GRX-DACPI Automatic Daylighting Control

Cover (shown open)

Photocell calibrate   Threshold 1-3 raise/lower   Bank selection   Scene selection buttons   Enforce
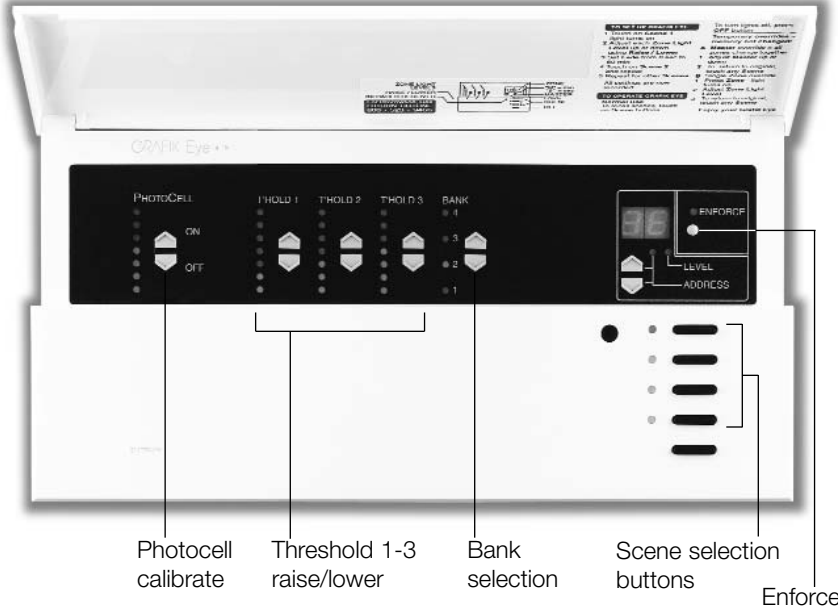
Description

- Saves energy in spaces with windows, skylights, or doors. Automatically dims lights when the sun is bright.
- Monitors ambient daylight via Lutron's MW-PS-WH photosensor or 0-10V photosensor by others.
- Automatically selects scenes in GRAFIK Eye Control Units based on the amount of daylight available.
- Helps maximize energy savings with "enforce" mode – automatic control overrides lighting set by occupants.
- Eliminates "passing cloud" effect with a two-minute "range qualification" timer.
- Works with GRAFIK Eye 3000 and 4000 Series Control Units. Selects scenes in just one Control Unit or a group of up to eight Control Units.

Functionality

- In the GRX-DACPI Daylighting Control, thresholds are set to define different ranges of daylight.
- In the Control Unit(s), scenes are set up to complement these levels.
- The GRX-DACPI monitors ambient light, automatically selecting scenes as daylight levels cross thresholds.
- The GRX-DACPI allows setup of four "banks" of thresholds and scenes.
- Three different thresholds can be set up for each bank.
- Use the bank select keys to select which bank the GRX-DACPI uses.
- The GRX-DACPI automatically selects scenes based on the bank selected and the amount of daylight available. This provides 12 different thresholds that call 16 different Control Unit lighting scenes. Create thresholds and scenes for different times of the day (morning vs. afternoon) or year (winter vs. spring).

- Thresholds define ranges. Ranges call scenes.
- The GRX-DACPI provides four banks.
- Enter three thresholds for each bank.
- The four scenes shown below are automatically called when thresholds are crossed.

	Range 1 0-25%	Threshold 1 = 25%	Range 2 26-50%	Threshold 2 = 50%	Range 3 51-75%	Threshold 3 = 75%	Range 4 76-100%
Bank 1	Scene 1		Scene 2		Scene 3		Scene 4
Bank 2	Scene 5		Scene 6		Scene 7		Scene 8
Bank 3	Scene 9		Scene 10		Scene 11		Scene 12
Bank 4	Scene 13		Scene 14		Scene 15		Scene 16

Job Name:	Model Numbers:
Job Number:	

Specifications

Power

Low-voltage Class 2 (PELV)
Operating Voltage: 12/24 V Direct Current.

Automatic Daylighting Control

- Automatically selects preset lighting scenes in response to ambient daylight.
- Provides four "banks". Each bank provides three thresholds (levels of ambient daylight) and four scenes.
- Allows photosensor input to override manual scene selection.
- Features a "Range Qualification" timer. When changes in daylight cause a scene change, the GRX-DACPI waits 2 minutes before another "automatic" scene change. (Scene selection buttons work immediately.)

Photosensor Input

- Accepts up to three MW-PS-WH photosensors wired in parallel or one 0-10V photosensor by others.
- Averages readings from up to three photosensors wired in parallel.
- Provides push-button photosensor calibration.

