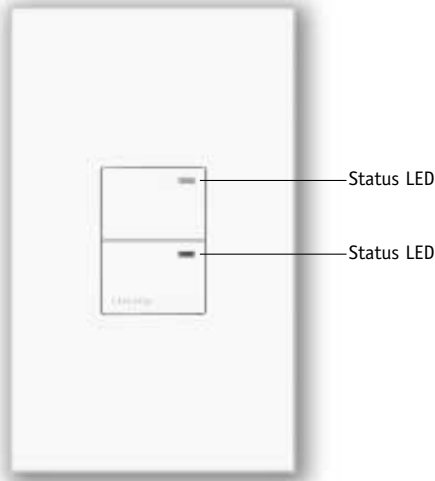


APPENDIX C

LIGHTING CONTROLS CUT-SHEETS

COLOR AND FINISH CODES

NTGRX-2B-SL-__-__
2-Button Wallstation



DESCRIPTION

- Often used in entryways, to turn lights on and off.
- Provides many different functions depending on how you set DIP switches 5, 6, and 7.
 - Has status LEDs to show which button was pushed last.
 - Works with GRX-3000 and GRX-4000 Control Units. Can be set up to invoke functions in just one Control Unit or group of up to eight Control Units.

SPECIAL FINISH

Available with stock engraving.

FUNCTIONS

	DIP SWITCH SETTINGS			Top button does this	Bottom button does this
	5	6	7		
Entrance Wallstation				Selects scene 1.	Turns lights off.
Scene Selection				Selects scene 9.	Selects scene 10.
				Selects scene 13.	Selects scene 14.
Panic Wallstation				Selects scene 16 (all lighting full on). Locks all other system controls.	Restores previous scene. Disables lockout.
Fine Tuning				Temporarily brightens selected zone(s).	Temporarily dims selected zone(s).
Single-Partition Status Wallstation				Control Units act in combination — movable wall is open to make one large space.	Control Units act independently — movable wall is closed to make two spaces.
Zone Lockout				Allows only temporary adjustments to zones. Adjustments won't affect preset scene settings.	Disables zone lockout.
Sequencing				Loops continuously through scenes 5 to 16 using fade times entered at Control Units.	Turns sequencing off.

LUTRON SPECIFICATION SUBMITTAL

Page

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #		S1
Brian Smith	UCSD Cal IT2 - Controls	# of #

SPECIFICATIONS

Power

Operating voltage: Low-voltage type Class 2(PELV), 12VDC to 24VFW.

Key Design Features

- Meets IEC 801-2. Tested to withstand 15kV electrostatic discharge without damage or memory loss.
- Has faceplate that snaps on with no visible means of attachment.
- Can be ganged to share a common faceplate with NovaT☆ and Vareo Dimmers. For ganging, counts as a "small control."

System Communications and Capacity

- Low-voltage type Class 2 (PELV) wiring connects Wallstations to Control Units and other components.
- You can link up to 8 Control Units and up to 16 total Wallstations and/or Control Interfaces for a total of 24 control points.

Terminals

Capacity: Accept up to two #18 AWG (1.0mm²) typical.

Environment

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

COLOR AND FINISH CODES

Matte Finishes

- Standard – Ships in 48 hours
- White **WH**
 - Ivory **IV**
 - Beige **BE**
 - Gray **GR**
 - Brown **BR**
 - Black **BL**

Metal Finishes

- Ships in 4 to 6 weeks
- Bright Brass **BB**
 - Bright Chrome **BC**
 - Bright Nickel **BN**
 - Satin Brass **SB**
 - Satin Chrome **SC**
 - Satin Nickel **SN**
 - Antique Brass **QB**
 - Antique Bronze **QZ**

Anodized Aluminum

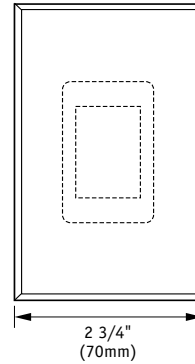
- Ships in 4 to 6 weeks
- Clear **CLA**
 - Black **BLA**
 - Brass **BRA**

- Engraving **E**
- No Insert **NI**

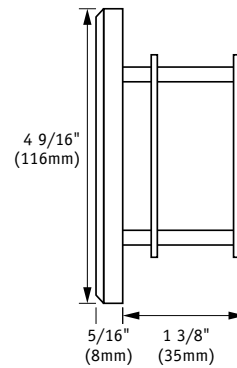
Custom Controls, color matching, and engraving available – Ships in 4 to 6 weeks. Pricing may vary depending on finishes.

DIMENSIONS

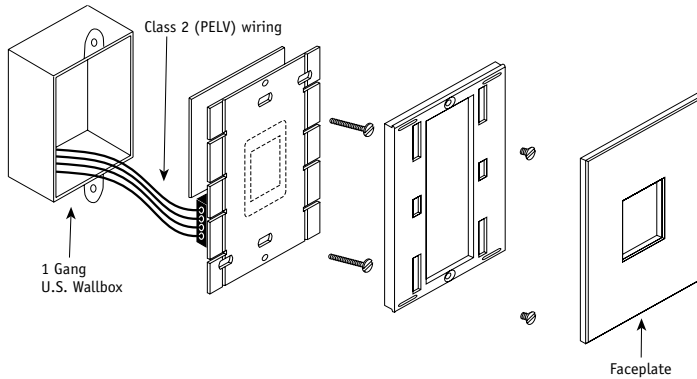
Front View



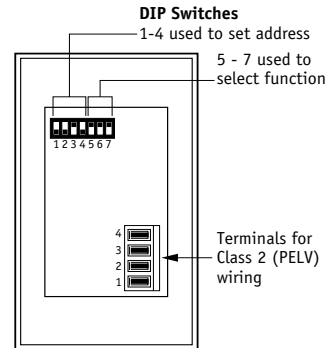
Side View



MOUNTING



Back View



LUTRON SPECIFICATION SUBMITTAL

Page

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #		S1
Brian Smith	UCSD Cal IT2 - Controls	# of #

Wallstation Installation

DIP SWITCHES

- Set DIP switches 1-4 to give the Wallstation the unique system address from 1 to 16.
- Set additional DIP switches (if any) to specify function as shown on the first page of the Wallstation's Specification Submittal.

