GRX-CI-RS232 Control Interface

Description

- Integrates a *GRAFIK Eye* Lighting & Shade Control System with a touchscreen, PC, or other digital equipment that supports RS232 communication.

- Provides monitoring commands that allow a touchscreen or PC to query *GRAFIK Eye* Control Units to:
  - Determine which scene is selected.
  - Read individual zone's intensity.
  - Keep track of buttons pressed.

- Provides control commands that allow a touchscreen or PC to operate *GRAFIK Eye* Control Units to:
  - Select or sequence lighting scenes.
  - Raise or Lower one or more zones.
  - Lock *GRAFIK Eye* Control Units.
  - Set Zone Intensity on *GRAFIK Eye* 3500 or 4500 Series Control Units, which allows users to set intensities on zones of light and to raise and lower an individual shade zone (Sivoia QEDTM shades also allow the selection of individual shade zone pre-sets).

- Functionality is set using DIP switches.

- May be programmed to control any combination of one to eight *GRAFIK Eye* 3000 or 4000 Series Control Units.

Job Name:	Model Numbers:
Job Number:	

Specifications

Power

Low-voltage PELV (Class 2: USA).
Operating Voltage: 12-24 V⎓.

Uses RS232 Command Set for *Grafik Eye* 3000/4000

Monitoring: Scene selection, scene status updates, read zone intensity.
Control: Scene selection, scene lockout, sequencing, zone lockout, zone raise/lower.
Additional control with *GRAFIK Eye* 3500 or 4500 Series Control Units: Set zone intensity.

System Communications and Capacity

• Low-voltage PELV (Class 2: USA) wiring connects the Control Interface to *GRAFIK Eye* Control Units.
• Standard 9-pin serial connector plugs into RS232 equipment and the GRX-CI-RS232.
• Multiple Control Interfaces may be used in a single system.
• 50 feet (15 m) maximum from GRX-CI-RS232 Interface to PC or other RS232 source.

Environment

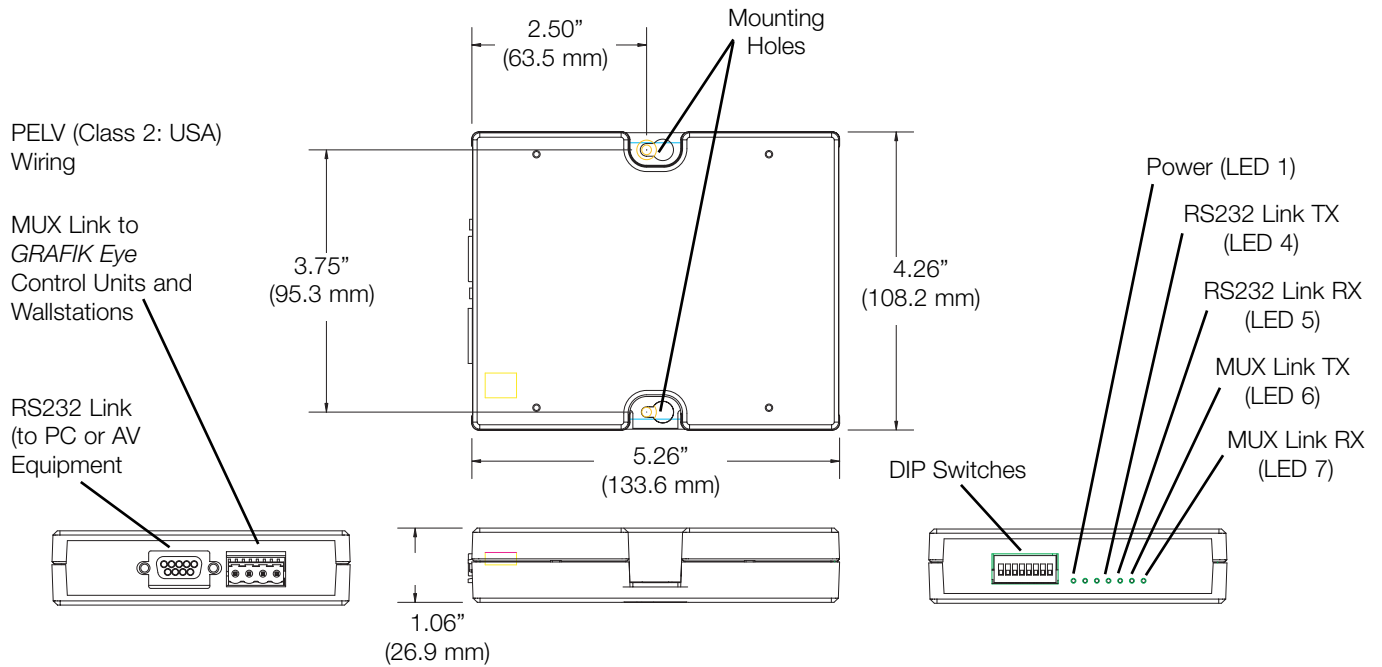32-122°F (0-50°C). Relative humidity less than 90% non-condensing.