Key Design Features

- Meets IEC 801-2. Tested to withstand 15kV electrostatic discharge without damage or memory loss.
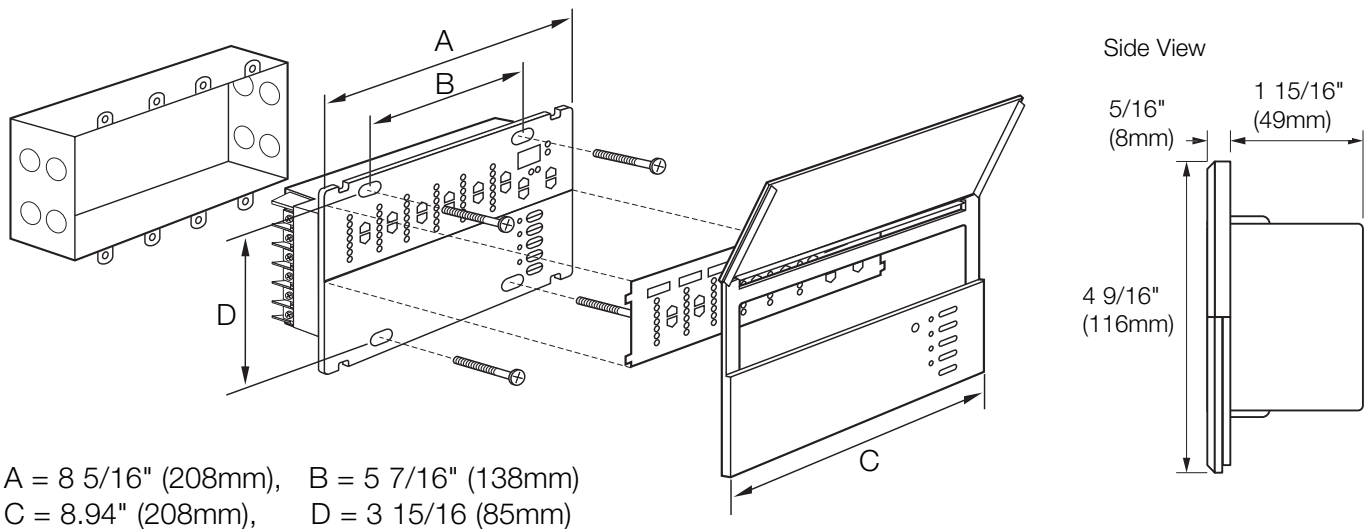- Faceplate snaps on with no visible means of attachment.

System Communications and Capacity

Low-voltage Class 2 (PELV) wiring connects the GRX-DACPI to GRAFIK Eye Control Units and other components.

Environment

32-104°F (0-40°C). 90% non-condensing relative humidity.

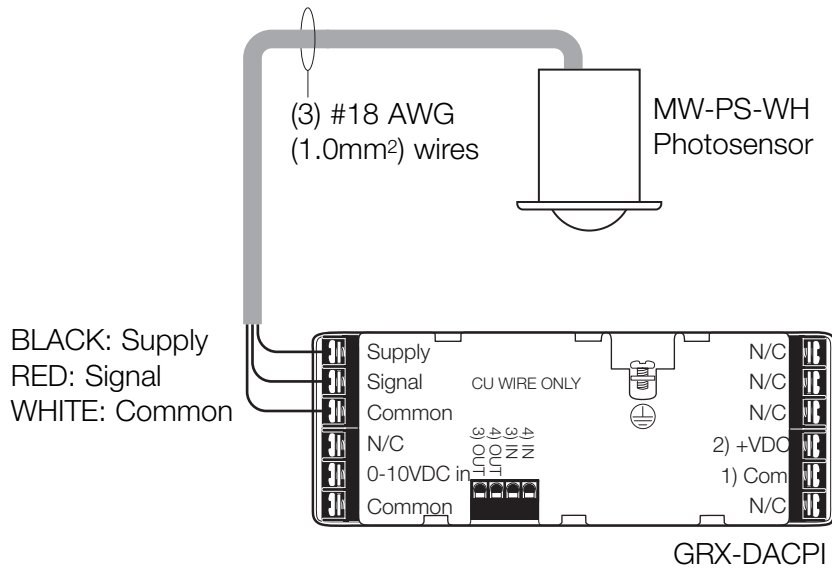## Dimensions And Mounting

Side View

5/16" (8mm)   1 15/16" (49mm)

4 9/16" (116mm)

A = 8 5/16" (208mm),   B = 5 7/16" (138mm)
C = 8.94" (208mm),   D = 3 15/16 (85mm)

Job Name:	Model Numbers:
Job Number:	