Address	DIP SWITCH SETTINGS			
	1	2	3	4
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Reserved for GRX-PRG, if present on link.

LOW-VOLTAGE CLASS 2 (PELV) WIRING

- Use low-voltage Class 2 (PELV) wiring to daisy-chain Wallstations to Control Units and other components.
- Make connections inside the wallbox. Or in a switchbox or junction box with a maximum wire length of 8 feet (2.5m) from the link to the Wallstation.

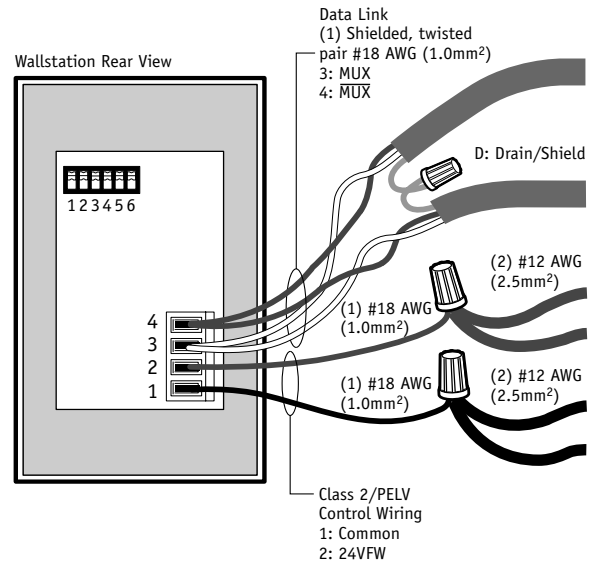
Note: EGRX Eurostyle Wallstations have a D terminal for Drain. You can connect the Drain/Shield at this terminal.

When used with GRX-3000 Control Units

- Two #18 AWG (1.0mm²) conductors for common (terminal 1) and 12VDC (terminal 2). Make sure you wire the the terminal 2 connection correctly. Refer to GRX-3000 Specification Submittal.
- One shielded, twisted pair #18 AWG (1.0mm²) for data link (terminals 3 and 4).

When used with GRX-4000 Control Units

- Two #12 AWG (2.5mm²) conductors for common (terminal 1) and 24VFW (terminal 2). These won't fit in terminals. Connect as shown.
- One shielded, twisted pair #18 AWG (1.0mm²) 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.

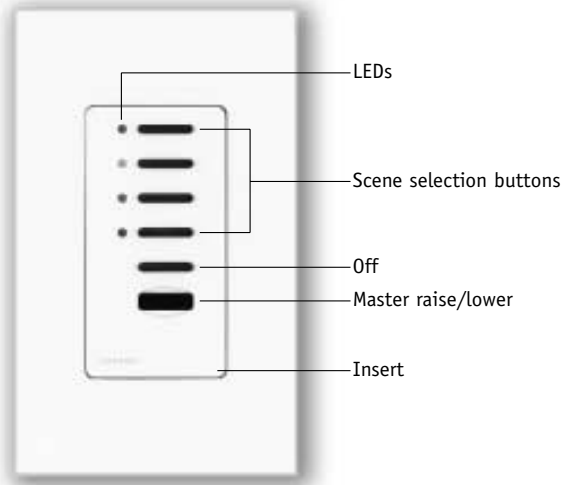


JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #		S1
Brian Smith	UCSD Cal IT2 - Controls	# of #

COLOR AND FINISH CODES

NTGRX-4S-__-__
Scene Selection Control



DESCRIPTION

Used to select and adjust scenes in GRAFIK Eye Control Units.









- Scene selection buttons activate scenes 1 to 4, 5 to 8, 9 to 12, or 13 to 16 depending on how you set DIP switches 5 and 6.
- Status LEDs show which scene is selected.
- Off button turns all lights off.
- Master raise/lower brightens or dims all lighting in the selected scene.

Works with GRX-3000 and GRX-4000 Control Units. Can be set up to select scenes in just one Control Unit or a group of up to eight Control Units.

SPECIAL FINISH

- Available with stock engraving.
- Available in a “no-insert” version for a sleeker look.

FUNCTIONS

DIP SWITCH SETTINGS		Scene selection buttons activate...
5	6	
		Scenes 1 to 4
		Scenes 5 to 8
		Scenes 9 to 12
		Scenes 13 to 16

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #	S2
Brian Smith	UCSD Cal IT2 - Controls
	# of #

SPECIFICATIONS

Power

Operating voltage: Low-voltage type Class 2(PELV), 12VDC to 24VFW.

Key Design Features

- Meets IEC 801-2. Tested to withstand 15kV electrostatic discharge without damage or memory loss.
- Has faceplate that snaps on with no visible means of attachment.
- Can be ganged to share a common faceplate with NovaT☆ and Vareo Dimmers. For ganging, counts as a "small control."

System Communications and Capacity

- Low-voltage type Class 2 (PELV) wiring connects Wallstations to Control Units and other components.
- You can link up to 8 Control Units and up to 16 total Wallstations and/or Control Interfaces for a total of 24 control points.

Terminals

Capacity: Accept up to two #18 AWG (1.0mm²) typical.

