



Description

The GLS-SIM is a compact interface device designed to allow Crestron Green Light® sensors to be connected directly to a Cresnet® control network. Cresnet is the communications backbone for Crestron® sensors, dimmers, keypads, touchpanels, shade controllers, thermostats, and many other devices. This flexible 4-wire bus provides data communications and 24 Vdc power for all of the devices on the Cresnet network. The GLS-SIM installs easily at the sensor location, mounting inside the electrical box or exposed above the ceiling. Wiring connections to the network and sensor are facilitated using miniature screw terminals.

GLS-SIM Specifications

SPECIFICATION	DETAILS
Power Requirements	
Cresnet Power Usage	1 W (0.04 A @ 24 Vdc) (Does not include power draw of attached devices.)
Environmental	
Temperature	32° to 104 °F (0° to 40 °C)
Humidity	0% to 95% RH (noncondensing)
Dimensions	
Height	2.00 in (51 mm)
Width	2.00 in (51 mm)
Depth	0.86 in (22 mm)
Weight	2 oz (57 g)

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.



Identity Code

The Net ID of the GLS-SIM has been factory set to 92 (with a mechanical setting of 00).

NOTE: The ID CODE switches on the GLS-SIM are factory set to 00. This allows changing the Net ID with Crestron Toolbox™ software (optional).

The Net ID of the GLS-SIM can be set using one of two methods:

- Manual Setting: Set the two ID CODE switches (from 03 to FE) to match a Net ID in the SIMPL Windows program.
- Touch-settable ID: Set the two ID CODE switches to 00 and set the Net ID using Crestron Toolbox. This is the factory setting. For more details, refer to the Crestron Toolbox help file.

ID CODE Switches



When setting the Net ID, consider the following:

- The Net ID of each unit must match an ID code specified in the control system program.
- Each network device must have a unique Net ID.

Installation

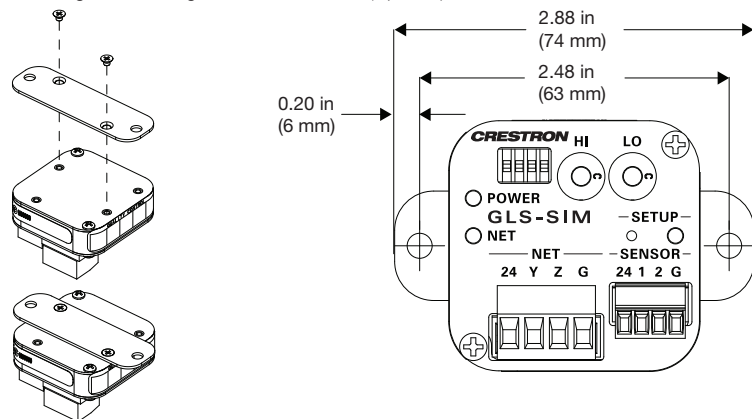
NOTE: Observe the following points.

- Install and use this product in accordance with appropriate electrical codes and regulations.
- If unsure about any part of these instructions, consult a qualified electrician.
- Mount the sensor on a vibration-free surface.
- All sensors must be mounted at least 6 feet (1.8 m) away from air vents.
- Do not mount sensors closer than 10 feet (3 m) from each other.
- Do not touch the inner surface of the lens. Clean outer surface with a damp cloth only.

NOTE: Before using the GLS-SIM, ensure the device is using the latest firmware. Check for the latest firmware for the GLS-SIM at www.crestron.com/firmware. Load firmware onto the device using Crestron Toolbox software.