Functions

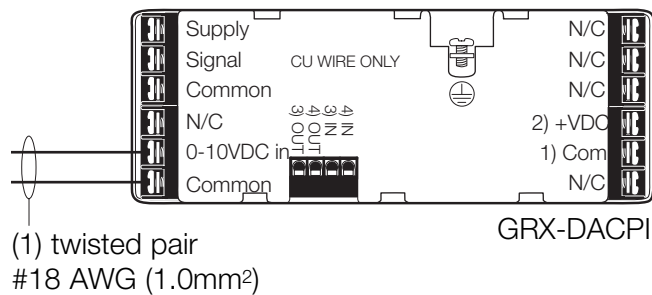| Buttons and Settings	Function
Scene selection buttons	Select scenes: • 1 to 4 with bank 1 • 5 to 8 with bank 2 • 9 to 12 with bank 3 • 13 to 16 with bank 4
Bank selection	• Select which bank the GRX-DACPI uses. • LED 1 lights for bank 1, LED 2 for bank 2, etc.
Threshold raise/lower	Used to setup 3 thresholds for each bank. Each threshold must be equal to or lower than the next threshold. Example: Threshold Can be set as a value between: 1 0-25% 2 25-50% 3 50-75%
Photocell calibrate button	Calibrates the photocell connected to the GRX-DACPI.
Enforce toggle button and LED	Forces the GRX-DACPI to re-select the appropriate scene every 5 minutes, even if daylight levels stay the same. LED lights when enforce mode is on.

Job Name:	Model Numbers:
Job Number:	

Wiring for Lutron MW-PS-WH Photocell

(3) #18 AWG
(1.0mm^2) wires

MW-PS-WH
Photosensor

BLACK: Supply
RED: Signal
WHITE: Common

Supply
Signal   CU WIRE ONLY
Common
N/C
0-10VDC in
Common

N/C
N/C
N/C
2) +VDC
1) Com
N/C

GRX-DACPI

0–10VDC Input Wiring

0-10VDC input from photo measurement equipment
by other manufacturers.

Supply
Signal   CU WIRE ONLY
Common
N/C
0-10VDC in
Common

N/C
N/C
N/C
2) +VDC
1) Com
N/C

GRX-DACPI

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

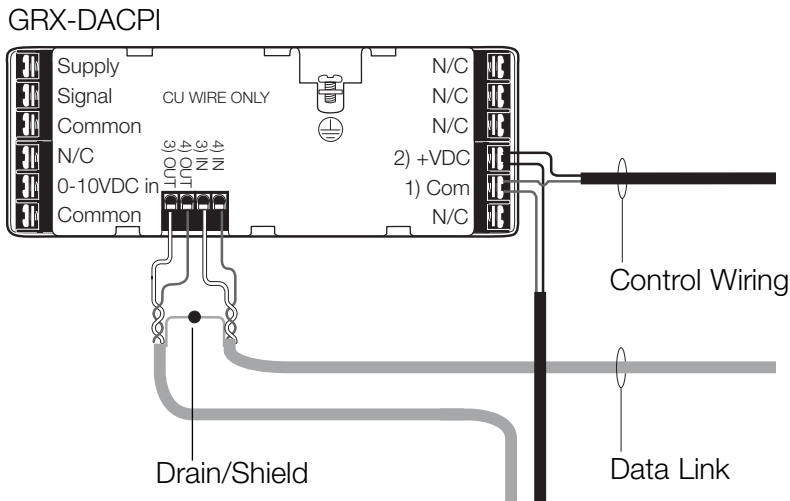| Job Name:	Model Numbers:
Job Number:	

Low-Voltage Class 2 (PELV) Wiring

• Use low-voltage Class 2 (PELV) wiring to daisy-chain the GRX-DACPI to GRAFIK Eye Control Units and other components.
• Make connections inside the wallbox or in a switch/junction box with a maximum wire length of 8 feet (2.5m) from the link to the GRX-DACPI.

When used with GRAFIK Eye 3000 Control Units:

• Two #18 AWG (1.0mm^2) conductors for common (terminal 1) and 12 V Direct Current (terminal 2) control wiring.
• One shielded, twisted pair #18 AWG (1.0mm^2) for data link (terminals 3 and 4).

When used with GRAFIK Eye 4000 Control Units:

• Two #12 AWG (2.5mm^2) conductors for common (terminal 1) and 24 V Direct Current (terminal 2) control wiring.
• One shielded, twisted pair #18 AWG (1.0mm^2) for data link (terminals 3 and 4).
• Connect Drain/Shield as shown. Do not connect to Ground (Earth) or Wallstation. Connect the bare drain wires and cut off the outside shield.

GRX-DACPI

Supply	CU WIRE ONLY	N/C
Signal		N/C
Common		N/C
N/C		2) +VDC
0-10VDC in		1) Com
Common		N/C

Control Wiring

Drain/Shield

Data Link

Job Name:	**Model Numbers:**
Job Number:	