

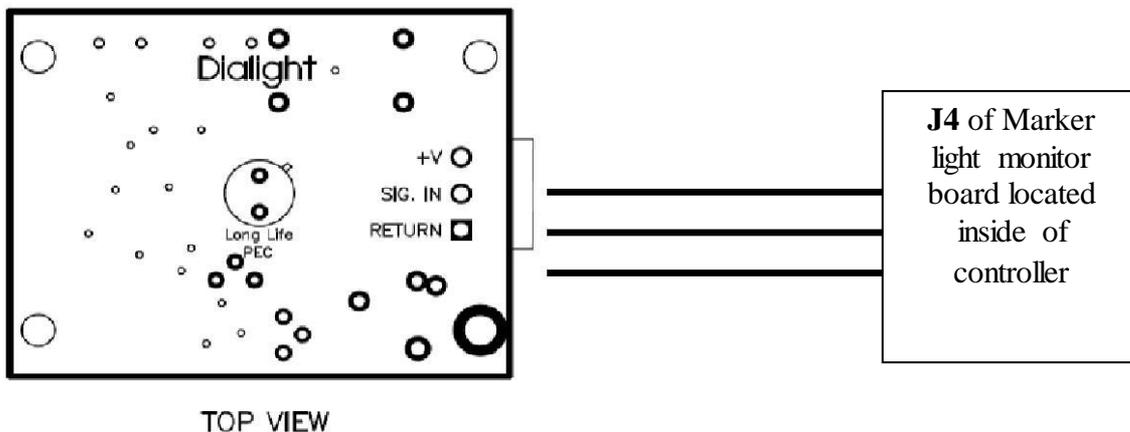
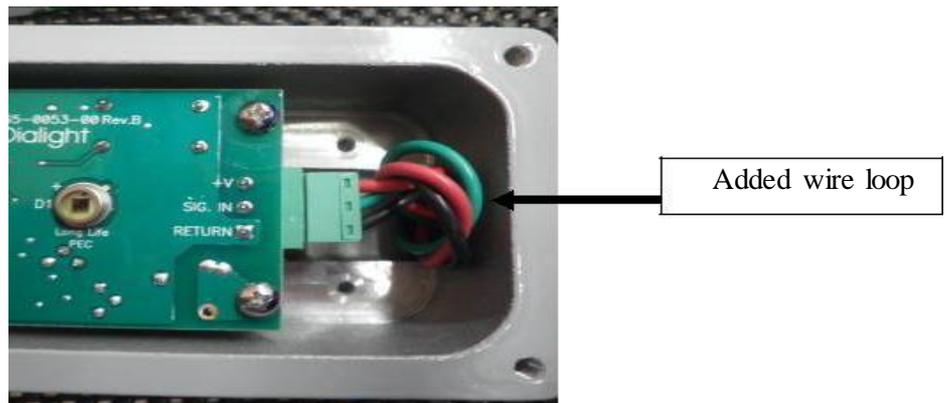
Overview:

The Dialight designed photocell is a long life photocell that requires no maintenance or adjustment during the life of the product or during the installation process. It has reverse polarity protection and additional circuitry for miss-wiring. The only connections required are wiring from the controller to the photocell.

NOTE: The photocell comes supplied with both ends threaded for 3/4 NPT Conduit, which is recommended for installing the photocell and GPS Antenna. If a cable without conduit is used in a hazardous location installation then the cable at minimum **MUST** have either a shield or braid that is properly connected to body of the photocell and to the enclosure of the controller it is being installed to. Failure to properly ground or use a cable without the shield or braid will void all warranties and the product could be subject to premature failures.

The Photocell requires 3 connections to be made to the inside of the photocell itself and 3 inside the controller

WARNING: While running the cable down the conduit it is recommended that a wire loop be added to keep the connector engaged while feeding the cable through the conduit.



Wire Connections from Photocell to Controller
+V = 12Vdc (supplied from controller)
SIG. IN = sense voltage relayed to controller
Return = ground



Mode Operation:

The Photocell will adjust the signal voltage according to the amount of light it senses. The tables below will show photocell voltages in all modes of operation.

Note: That it will typically take 45 seconds for a transition to occur at the controller once the transition voltage is obtained.

