## Description

The Crestron® GLS-LCL Closed-Loop Photosensor responds to ambient light levels within an occupied space and provides an analog voltage proportionate to the ambient light level.

The ambient light measured is the light from any light source in the visible spectrum. The sensor does not distinguish between natural sunlight and artificial light. It contains a sensor, which is color and spatially corrected to provide a true representation of changes in lighting levels that the human eye perceives.

The sensor measures the ambient light that actually falls upon it within a 60º cone extending downward from the sensor (refer to the "Field of View" illustration). This is the light that is reflected to the ceiling from the walls, floor, and furniture.

Field of View

60°
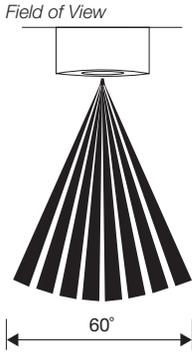
GLS-LCL Specifications

SPECIFICATION	DETAILS
Power Requirements	
Current Consumption	4 mA at 24 Vdc
Cresnet® Power Usage	<1 W*
Output	0–10 Vdc (0–70 fc)
Recommended Mounting Location	Directly above work space
Field of View Coverage	60° Cone
Environmental	
Temperature	32° to 131 °F (0° to 55 °C)
Humidity	20% to 90% RH (noncondensing)

* Power may be taken from the Cresnet® bus regardless of interface method.

Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.

Mounting Location

NOTE: Mount the sensor on a vibration-free surface.

NOTE: The recommended mounting location is above a work space, such as a desk, conference table, or computer terminal.

NOTE: If flush mounting the sensor into a ceiling for concealed wiring, make sure there is access to the space above the ceiling and a hole in the ceiling. Refer to the "Installation" section.

Take care when choosing the mounting location because—depending on the location of windows, lighting fixtures, wall colors, and etc.—the ambient light level will fluctuate in different areas of the room. The ambient light at the doorway can be much less than that at the windows, corners of the room, or especially on the ceiling. Therefore, it is important to measure the ambient light level over the workplace.

At the proposed location of the sensor and before installation, measure the daylight levels on a sunny day.

1. Turn off the lights.
2. Orient a light meter in the same direction the sensor will view.
3. Verify that the light meter reads at least 35 fc for the daylight levels. If the light levels are less than 35 fc, select another location or reorient the sensor.

Wiring

NOTE: Observe the following points:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician should install this product.
- Use CRESNET-P or CRESNET-NP wire only.

Make connections as described. Refer to the "Wiring Diagrams" section when necessary.

1. Prepare the sensor lead wires by removing 3/4 in (19 mm) of insulation from each lead to expose bare copper wire. The wire ends must be straight.
2. Determine the length of the low-voltage wires needed to connect power to the sensor. Use wires suitable for low-voltage wiring according to local electrical codes.
3. Route the low-voltage wires from the GLS-LCL location(s) to the interface device location(s). Refer to the "Wiring Diagrams" section.
4. Prepare the low-voltage wires by removing 3/4 in (19 mm) of insulation from each lead to expose bare copper wire. The wire ends must be straight.
5. Connect the low-voltage wires as shown in "Wiring Diagrams" (black to ground, red to power, and orange to the interface device).
6. Twist the strands of each separate wire connection tightly and push firmly into the appropriate wire connector.
7. Screw on the connector clockwise, ensuring no bare conductor shows below the wire connectors.
8. Secure each connector with electrical tape.

Installation

Fasten the GLS-LCL onto the ceiling surface or flush mount it into the ceiling.

Fastened onto the ceiling surface

NOTE: If wiring is to be run exposed along the ceiling, carefully trim the plastic from the indentation in the side of the outer shell and lay the sensor wires through it before tightening the shell onto the ceiling.

1. Attach the outer shell to the ceiling at the desired location. Use two #4 screws and appropriate anchor hardware where necessary.
2. Make all connections as described in the "Wiring" section.
3. Carefully feed the wires into the hole.
4. Press the sensor body into the outer shell until the rim is flush with the shell.

Flush mounted into the ceiling

NOTE: Do not use the outer shell of the sensor.

1. Cut a 2 in (51 mm) diameter hole through the ceiling.
2. Make all connections as described in the "Wiring" section.
3. Carefully feed the wires back through the hole.
4. Press the sensor into the hole until the rim is flush with the ceiling.

Special Programming

To ensure correct processing of the sensor's output from all interface devices (other than the GLS-SIM), use the SIMPL program for the control processor to disable the pull-up resistor built in to the Versiport input connector. This is accomplished by setting the "pu-disable" digital input signal to a "1."

Typical Application Diagrams

Integrating the GLS-LCL into a Cresnet System via the GLS-SIM

GLS-LCL

| Crestron 2-series control processor | Cresnet | GLS-SIM |
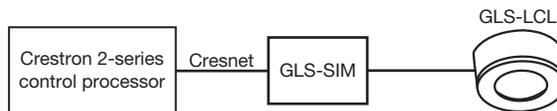
Integrating the GLS-LCL into a Cresnet System via the DIN-IO8

GLS-LCL

| Crestron 2-series control processor | Cresnet | DIN-IO8 |
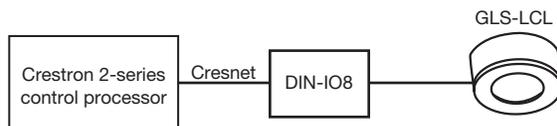
NOTE: The DIN-IO8 can be substituted with any Crestron product with Versiports.

Wiring Diagrams

Connecting Sensors to the GLS-SIM

All wires from the sensor to the GLS-SIM must be 24 AWG minimum.
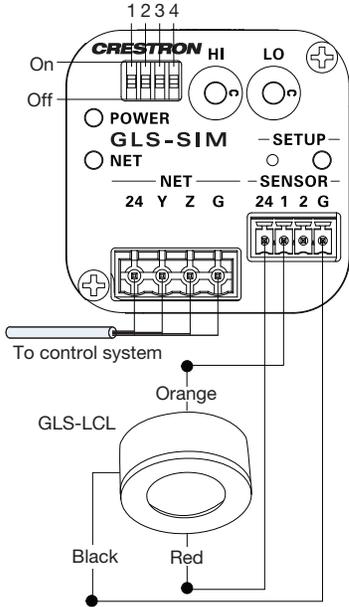
DIP Switch Settings

INPUT CHANNEL	DIP SWITCH	SETTING
1	1	ON
	2	OFF*
2	3	ON
	4	OFF*

* Setting switches 2 or 4 to ON inverts the polarity, causing the control signal to read "100%" at 0 V and "0%" at 10 V.

Connecting Sensors to the DIN-IO8
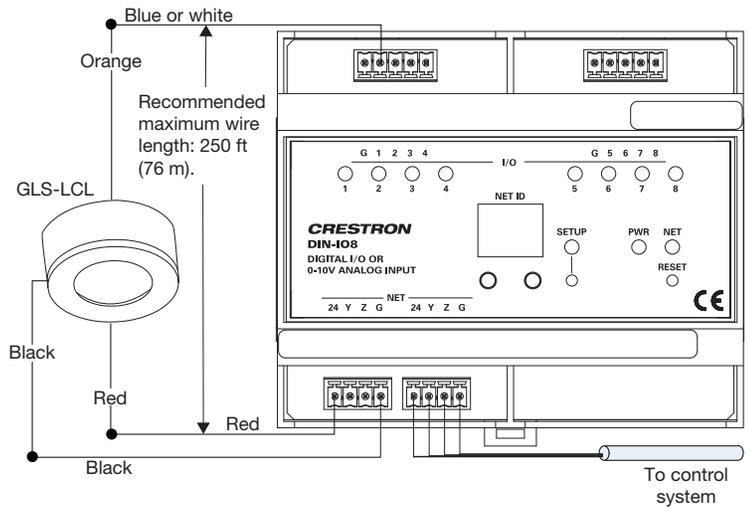
NOTE: The same Crestron power supply MUST be used to power both the sensors and the interface device (e.g., DIN-IO8). Otherwise, there is a risk of damage to the interface device.

NOTE: The DIN-IO8 can be substituted with any Crestron product with Versiports.

Troubleshooting

The following table provides corrective actions for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The lights do not respond to a change in ambient light level.	Wiring between the sensor and the GLS-SIM (or other compatible interface) is incorrect.	Refer to the "Wiring Diagrams" section.
	The sensor location is improper.	Verify that the sensor is located such that it can detect the desired workspace light levels.
	The control system programming is incorrect.	Check the logic in the control processor, or contact Crestron for assistance.
	The GLS-SIM DIP switch settings are incorrect.	Refer to the "Wiring Diagrams" section.