Functions

DIP Switch	Function	When set to ON	When set to OFF
1	Zone Lock Retain	If power goes out, locked zones stay locked when power returns.	Power cycling unlocks locked zones.
2	Scene Lock Retain	If power goes out, locked scenes stay locked when power returns.	Power cycling unlocks locked scenes.
3	Sequence Retain	If power goes out, sequencing resumes when power returns.	Power cycling stops sequencing.
4	Sequencing Scene Range	Sequencing loops through scenes 5 to 16.	Sequencing loops through scenes 1 to 4.
5	Multiple Addresses[1]	DIP Switches 1-4 used to set address, not function.	DIP Switches 1-4 operate as specified above.
6	Button Feedback	Interface reports Control Unit and Wallstation button presses.	No reporting of button presses.
7	Scene Status	Interface reports scene changes.	No reporting of scene changes.
8	Not Used		

[1] Only for projects with more than one Control Interface that use RS232 or Ethernet communications (GRX-PRG or GRX-CI-RS232 or GRX-CI-NWK-E). One Interface in the project automatically assumes address 16 – DIP switches do not need to be set to give it an address. (If a GRX-PRG is present, it must assume address 16.) Every other RS232 or Ethernet Interface in the project must have a unique address: set DIP switch 5 to on and then use DIP switches 1-4 to assign a unique address.
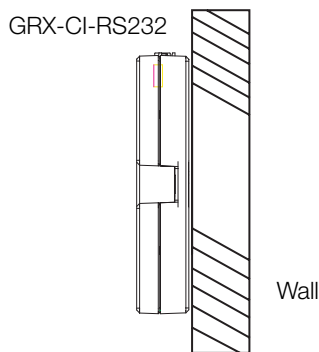
Job Name:	Model Numbers:
Job Number:	

Dimensions

2.50"
(63.5 mm)

Mounting Holes

PELV (Class 2: USA) Wiring

MUX Link to *GRAFIK Eye* Control Units and Wallstations

3.75"
(95.3 mm)

4.26"
(108.2 mm)

Power (LED 1)

RS232 Link TX (LED 4)

RS232 Link RX (LED 5)

MUX Link TX (LED 6)

MUX Link RX (LED 7)

RS232 Link (to PC or AV Equipment

5.26"
(133.6 mm)

DIP Switches

1.06"
(26.9 mm)

Mounting

• Mounts directly to the wall.
• 19" AV rack mountable with 1U rack shelf from Lutron Model # LUT-19AV-1U.
• For conduit wiring options, contact Lutron customer service.

