GRX-CI-NWK-E Control Interface

Description

- Integrates a *GRAFIK Eye* Lighting & Shade Control System with a touchscreen, PC, or other digital equipment that supports TCP/IP communication over Ethernet.

- TCP/IP provides fast reliable two-way 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 QED™ shades also allow the selection of individual shade zone presets).

- 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 CAT5 cable, 100 m (328 feet) maximum, connects GRX-CI-NWK-E Interface to PC or other Ethernet source.
• Supports MDI/MDIX auto-crossover (no crossover cable needed).
• Auto-negotiation of 10 or 100Mbps speed and full- or half-duplex operation.
• Multiple Control Interfaces may be used in a single system.

Environment

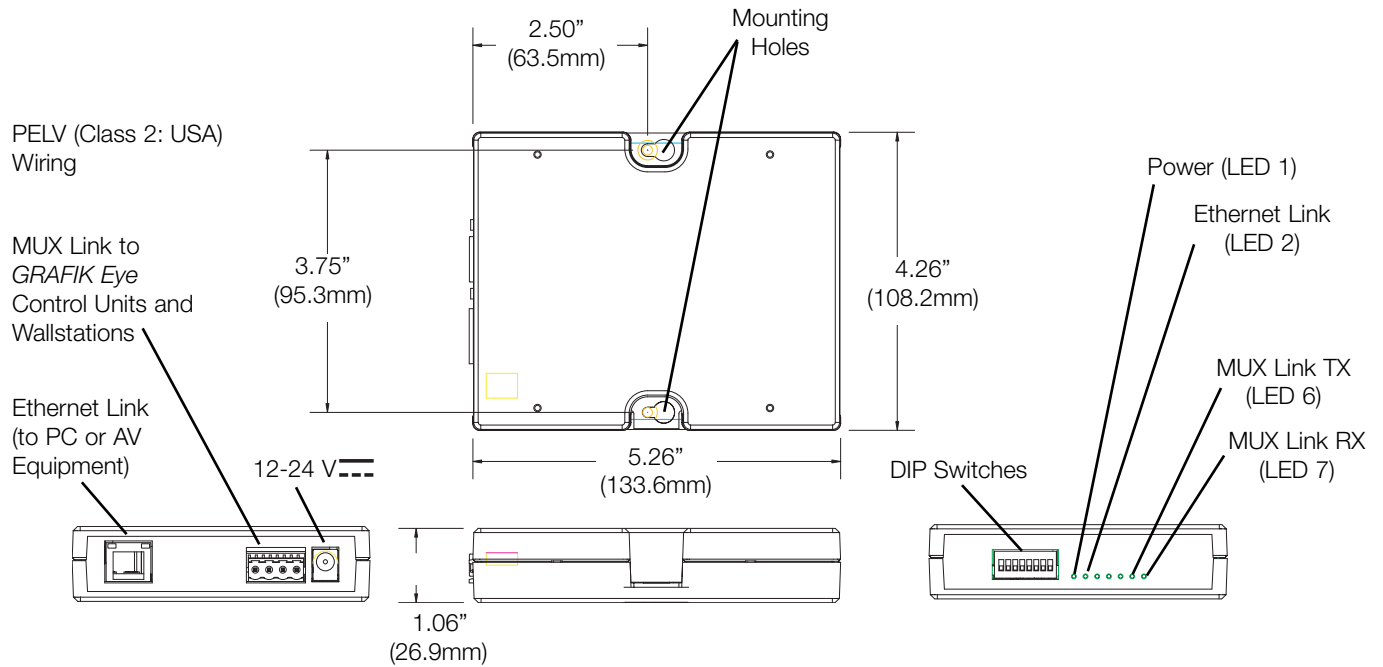32-122°F (0-50°C). Relative humidity less than 90% non-condensing.