Environment

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

COLOR AND FINISH CODES

Matte Finishes

- Standard – Ships in 48 hours
- White **WH**
 - Ivory **IV**
 - Beige **BE**
 - Gray **GR**
 - Brown **BR**
 - Black **BL**

Metal Finishes

- Ships in 4 to 6 weeks
- Bright Brass **BB**
 - Bright Chrome **BC**
 - Bright Nickel **BN**
 - Satin Brass **SB**
 - Satin Chrome **SC**
 - Satin Nickel **SN**
 - Antique Brass **QB**
 - Antique Bronze **QZ**

Anodized Aluminum

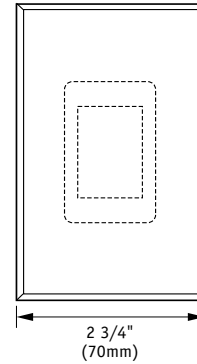
- Ships in 4 to 6 weeks
- Clear **CLA**
 - Black **BLA**
 - Brass **BRA**

- Engraving **E**
- No Insert **NI**

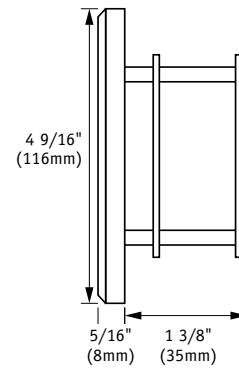
Custom Controls, color matching, and engraving available – Ships in 4 to 6 weeks. Pricing may vary depending on finishes.

DIMENSIONS

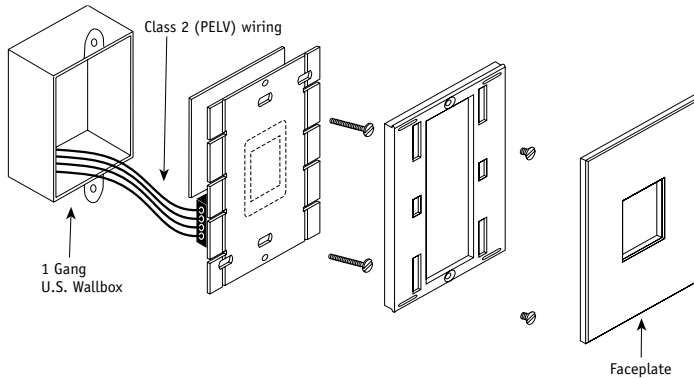
Front View



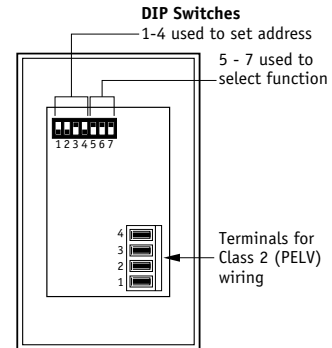
Side View



MOUNTING



Back View



LUTRON® SPECIFICATION SUBMITTAL

Page

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #		S2
Brian Smith	UCSD Cal IT2 - Controls	# of #

Wallstation Installation

DIP SWITCHES

- Set DIP switches 1-4 to give the Wallstation the unique system address from 1 to 16.
- Set additional DIP switches (if any) to specify function as shown on the first page of the Wallstation's Specification Submittal.

Address	DIP SWITCH SETTINGS			
	1	2	3	4
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Reserved for GRX-PRG, if present on link.

LOW-VOLTAGE CLASS 2 (PELV) WIRING

- Use low-voltage Class 2 (PELV) wiring to daisy-chain Wallstations to Control Units and other components.
- Make connections inside the wallbox. Or in a switchbox or junction box with a maximum wire length of 8 feet (2.5m) from the link to the Wallstation.

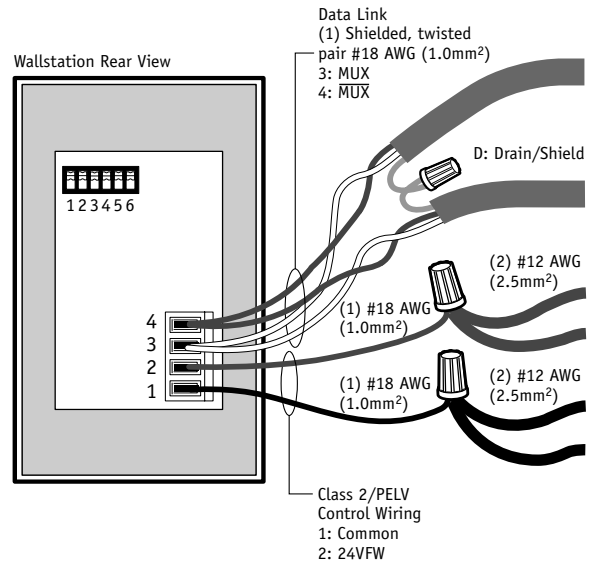
Note: EGRX Eurostyle Wallstations have a D terminal for Drain. You can connect the Drain/Shield at this terminal.

When used with GRX-3000 Control Units

- Two #18 AWG (1.0mm²) conductors for common (terminal 1) and 12VDC (terminal 2). Make sure you wire the the terminal 2 connection correctly. Refer to GRX-3000 Specification Submittal.
- One shielded, twisted pair #18 AWG (1.0mm²) for data link (terminals 3 and 4).

When used with GRX-4000 Control Units

- Two #12 AWG (2.5mm²) conductors for common (terminal 1) and 24VFW (terminal 2). These won't fit in terminals. Connect as shown.
- One shielded, twisted pair #18 AWG (1.0mm²) 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.



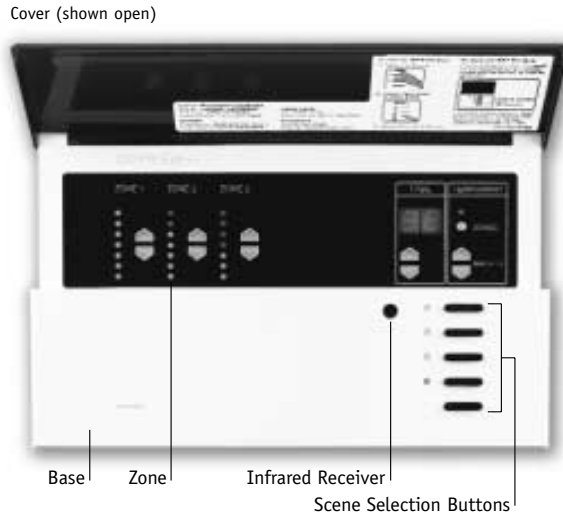
LUTRON® SPECIFICATION SUBMITTAL

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JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #		S2
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GRX-4000 Control Units



Preset Controls

- 4 preset lighting scenes and off for up to 24 zones, accessible from Control Unit faceplate.
- 12 additional scenes stored in Control Unit, accessible via Wallstations and/or Control Interfaces.
- Light levels fade smoothly between scenes. Fade time: 0-59 seconds or 1-60 minutes. Can be set differently for each scene.

Key Design Features

- Meets IEC 801-2. Tested to withstand 15kV electrostatic discharge without damage or memory loss.
- Provides power failure memory: Automatically restores lighting to scene selected prior to power interruption.
- Has faceplate that snaps on with no visible means of attachment.

System Communications and Capacities

Low-voltage type Class 2 (PELV) wiring connects Control Units, Wallstations, and Control Interfaces:

- You can link up to 8 Control Units to control up to 64 zones.
- You can add up to 16 total Wallstations and Control Interfaces for a total of 24 control points.

Environment

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

DESCRIPTION

- Provide pushbutton recall of four preset lighting scenes.
- Control virtually any light source.
- Provide lockout options to prevent accidental changes.
- Include built-in infrared receiver for operation with an optional remote control.

Models available to:

- Control two to 24 zones of lighting.
- Provide easy setup of preset lighting scenes:
GRX-4100 Control Units provide standard setup via pushbuttons on the Control Unit.
GRX-4500 Control Units provide optional setup via a PC, including setting lighting levels in 1% increments.

GRX-4000 Control Units work with:

- GRAFIK Eye Wallstations
- GP and LP Dimming Panels
- XP Softswitch™ Panels

SPECIFICATIONS

Operating Voltage

- Low-voltage type Class 2 (PELV), 12VDC to 24VFW.
- Lightning Strike Protection: Meets ANSI/IEEE standard 62.41-1980. Can withstand voltage surges of up to 6000V and current surges up to 3000A.

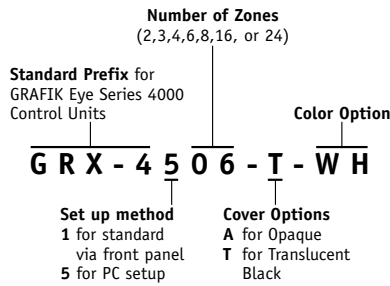
Sources/Load Types

Operates sources with a smooth continuous Square Law dimming curve or on a full conduction non-dim basis via GP and LP Dimming Panels and XP Softswitch™ Panels.

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #		S3, S5
Brian Smith	UCSD Cal IT2 - Controls	# of #

HOW TO BUILD A MODEL NUMBER



MODELS

NUMBER OF ZONES	MODEL NUMBER	
	STANDARD SETUP	PC SETUP
2	GRX-4102- - -	GRX-4502- - -
3	GRX-4103- - -	GRX-4503- - -
4	GRX-4104- - -	GRX-4504- - -
6	GRX-4106- - -	GRX-4506- - -
8	GRX-4108- - -	GRX-4508- - -
16	GRX-4116- - -	GRX-4516- - -
24	GRX-4124- - -	GRX-4524- - -

COVER OPTIONS

Opaque **A**
Cover and Base will match.
Translucent Black **T**
Black cover and your choice of base color.

BASE COLORS

Matte Finishes

Standard – Ships in 48 hours

White **WH**
Ivory **IV**
Beige **BE**
Gray **GR**
Brown **BR**
Black **BL**

Gloss Finishes

Ships in 4 to 6 weeks
Cover Choice: **A** only

White **WH**
Light Almond **GLA**
Almond **GAL**
Ivory **GIV**

Metal Finishes

Cover Choice: **T** only

Bright Brass **BB**
Bright Chrome **BC**
Bright Nickel **BN**
Satin Brass **SB**
Satin Chrome **SC**
Satin Nickel **SN**
Antique Brass **QB**
Antique Bronze **QZ**

Anodized Aluminum

Clear **CLA**
Black **BLA**
Brass **BRA**

Custom Controls, color matching, and engraving available, Ships in 4 to 6 weeks

LUTRON SPECIFICATION SUBMITTAL

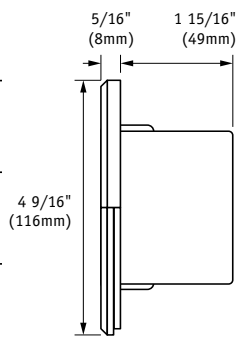
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JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

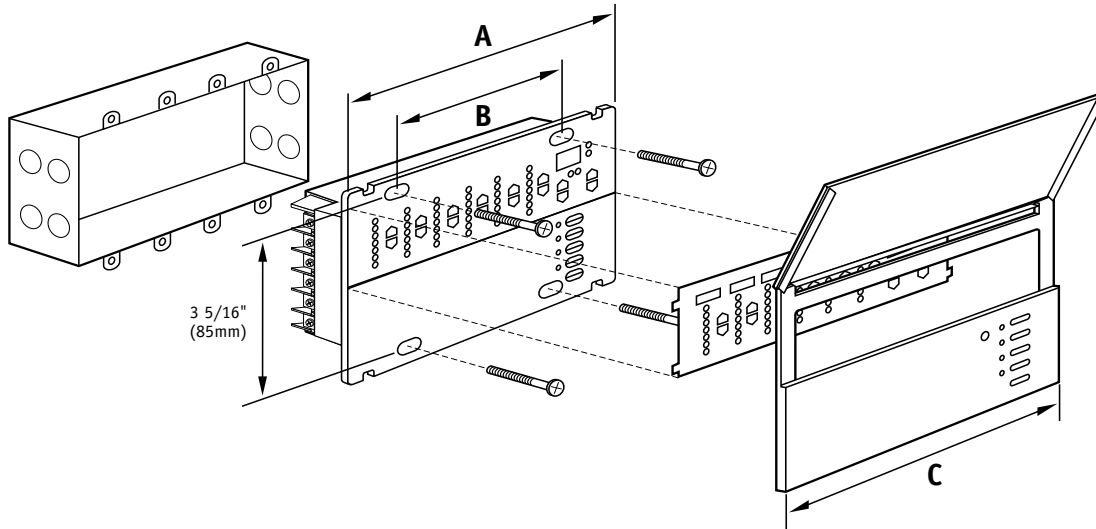
Lutron #	S3, S5
Brian Smith	UCSD Cal IT2 - Controls # of #

DIMENSIONS AND MOUNTING

MODEL	SIDE VIEW	A	B	C	WALLBOX ¹ U.S. SIZE	DEPTH
2-Zone: GRX-4102 GRX-4502		4 5/16" (123mm)	1 13/16" (46mm)	5.56" (141mm)	2 Gang	3.5" (89mm)
3-Zone: GRX-4103 GRX-4503		6 11/16" (168mm)	3 5/8" (92mm)	7.25" (184mm)	3 Gang	3.5" (89mm)
4-Zone: GRX-4104 GRX-4504		8 5/16" (208mm)	5 7/16" (138mm)	8.94" (227mm)	4 Gang	3.5" (89mm)
6-Zone: GRX-4106 GRX-4506		8 5/16" (208mm)	5 7/16" (138mm)	8.94" (227mm)	4 Gang	3.5" (89mm)
8-Zone: GRX-4108 GRX-4508		8 5/16" (208mm)	5 7/16" (138mm)	8.94" (227mm)	4 Gang	3.5" (89mm)
16-Zone: GRX-4116 GRX-4516		8 5/16" (208mm)	5 7/16" (138mm)	8.94" (227mm)	4 Gang	3.5" (89mm)
24-Zone: GRX-4124 GRX-4524		8 5/16" (208mm)	5 7/16" (138mm)	8.94" (227mm)	4 Gang	3.5" (89mm)



¹ Can be ordered from Lutron as Part Number 241-519 (1 Gang gangable boxes).



LUTRON SPECIFICATION SUBMITTAL

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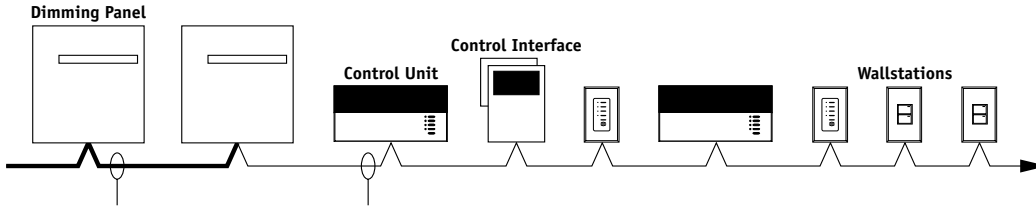
JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #		S3, S5
Brian Smith	UCSD Cal IT2 - Controls	# of #

LOW-VOLTAGE CLASS 2 (PELV) WIRING

Pull low-voltage Class 2 (PELV) wiring for system communications.

- Must be daisy-chained.
- Must be less than 2000 feet (600m).
- Must run separately from line (mains) voltage.



Panel-to-Panel wiring¹

Include one extra #18AWG (1.0mm²).
Used as a "sense line" for emergency (essential) lighting.

Four wires¹ for low-voltage type Class 2 (PELV)

- Two #12 AWG (2.5mm²) conductors for control wiring.
- One shielded, twisted pair #18 AWG (1.0mm²) for data link.

¹ If you use Lutron cable, you can use smaller gauge wires.

- If your total system is less than 500 feet (150m), you can use GRX-CBL-346S:
 - Two #18AWG (1.0mm²) for power.
 - One twisted, shielded pair #22AWG (.625mm²) for data link.
 - No "sense line" included - add your own #18AWG (1.0mm²).
- If your total system is 500 to 2000 feet (150 to 600m), you can use GRX-CBL-46L:
 - Two #12AWG (2.5mm²) for power.
 - One twisted, shielded pair #22AWG (.625mm²) for data link.
 - One #18AWG (1.0mm²) for sense line between Panels.
- Lutron has also approved smaller gauge cable from Belden, Liberty, Alpha, and Signature. Ask for Lutron GRAFIK Eye Cable.

LUTRON® SPECIFICATION SUBMITTAL

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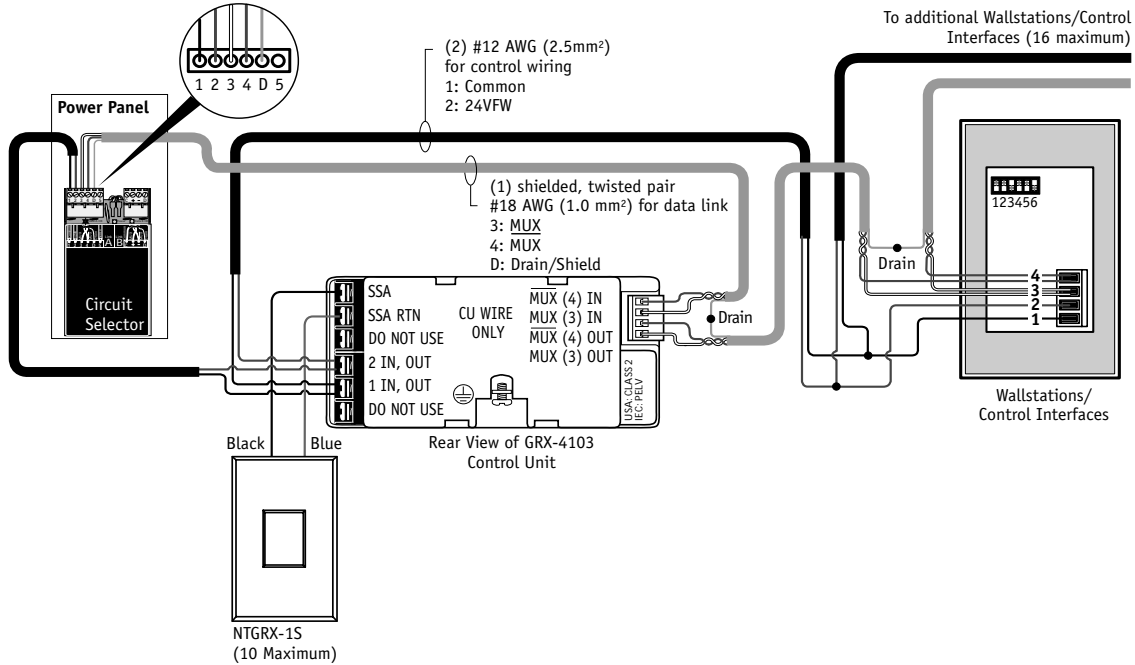
JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #		S3, S5
Brian Smith	UCSD Cal IT2 - Controls	# of #

CLASS 2 (PELV) TERMINAL CONNECTIONS

Connect Drain/Shield as shown. Terminate only at Power Panel if Drain Terminal is provided. It is easiest to connect the bare drain wires and cut off the outside shield throughout the control link.

Lutron recommends you make all connections in the Control Unit's wallbox. Remote connections must be in a switchbox or junction box with a maximum wire length of 8 ft. (2.5m) from the link to the connected unit.



LUTRON SPECIFICATION SUBMITTAL

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JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

Lutron #		S3, S5
Brian Smith	UCSD Cal IT2 - Controls	# of #

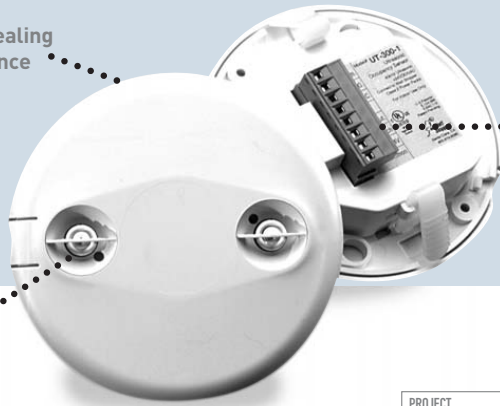


UT-300 Low Voltage Ultrasonic Occupancy Sensor

Architecturally appealing
low profile appearance

SmartSet™ automatically
selects optimal time delay
and sensitivity

Ultrasonic diffusers give
more comprehensive
coverage



Accepts low voltage
switch input for
manual-ON operation

Depluggable terminal
wiring for quick and
easy installation

Walk-through mode
increases savings potential

PROJECT
LOCATION/TYPE

Product Overview

Description

Watt Stopper/Legrand's low profile UT-300 ultrasonic occupancy sensor automatically turns lighting on and off based on occupancy. The sensor mounts on the ceiling with a flat, unobtrusive appearance and provides 360° coverage.

Operation

The UT-300 operates on 24 VDC, VAC or halfwave rectified. It uses the Doppler Principle and high frequency (40 KHz) ultrasound to sense occupancy and automatically turn lighting on. When no occupancy is detected for the length of the time delay, lighting automatically turns off. For manual-ON operation, the UT works with a low voltage momentary switch.

SmartSet

Using SmartSet™ technology, UT sensors require no adjustment at installation. SmartSet continuously monitors the controlled space to identify usage patterns. With this information, it automatically adjusts time delay and sensitivity settings for optimal performance and energy efficiency. The sensor assigns short delays (as low as 5 minutes) for times when the space is usually vacant, and longer delays (up to 30 minutes) for busier times.

Application

UT sensors offer excellent control of lighting for many spaces including restrooms, large offices, and open office areas. Also, they can control large partitioned office spaces when configured in zone patterns. The UT sensors' performance combined and ease of installation will provide fast paybacks and many years of energy savings.

Features

- Advanced control logic based on RISC micro-controller provides:
 - Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
 - SmartSet automatically adjusts sensitivity and time delay settings to fit occupant patterns
 - Walk-through mode turns lights off 3 minutes after the area is initially occupied – ideal for brief visits such as mail delivery
- Advanced Signal Processing Circuitry helps to eliminate false ONs
- Patented ultrasonic diffusion technology spreads coverage to a wider area
- LED indicates occupancy detection
- UT-300 works with low voltage momentary switches for manual control
- DIP switch simplifies sensor adjustments
- Clip mounting system makes ceiling tile installation simple
- Uses depluggable terminal wiring system for quick and easy installation
- Available with isolated relay for integration with BAS or HVAC



www.wattstopper.com
800.879.8585

WattStopper #		SA
Brian Smith	UCSD Cal IT2 - Controls	# of #



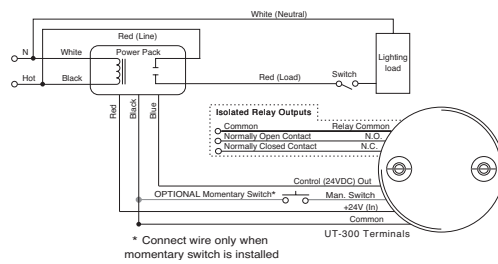
UT-300 Technical Information

Specifications

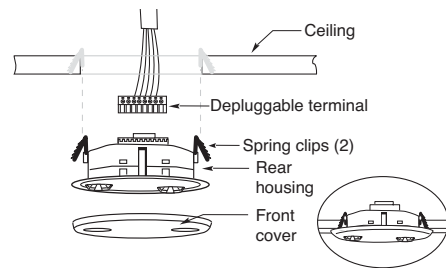
- 24 VDC/VAC
- Time delays: SmartSet (automatic), fixed (5, 10, 15, 20, or 30 minutes), walk-through, test-mode
- Ultrasonic frequency of 40 kHz
- UT-300 contains isolated relay with N/O and N/C outputs; rated for 1 Amp at 30 VDC/VAC
- Mounting options: ceiling tile; 4 square junction box with double gang mudring
- Units per power pack: UT-300 up to 2(B), up to 3 (BZ); UT-305 up to 3 (B), up to 4 (BZ)
- Dimensions: 4.5" diameter x 1.02" deep (114.3mm x 25.9mm)
- UL and CUL listed; five year warranty

Wiring & Mounting

Wiring & Controls

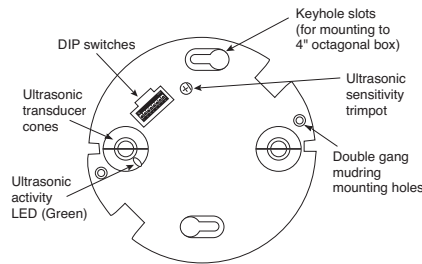


Ceiling Mounting



Controls & Settings

Product Controls



DIP Switch Settings

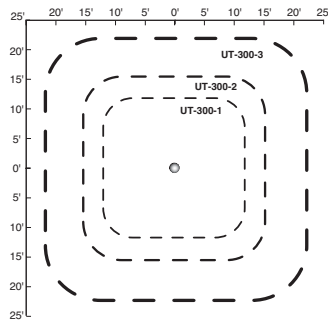
On Mode 1	LED 6
Auto On	Disabled
Manual On	Enabled
Override 2	
Normal	
Override	
Time Delay 3 4 5	
5 sec/SmartSet	
5 minutes	
10 min.	
10 minutes	
15 min.	
15 minutes	
20 minutes	
30 min.	

◀ = Factory Setting
 ● = ON
 - = OFF

↑ = walk-through mode

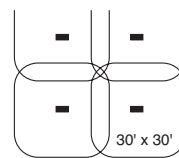
Coverage & Placement

Coverage



Coverages shown represent half-step walking motion. Actual coverages can vary for each application depending on the shape and use of space and the obstacles present. Coverage may be reduced if product is mounted greater than 12 feet high.

Placement



A typical layout for an open office space would be to place UT sensors so they control zones that overlap. For partitioned spaces, a typical zone is about 25' x 25' with an overlap on the coverages that senses motion up to 30' x 30'.

Ordering Information

Catalog No.	Voltage	Current	Coverage	Feature
<input type="checkbox"/> UT-300-1	24 VDC	40 mA	500 ft ² (46.5 m ²)	Isolated relay
<input type="checkbox"/> UT-300-2	24 VDC	40 mA	1000 ft ² (92.9 m ²)	Isolated relay
<input type="checkbox"/> UT-300-3	24 VDC	45 mA	2000 ft ² (185.8 m ²)	Isolated relay
<input type="checkbox"/> UT-305-1	24 VDC	30 mA	500 ft ² (46.5 m ²)	
<input type="checkbox"/> UT-305-2	24 VDC	30 mA	1000 ft ² (92.9 m ²)	
<input type="checkbox"/> UT-305-3	24 VDC	35 mA	2000 ft ² (185.8 m ²)	

All units are white and use Watt Stopper power packs. Current consumption can be slightly higher when only one sensor per power pack is used.

Watt Stopper/Legrand®
Pub. No. 16902

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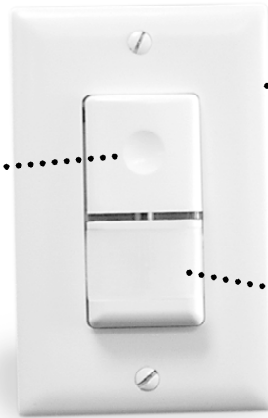


WA-200 Automatic Wall Switch

SmartSet technology automatically selects optimal settings for each space

Choice of Auto-ON or Manual-ON operation

Audible and/or visual alerts of impending shut-off



Terminal style wiring simplifies installation

Selectable walk-through mode for increased savings

Vandal resistant hard lens

Product Overview

Description

The WA-200 passive infrared automatic wall switch turns lighting on and off based on occupancy. These switches feature our innovative SmartSet™ technology which eliminates the adjustment process.

Operation

The WA-200 replaces existing wall switches and operates between 100 and 300 volts. The WA uses advanced passive infrared technology to detect occupancy and turn lights on. Once a space is vacated and the time delay elapses, lights automatically turn off. DIP switch settings allow for a variety of additional control options such as Manual or Automatic-ON, time delay, light level sensing, sensitivity, and audible or visual alerts.

SmartSet

Using SmartSet™ technology, the WA-200 requires no adjustment at installation. SmartSet continuously monitors the controlled space to identify usage patterns. Using this information, it automatically adjusts the time delay and sensitivity settings for optimal performance and energy efficiency. The sensor assigns short delays (as low as 5 minutes) for times when the space is usually vacant, and longer delays (up to 30 minutes) for busier times.

Applications

The WA-200's many options, ease of installation, and great energy saving potential add up to a large return on investment. The sensor's hard lens enables it to be used in public spaces such as teachers' offices and small storage areas in addition to standard applications of offices, small conference rooms, copy rooms, and other enclosed, small building spaces.

Features

- Advanced control logic based on RISC microcontroller provides:
 - Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
 - SmartSet automatically adjusts sensitivity and time delay settings to fit occupant patterns
 - Walk-through mode turns lights off 3 minutes after the area is initially occupied
- Hard lens makes sensor resistant to vandalism
- Terminal style wiring makes installation quick and easy, eliminating the need for wire nuts
- Choice of automatic-ON or manual-ON operation
- Optional alerts for impending shut-off include light flash, audible, or both
- For safety, there is no leakage to load in the off mode and sensor is safety grounded



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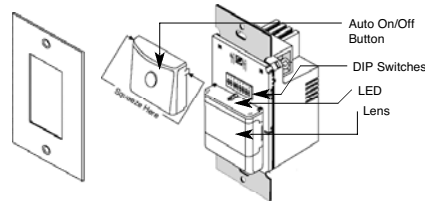
WA-200 Technical Information

