intelligent
lighting controls

CATALOG NUMBERS	DESCRIPTIONS
ILC-SWX-823-xx	Line Voltage Switch & Dimmer (0-10V)

* xx = color (WH, IV, LA, GY, RD, BK)

ADDITIONAL OPTIONS
- **HE:** High Humidity Environment

OVERVIEW

The **INTELLIGENT LIGHTING CONTROLS** line voltage wall switch & 0-10 volt dimmer provides manual lighting control (i.e. switching and dimming). Designed with contractors in mind, the unit is significantly shallower than typical dimmers, resulting in less crowded wall boxes. Additionally, versatile wiring enables usage with or without a neutral connection. For dimming adjustment, intuitive raise and lower buttons are present in addition to the on/off button. Five vertically stacked LEDs are provided to indicate the current dimming level. Configurable dimming parameters include High/Low Trims, Turn on Levels, and Curve Types. This dimmer also matches the INTELLIGENT LIGHTING CONTROLS family of wall switch occupancy sensors and 0-10V dimming wall switch sensors.

SPECIFICATIONS

ELECTRICAL

OPERATING VOLTAGE
120/277 VAC, 50/60 Hz

LOAD RATINGS
MAX: 800W @ 120VAC
1200W @ 277VAC
MIN: None

LOAD TYPES
LED Driver/Lamps
CFL, Electronic/Magnetic Ballasts (Fluorescent)
Tungsten (Incandescent)

DIMMING CAPABILITY
0-10 VDC ballasts or drivers compliant with IEC 60929 Annex E.2

DIMMING LOAD
50 mA maximum (sink only)

PHYSICAL

SIZE
2.74"H x 1.68"W x 1.39"D
(6.96 x 4.27 x 3.53 cm)
Not Including Mounting Strap
<1" Wallbox Mounting Depth

WEIGHT
4.5 oz

MOUNTING
Single Gang Switch Box

ENVIRONMENTAL

OPERATING TEMP
32°F to 122°F (0°C to 50°C) - Standard
-40° F/C (with **-HE** Option)

RELATIVE HUMIDITY
0-95% Non-Condensing

BAA COMPLIANT · TAA COMPLIANT · MADE IN THE USA · RoHS LEAD FREE COMPLIANT · C UL US LISTED · TITLE 20 LISTED · TITLE 24 COMPLIANT

FEATURES

ELECTRICAL FEATURES

- **Accommodates Neutral (3-wire) and No-Neutral (2-Wire) Installation**
- **Electronically Timed Switching Ensures Long Relay Life**
- **Works both Standalone and with 3-Way Switches**
- **Meets NEC 404.2(c) & 404.22 Guidelines Regarding Powering Over Ground & Current Leakage**

PHYSICAL FEATURES

- **Enclosure is 25-40% Shallower than Other Sensors (< 1" depth into wallbox)**
- **Self-Grounding Mounting Strap**
- **Modern Look and Intuitive Easy-Tap Button for On/Off, Raise, & Lower**
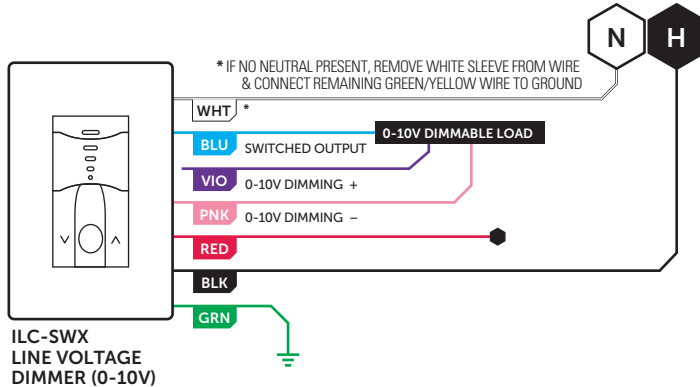- **Settings are Adjustable Without Removing Cover Plate**

OPERATIONAL FEATURES

- **5 LED Dimming Level Indication**
- **Configurable Dimming Parameters including High/Low Trims, Turn on Levels, and Curve Types**
- **Blue Locator LED when Lights are Off**

WIRING

- Unit works both in installations where neutral connection is available as well as installations where only ground connection is present.
- If no neutral is present, remove the white sleeve from the wire & connect the now Green/Yellow wire to ground.
- The White wire (or Green/Yellow wire underneath the removable sleeve) <u>MUST</u> be connected to neutral (or ground if sleeve is removed) for the unit to operate. The all Green wire is just for safety.
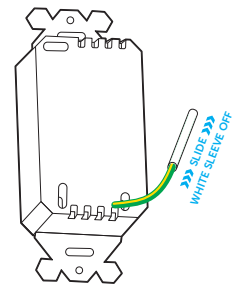- Never connect Violet or Gray wire to line voltage.