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, 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"
(63.5mm)

Mounting
Holes

PELV (Class 2: USA)
Wiring

MUX Link to
GRAFIK Eye
Control Units and
Wallstations

Ethernet Link
(to PC or AV
Equipment)

3.75"
(95.3mm)

12-24 V

4.26"
(108.2mm)

5.26"
(133.6mm)

1.06"
(26.9mm)

DIP Switches

Power (LED 1)

Ethernet Link
(LED 2)

MUX Link TX
(LED 6)

MUX Link RX
(LED 7)

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-NWK-E

Wall
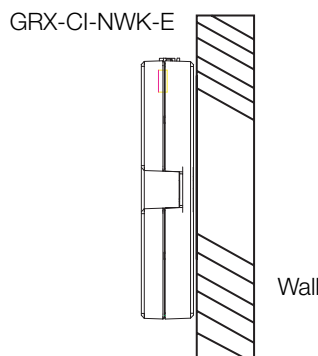
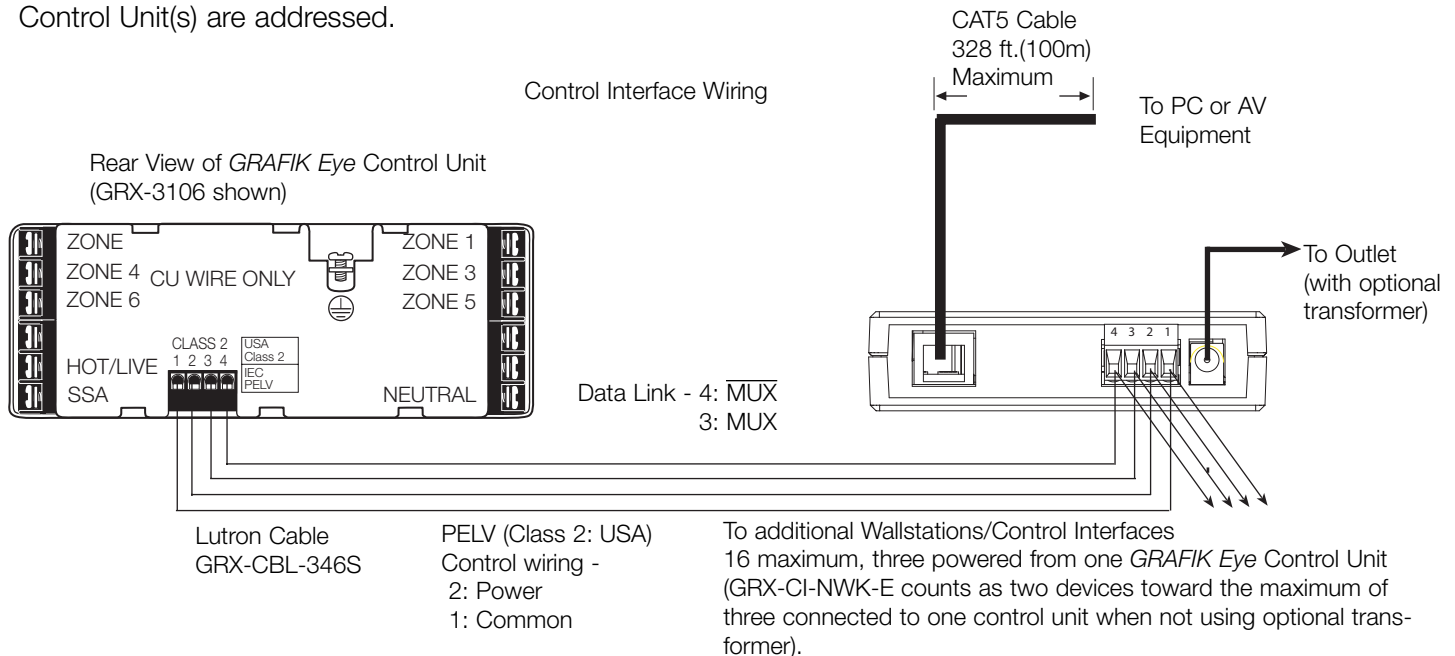| Job Name:	Model Numbers:
Job Number:	

Ethernet Link Wiring

- Standard CAT5 cable connects GRX-CI-NWK-E Interface to PC, router, or other Ethernet source.
- No crossover cable needed.
- Must be 100 m (328 feet) or less.
- Ethernet network and cable provided by others.

Power Options

- Power for one GRX-CI-NWK-E counts as two devices toward the maximum of three devices per *GRAFIK Eye* Control Unit when powered off of Pin 2 of the MUX Link.
- To Power separately from the MUX Link order the following transformer model numbers.
     120 V: T120-15DC-9-BL
     240 V: TE240-15DC-9-BL
     240 V (UK): TU240-15DC-9-BL
- Do not connect Pin 2 of the MUX Link to the GRX-CI-NWK-E when using optional transformer.