Specifications

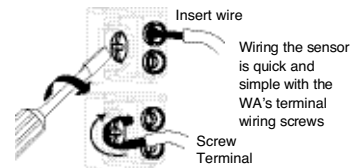
- Universal 100 - 300 VAC; 50/60 Hz operation
- Coverage of 180 degrees, maximum 300 ft² (27.9 m²), 150 ft² (13.9 m²) for desktop activity
- Time delays: SmartSet (automatic), fixed (5, 10, 15, 20, or 30 minutes), walk-through, test-mode
- Sensitivity adjustment: SmartSet (automatic) or reduced sensitivity
- Adjustable light level setting of 8 to 180 footcandles (86.1 to 1,937.5 lux)
- 1.0 mm hard, poly IR 2 lens; 2 level lens for superior desktop detection
- Compatible with all electronic ballasts and PL lamp ballast systems
- Dimensions: 2.6" x 1.7" x 1.9" (66.0mm x 43.2mm x 48.3mm) L x W x D
- UL and CUL listed; 5 year warranty

Controls & Wiring

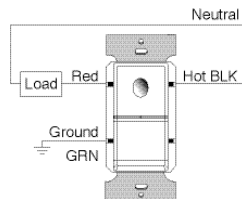
Controls & Installation



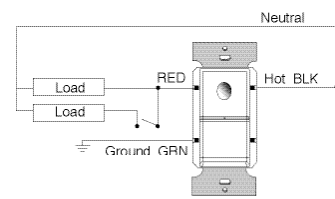
Wire Connections



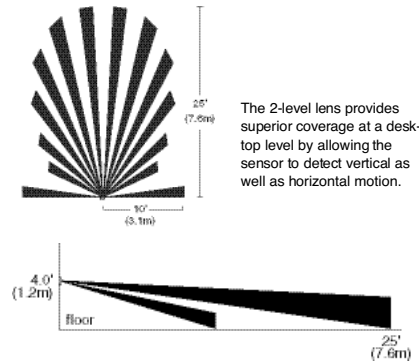
Single Level Lighting



Manual Bi-level Lighting



Coverage



DIP Switch Settings

Time Delay	1	2	3	Light Level	6
* 15 sec/SmartSet	↓	↓	↓	Disabled	↓
5 minutes	↓	↓	↑	Enabled	↑
* 10 minutes	↓	↑	↑	Audible Alerts	7
10 minutes	↓	↑	↑	Disabled	↓
* 15 minutes	↑	↓	↓	Enabled	↑
15 minutes	↑	↑	↑	Visible Alerts	8
* 20 minutes	↑	↑	↑	Disabled	↓
30 minutes	↑	↑	↑	Enabled	↑
Sensitivity	4				
High/SmartSet	↓			↑ = ON ↓ = OFF	
Low	↑			◀ Factory settings	
ON Mode	5			* Walk-through mode enabled	
Auto On	↓			Number indicates DIP switch position	
Manual On	↑				

Ordering Information

Catalog No.	Voltage	Load Requirement	Coverage
WA-200	100/120 VAC; 50/60 Hz or 230/277 VAC; 50/60 Hz	0-800 Watt Ballast or 0-1200 Watt Ballast	up to 300 ft ² ; 180° 27.9 m ²
ASP-211	Cover plate for single gang box (one included with each unit)		
ASP-422	Blank cover plate for 2-gang box		
ASP-432	Cover switch plate for 2-gang box with switch option		

Add to the end of catalog no.: -W for white, -I for ivory, -G for grey, -B for black, -A for light almond



LightSaver® LS-290C Photocell

Photocell for LightSaver
LCD-203 and LCO-203
controllers

Mounts vertically or
horizontally

Footcandle range
from 3 - 6000

Architecturally attractive
design



PROJECT _____
LOCATION/TYPE _____

Product Overview

Description

Watt Stopper/Legrand's LightSaver LS-290C photocell provides the daylight data necessary for operation of the LCD-203 and LCO-203 daylighting control systems.

Operation

Utilizing a photodiode element, the LS-290C continuously measures ambient light levels. The sensor is positioned to "see" incoming daylight from either a window or skylight without seeing electrical light. Users select the applicable foot-candle range by a jumper beneath the front cover.

Specifications

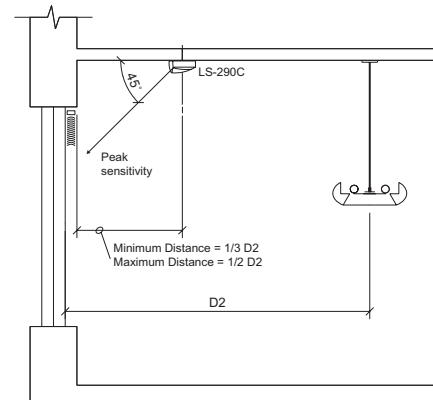
- Three jumper-selectable footcandle ranges: 3-300 fc, 30-3000 fc, 60-6000 fc
- Low voltage, Class 2 device
- Protective hard plastic cover
- 3 conductor 22 AWG twisted cable equal to Belden 8443
- Maximum wire length is 250 feet (76.2m)
- Dimensions: 2" diameter x 1.2" deep (50.8mm diameter x 30.5mm deep)
- UL and CUL listed, five year warranty

Ordering Information

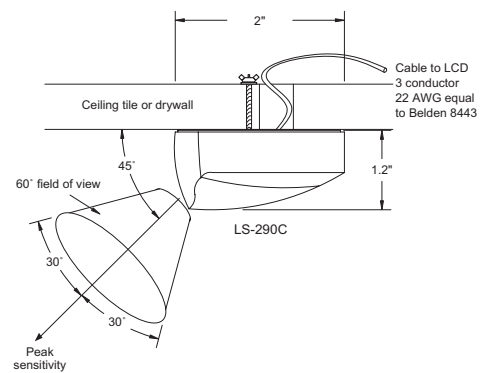
Catalog No.	Description	Footcandle range
<input type="checkbox"/> LS-290C	Photocell	3 - 6000 (32 - 64,000 lux)

Pub. No. 9606

Photocell Placement



Installation and Wiring



www.wattstopper.com
800.879.8585

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