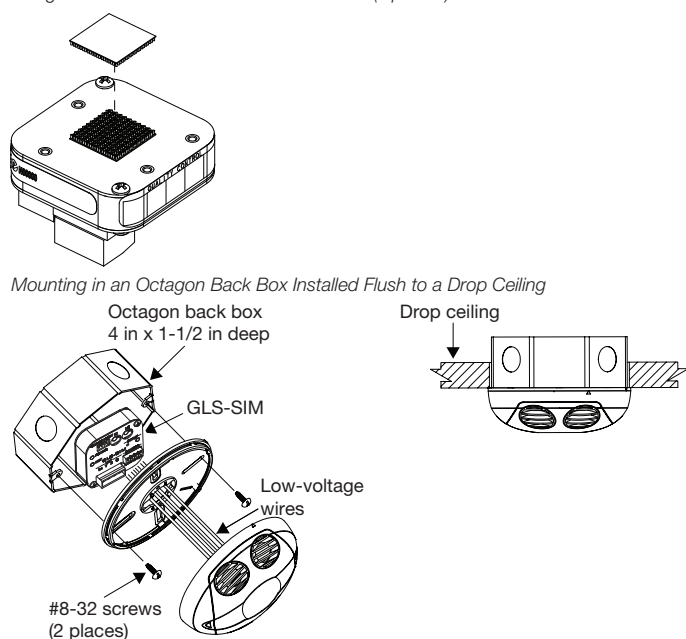
The GLS-SIM can be installed inside a standard 4-inch electrical box or mounted above the ceiling using the included mounting bracket or the included dual-lock fastener. Use a #1 Phillips screwdriver and the included screws to attach the included mounting bracket.

Attaching the Mounting Bracket to GLS-SIM (Optional)



NOTE: Screws used for securing the GLS-SIM to a surface are not included.

Using a Dual-Lock Fastener on the GLS-SIM (Optional)



Hardware Hookup

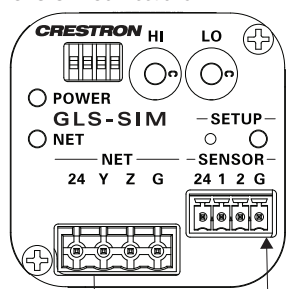
Make the necessary connections as called out in the illustration. Apply power after all connections have been made.

CAUTION: Insufficient power can lead to unpredictable results or damage to the equipment. To help calculate how much power is needed for the system, use the Crestron Power Calculator at www.crestron.com/calculators.

NOTE: Use Crestron Certified Wire.

NOTE: When making connections, strip the ends of the wires approximately 1/2 in (13 mm). Use care to avoid nicking the conductors. Twist together the ends of the wires that share a connection.

GLS-SIM Connections



NET: To control system and other Cresnet devices

SENSOR: Sends power to and receives input from sensor(s)

NOTE: The SENSOR port is a 4-pin 3.5 mm detachable terminal block. The sensor input is comprised of 24 Vdc power output and two Versiports (referenced to GND), 5 V and 2k ohms pull-up resistor per pin.

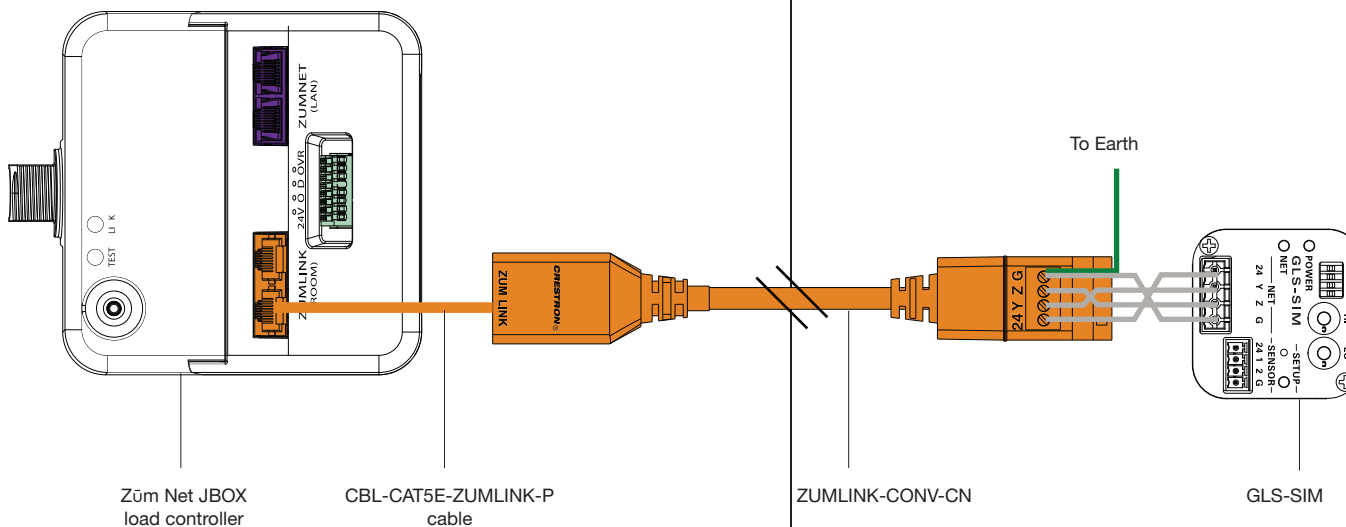
NOTE: Depending on the available Cresnet power, the GLS-SIM can pass a maximum of 1 A @ 24 Vdc to the devices or sensors that are connected to the SENSOR port.

Other Connections

The GLS-SIM can be configured as a digital input, an analog input, or a digital output. This setting is determined by the program running in the attached control processor. Other settings are controlled by the DIP switches. Refer to the "Configuration" section for diagrams that show how the GLS-SIM should be wired for each application.

CAUTION: Incorrect wiring may damage the GLS-SIM.

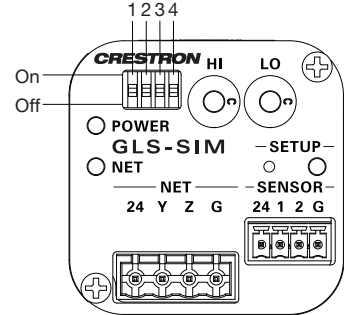
When utilized with Züm® wired lighting control applications and the Züm Link communication bus, match the 24, Y, Z, G connections from the ZUMLINK-CONV-CN to the GLS-SIM. The ZUMLINK-CONV-CN G output must be grounded to Earth as well as to the GLS-SIM G input.



Configuration

Use the DIP switches to configure the GLS-SIM to work with various device types, as described in the following illustrations and associated tables.

DIP Switches on GLS-SIM



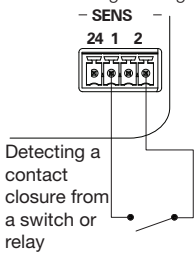
INPUT CHANNEL	DIP SWITCH	SETTING
1	1	OFF: Enables pull-up resistor ON: Disables pull-up resistor
	2	OFF: Normal polarity ON: Inverted polarity
2	3	OFF: Enables pull-up resistor ON: Disables pull-up resistor
	4	OFF: Normal polarity ON: Inverted polarity

Sensor Digital Input

The GLS-SIM can be configured for sensors that use relay contacts (normally open or normally closed) or voltage level (active high or active low). The digital input is rated for 0–24 Vdc, the input impedance is 18.5k ohms, and the logic threshold is 1.25 Vdc.

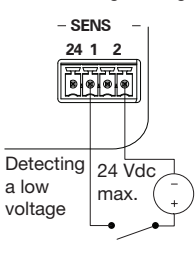
Refer to the tables and wiring diagrams to configure the GLS-SIM.

Switch Settings for Digital Input (Dry Contact Closure)



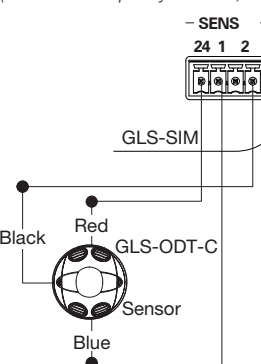
INPUT CHANNEL	DIP SWITCH	SETTING
1	1	OFF
	2	OFF: Normally open ON: Normally closed
2	3	OFF
	4	OFF: Normally open ON: Normally closed

Switch Settings for Digital Input (Voltage Detection)



INPUT CHANNEL	DIP SWITCH	SETTING
1	1	ON
	2	OFF: Active low ON: Active high
2	3	ON
	4	OFF: Active low ON: Active high

Switch Settings for Digital Input (Crestron occupancy sensors, e.g., GLS-ODT-C500/1000/2000)

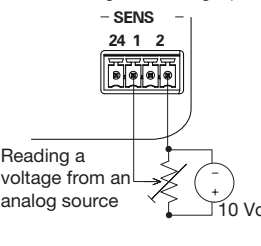


INPUT CHANNEL	DIP SWITCH	SETTING
1	1	ON
	2	ON
2	3	ON
	4	ON

Analog Input

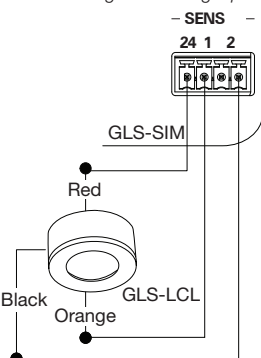
When using the GLS-SIM to read an analog input, set the DIP switches as shown in the tables and wiring diagrams to configure the GLS-SIM. The analog input is rated for 0–10 Vdc, protected to a maximum of 24 Vdc, and the input impedance is 18.5k ohms.

Switch Settings for Analog Input (Read Voltage from Analog Source)



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

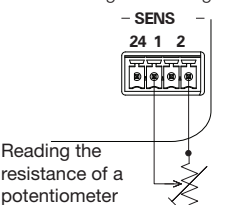
Switch Settings for Analog Input (Crestron Photocells, e.g., GLS-LCL and GLS-LOL)



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.

Switch Settings for Analog Input (Read Resistance of Potentiometer)



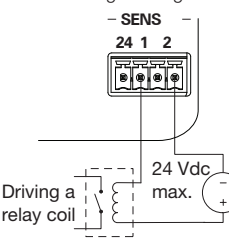
INPUT CHANNEL	DIP SWITCH	SETTING
1	1	OFF
	2	OFF*
2	3	OFF
	4	OFF*

* 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.

Digital Output

When using the GLS-SIM as a digital output, set the DIP switches as shown in the table and wiring diagram. The digital output is a 250mA sink from a maximum of 24 Vdc, and catch diodes are used with "real world" loads.

Switch Settings for Digital Output (Drive a Relay Coil)



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.

Troubleshooting

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

NOTE: When troubleshooting, keep in mind that operation is ultimately determined by the control system program.

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The device does not turn on (PWR LED is not lit).	The device is not receiving power from a Crestron power source.	Use the provided Crestron power source. Verify that the connections are correct.
	The device is not receiving sufficient power.	Use the Crestron Power Calculator to help calculate how much power is needed for the system.
	There is electrostatic discharge due to improper grounding.	Check that all ground connections have been made properly.
The device does not function as expected.	The unit is not configured correctly.	Verify that the DIP switch settings and sensor wiring are correct.
	The programming in the control system is incorrect.	Check the control system logic, or contact Crestron for assistance.

This product is listed to applicable UL® Standards and requirements by Underwriters Laboratories Inc.

Ce produit est homologué selon les normes et les exigences UL applicables par Underwriters Laboratories Inc.



Suitable for use in environmental air space in accordance with Section 300-22(c) of the National Electrical Code (US, NFPA-70), and Sections 2-128, 12-010(3), and 12-100 of the Canadian Electrical Code, Part 1, CSA C22.1.

As of the date of manufacture, the device has been tested and found to comply with specifications for CE marking.



Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following 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.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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. 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 dealer or an experienced radio/TV technician for help.

The product warranty can be found at www.crestron.com/warranty.

The specific patents that cover Crestron products are listed at patents.crestron.com.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

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Specifications subject to change without notice.