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 (1.0 mm^2) wires.
- LED 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.

CAT5 Cable
328 ft.(100m)
Maximum

Control Interface Wiring

To PC or AV
Equipment

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

ZONE
ZONE 4   CU WIRE ONLY
ZONE 6

ZONE 1
ZONE 3
ZONE 5

CLASS 2
1 2 3 4   USA
Class 2
IEC
PELV

HOT/LIVE

SSA

NEUTRAL

To Outlet
(with optional
transformer)

4 3 2 1

Data Link - 4: $\overline{MUX}$
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 powered from one *GRAFIK Eye* Control Unit
(GRX-CI-NWK-E counts as two devices toward the maximum of
three connected to one control unit when not using optional trans-
former).

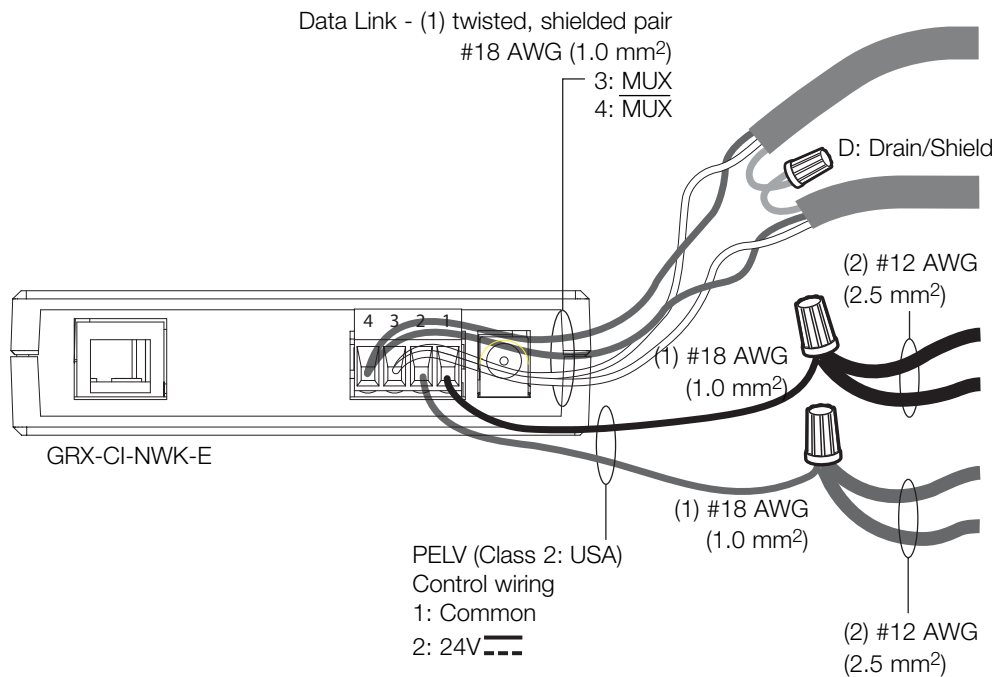| Job Name:	Model Numbers:
Job Number:	

PELV (Class 2: USA) Terminal Connections

When used with GRX-3000 Control Units

- Two #18 AWG (1.0 mm²) conductors for Common (terminal 1) and 12 V⎓ (terminal 2). Ensure that the terminal 2 connection is wired when not using optional transformer. Refer to GRX-3000 Specification Submittal for more details.
- One shielded, twisted pair #18 AWG (1.0 mm²) for data link (terminals 3 and 4).

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

- Two #12 AWG (2.5mm²) conductors for Common (terminal 1) and 24 V⎓ (terminal 2). These will not fit in terminals. Connect as shown.
- One shielded, twisted pair #18 AWG (1.0 mm²) 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 mm²)
3: MUX
4: MUX
D: Drain/Shield
(2) #12 AWG (2.5 mm²)
(1) #18 AWG (1.0 mm²)
GRX-CI-NWK-E
(1) #18 AWG (1.0 mm²)
PELV (Class 2: USA) Control wiring
1: Common
2: 24V⎓
(2) #12 AWG (2.5 mm²)

Job Name:

Job Number:

Model Numbers: