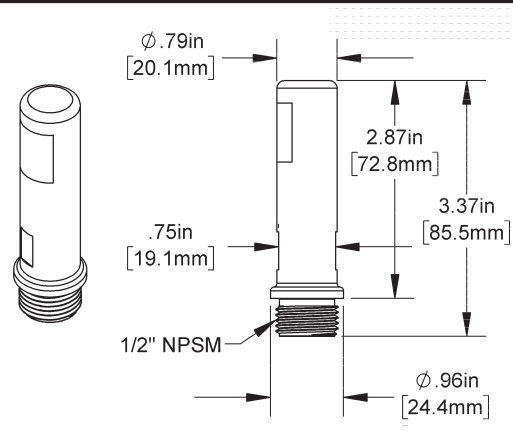
Installation and Operating Instructions

rev. 07/17/24

Overview & Identification

The BAPI Outdoor Light Level Sensor conserves energy by allowing lights to be shut off when the ambient light level exceeds a specified level. The sensor can also help ensure safety by allowing lights to be turned on when the ambient light falls below a specified level.

The unit comes in a rugged and watertight UV-inhibited polycarbonate enclosure with an IP66, NEMA 4 rating. The light level range is available as Foot Candle and Lux with 0 to 5V, 0 to 10V or 4 to 20 mA output. Custom ranges are also available.



Mounting

The BAPI Outdoor Light Level sensor should be mounted on top of a building or structure in direct sunlight with a North facing orientation. This probe is fitted with 1/2 inch NPSM threads on the base to easily screw into a conduit fitting. The installer should check the surrounding area in order to identify any obstacles (such as tree shade) which may inhibit the light sensor readings negatively and choose an appropriate location accordingly.

Mount the unit so that other equipment on the building cannot physically or mechanically obstruct it. Do not mount under awnings or other projections within 15 feet, to keep the sensor free from shade. If the unit cannot be roof mounted with an unobstructed view of the horizon, then do not mount near economizers, intake or exhaust fans, barometric dampers or other reflective surfaces.

To further minimize obstructions and shading, do not mount near building corners. Mount near the center of the building away from balconies and opening windows. Mount at least 24 inches from the wall.



Fig. 1:
Sensor mounted in a parking lot facing north.

Specifications

Power Supply:

12 to 28 VDC, 22mA max (for 0 to 5 VDC or 4 to 20 mA Outputs)
15 to 28 VDC, 6 mA max (for 0 to 10 VDC Output)

Factory Selectable Outputs:

0 to 5V, 0 to 10V and 4 to 20 mA

Accuracy: 10 Lux $\pm 10\%$ of reading.

Environmental Operation Range:

Temperature -40 to 185°F (-40 to 85°C)

Humidity: 0 to 100%, non-condensing

Enclosure Material: UV-Inhibited Polycarbonate

Material Rating: UL94V-0, UL746C

Enclosure Rating: IP66, NEMA 4

Specifications subject to change without notice.



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Termination

Output Signal	Red Wire	Black Wire	White or Green Wire
4 to 20 mA	12 to 28 VDC	4 to 20 mA Signal To Controller Analog Input	Not Used
0 to 5 VDC	12 to 28 VDC	To Controller Ground	White Wire to Controller Analog Input
0 to 10 VDC	15 to 28 VDC	To Controller Ground	Green Wire to Controller Analog Input

Note: BAPI recommends using the supplied Sealant Filled Connectors for field terminations.

Output and Range Information

PART # ON LABEL

DESCRIPTION

BA/LLV-05-FC[0 TO 875]0 to 5V Output, 0 to 875 Foot Candle Range
BA/LLV-10-FC[0 TO 875]0 to 10V Output, 0 to 875 Foot Candle Range
BA/LLV-20-FC[0 TO 875]4 to 20mA Output, 0 to 875 Foot Candle Range
BA/LLV-05-LX[0 TO 2000]0 to 5V Output, 0 to 2,000 Lux Range
BA/LLV-10-LX[0 TO 2000]0 to 10V Output, 0 to 2,000 Lux Range
BA/LLV-20-LX[0 TO 2000]4 to 20mA Output, 0 to 2,000 Lux Range

Maintenance

Verify that the sensor window is free of debris with regular inspections. Clean with a wet rag or glass cleaner to remove debris.

Diagnostics

Possible Problem

Unit not reporting light level correctly

Possible Solution

Verify proper termination and proper supply voltage as described in the "Termination" section

Make sure the sensor window is free of debris and pointing north

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