GRX-CI-RS232

Wall

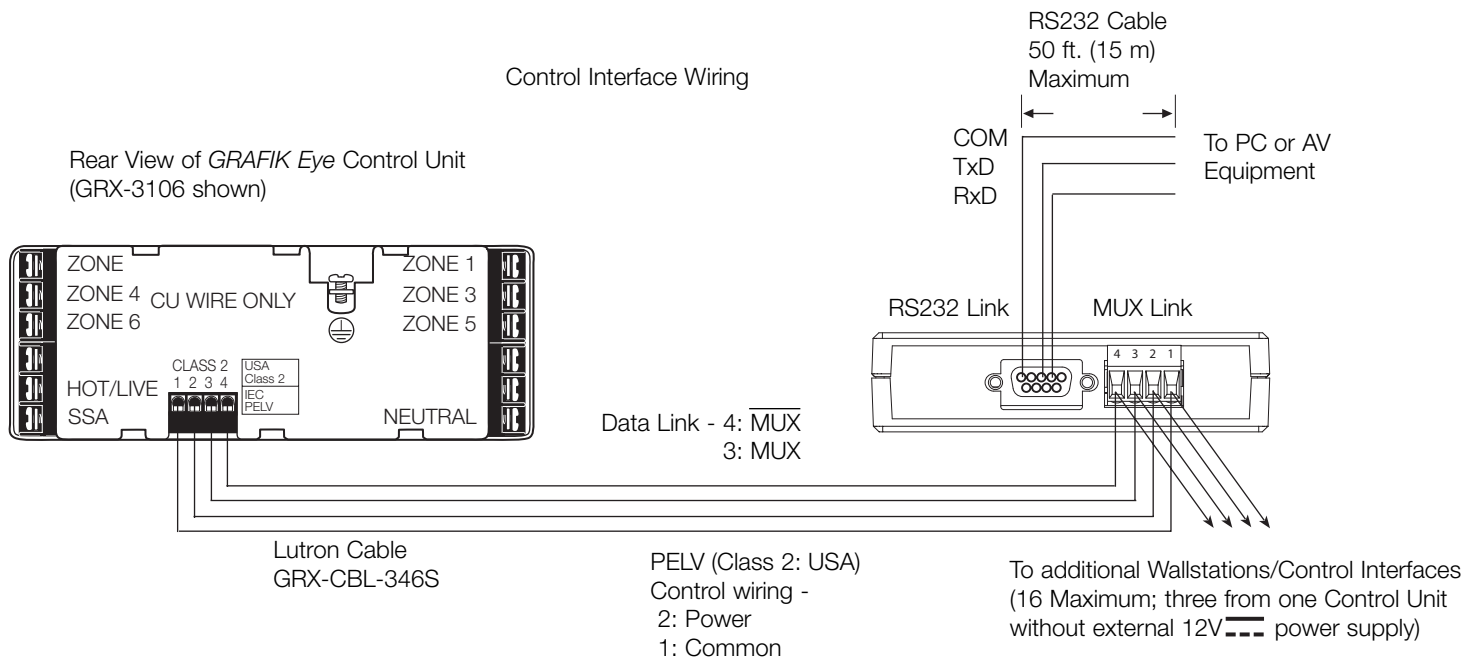| Job Name:	Model Numbers:
Job Number:	

RS232 Link Wiring

- 9-pin to 9-pin serial cable provided.
- Standard 9-pin serial connector plugs into RS232 equipment, and to GRX-CI-RS232.
- Must be 50 feet (15 m) or less.

RS232 Signals

| Signals	Pin on 9-pin Cable
Com	5
TxD	3
RxD	2

Low-Voltage PELV (Class 2: USA) Wiring

- Make daisy-chain connections to the low-voltage PELV (Class 2: USA) MUX Link terminals on the back of the Control Interface.
- Do not use T-taps. Run all wires in and out of terminal block.
- Each terminal accepts up to two #18 AWG (1.0mm^2) wires.
- LED 1 lights (power) and LED 7 blinks rapidly (MUX Link RX) when the PELV (Class 2: USA) MUX Link is installed correctly and *GRAFIK Eye* Control Unit(s) are addressed.

Control Interface Wiring

RS232 Cable
50 ft. (15 m)
Maximum

Rear View of *GRAFIK Eye* Control Unit
(GRX-3106 shown)

COM
TxD
RxD

To PC or AV
Equipment

RS232 Link   MUX Link

Data Link - 4: $\overline{\text{MUX}}$
          3: MUX

Lutron Cable
GRX-CBL-346S

PELV (Class 2: USA)
Control wiring -
2: Power
1: Common

To additional Wallstations/Control Interfaces
(16 Maximum; three from one Control Unit
without external 12V power supply)

ZONE, ZONE 4, CU WIRE ONLY, ZONE 6, ZONE 1, ZONE 3, ZONE 5, HOT/LIVE, CLASS 2, USA Class 2, IEC PELV, SSA, NEUTRAL

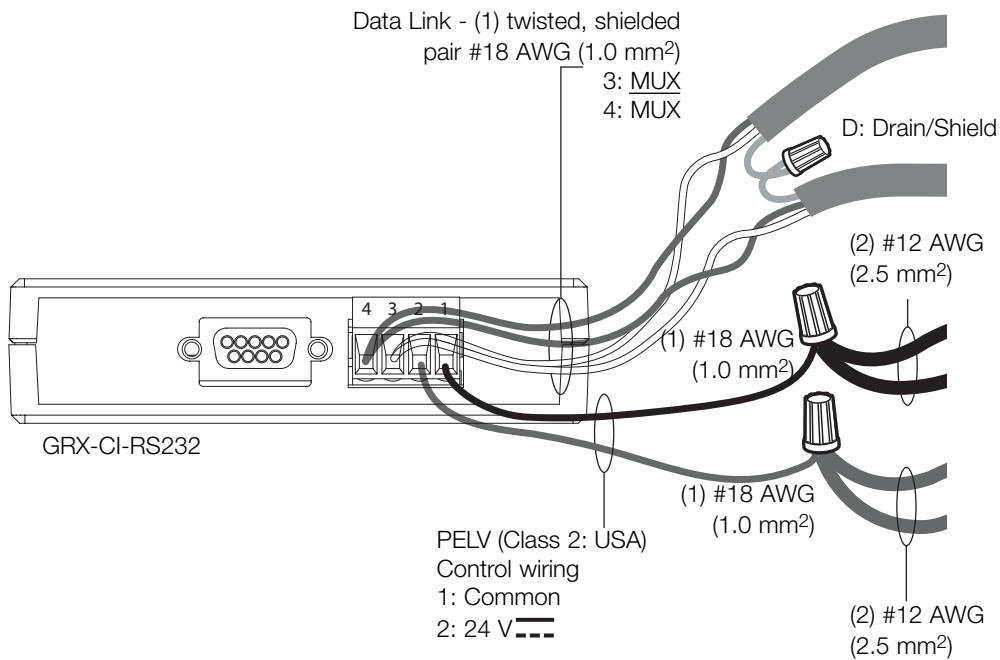| Job Name:	Model Numbers:
Job Number:	

PELV (Class 2: USA) Terminal Connections

When used with GRX-3000 Control Units

- Two #18 AWG (1.0 mm^2) conductors for Common (terminal 1) and 12V⎓ (terminal 2). Ensure that the terminal 2 connection is wired correctly. Refer to GRX-3000 Specification Submittal for more details.
- One shielded, twisted pair #18 AWG (1.0mm^2) for data link (terminals 3 and 4).

When used with GRX-4000 Control Units (See Wiring Diagram Below)

- Two #12 AWG (2.5 mm^2) conductors for Common (terminal 1) and 24V⎓ (terminal 2). These will not fit in terminals. Connect as shown.
- One shielded, twisted pair #18 AWG (1.0 mm^2) for data link (terminals 3 and 4).
- Connect Drain/Shield as shown. Do not connect to Ground (Earth) or Wallstation/Control Interfaces. Connect the bare drain wires and cut off the outside shield.

Data Link - (1) twisted, shielded pair #18 AWG (1.0 mm^2)
3: MUX
4: MUX

D: Drain/Shield

(2) #12 AWG (2.5 mm^2)

(1) #18 AWG (1.0 mm^2)

GRX-CI-RS232

(1) #18 AWG (1.0 mm^2)

PELV (Class 2: USA) Control wiring
1: Common
2: 24 V⎓

(2) #12 AWG (2.5 mm^2)

Job Name:	Model Numbers:
Job Number:	