Table 1 – Photocell Transition Inducing Voltages:

SIGNAL. IN - RETURN VOLTS	RED Only Tower Config.	Dual Red/White Tower Config.	High Intensity Tower Config
Rises to 1.53V	Night to day		Twilight to Day
Falls to 1.53V	Day to Night		Day to Twilight
Rises to 1.48V		Night to Day	Night to Twilight
Falls to 1.44V		Day to Night	Twilight to Night

Table 2 - Typical voltage readings from Signal In to Return are as follows:

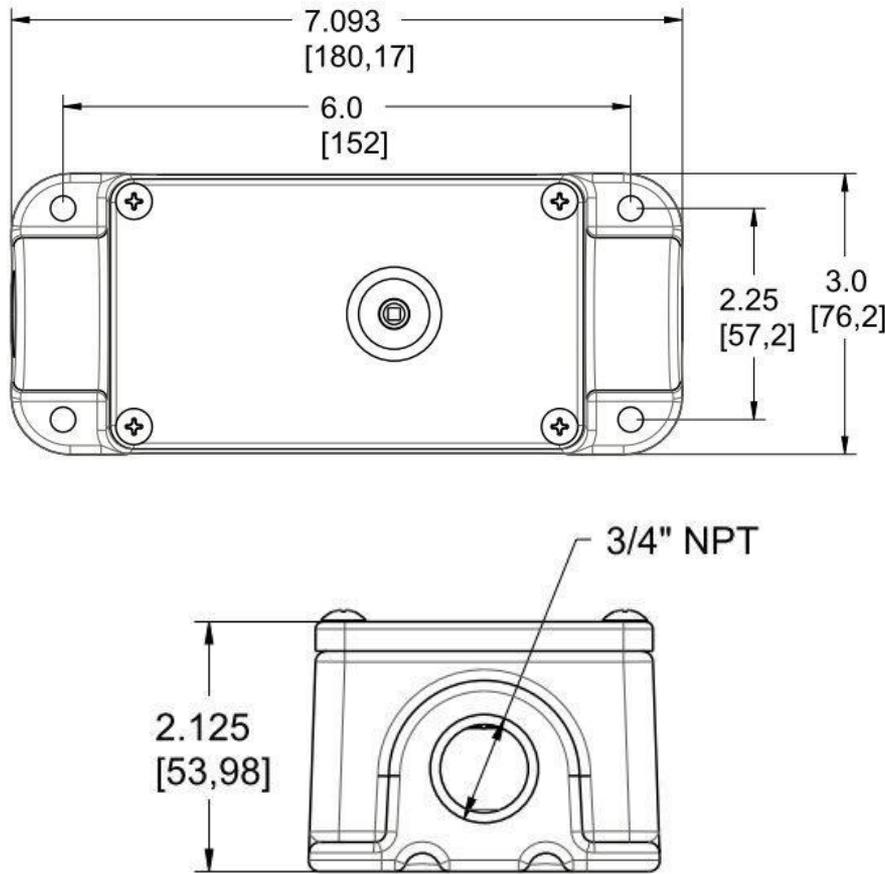
Daytime	Nighttime
3.0 ± 1 Volts	1.4 ± 0.5 Volts

Table 3 - Typical voltage readings from V+ to Return are as follows:

Daytime	Nighttime
9.3 ± 0.5 Volts	10.4 ± 0.5 Volts



Mechanical Dimensions:



Photocell Troubleshooting:

To resolve most problems, ensure the photocell is facing North, and is free of any obstructions. If problems persist, see the troubleshooting tables below:

Table 4 – Photocell alarms present on Controller

Problem	Explanation of Problem	Test/Action	Solution
AL4 on controller and/or AL5 on the controller.	AL4 indicates that the photocell is not being detected by the controller. AL5 indicates that the controller has not detected a transition change in over 16 hours.	Ensure that Photocell connections are present and wire connection positions are consistent at J4 of the side marker board and at the photocell. Using a DC voltage meter, perform measurements and compare to specified voltages as listed in Mode Operation section.	Correct any wiring issues found. If voltages measured are not consistent with specified voltages at Mode Operation section, replace photocell.



REVISION HISTORY

<u>REV</u>	<u>ECO No.</u>	<u>DRN</u>	<u>CKD</u>	<u>APP</u>	<u>QA</u>	<u>CM</u>	<u>DATE</u>
A	19448	BAM	SA	EN	CR	JN	7-10-14
B	64576	TLD	AV	AR	YS	JN	12-11-19