STANDALONE WIRING

N **H**

* IF NO NEUTRAL PRESENT, REMOVE WHITE SLEEVE FROM WIRE
& CONNECT REMAINING GREEN/YELLOW WIRE TO GROUND

WHT *

BLU SWITCHED OUTPUT — 0-10V DIMMABLE LOAD

VIO 0-10V DIMMING +

PNK 0-10V DIMMING −

RED

BLK

GRN

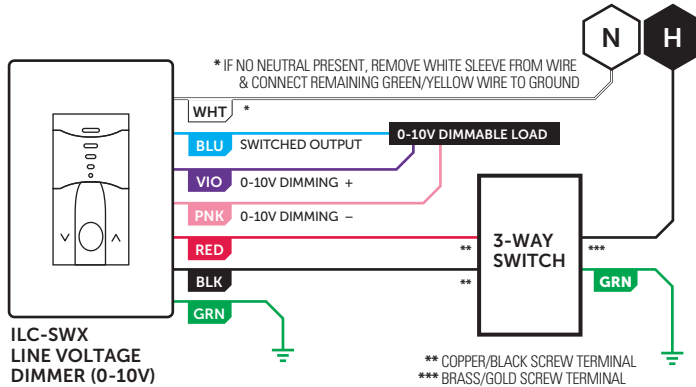**ILC-SWX
LINE VOLTAGE
DIMMER (0-10V)**

> **NOTE: This product is UL listed and meets NEC 404.2(c) & 404.22 guidelines regarding powering over ground & current leakage. Powering over ground is permitted for replacement / retrofit only.**

NEUTRAL TO GROUND CONVERSION DETAIL

- The White wire has a removable sleeve which reveals a Green/Yellow wire

SLIDE
WHITE SLEEVE OFF

3-WAY WIRING

N **H**

* IF NO NEUTRAL PRESENT, REMOVE WHITE SLEEVE FROM WIRE
& CONNECT REMAINING GREEN/YELLOW WIRE TO GROUND

WHT *

BLU SWITCHED OUTPUT — 0-10V DIMMABLE LOAD

VIO 0-10V DIMMING +

PNK 0-10V DIMMING −

RED **

BLK **

GRN

**3-WAY
SWITCH** ***

GRN

**ILC-SWX
LINE VOLTAGE
DIMMER (0-10V)**

** COPPER/BLACK SCREW TERMINAL
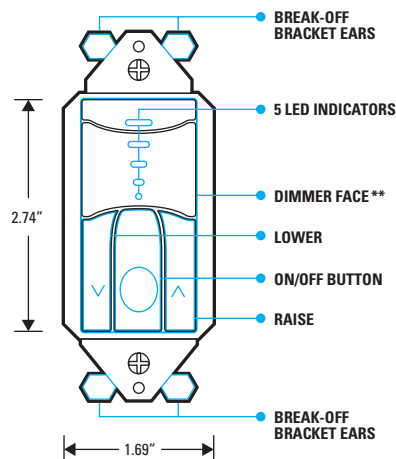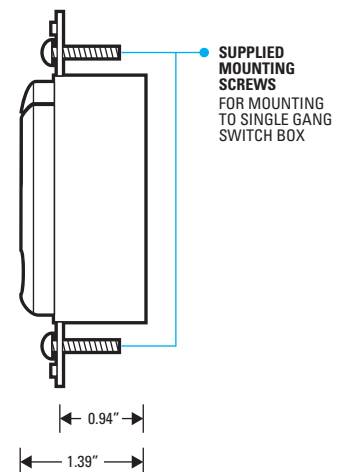*** BRASS/GOLD SCREW TERMINAL

INSTALLATION

MOUNTING

- Designed to mount in 1-gang wall box with 3.28" hole spacing
- Units also can share multiple gang wall boxes with other devices

FRONT

- BREAK-OFF BRACKET EARS
- 5 LED INDICATORS
- DIMMER FACE **
- LOWER
- ON/OFF BUTTON
- RAISE
- BREAK-OFF BRACKET EARS

2.74"

1.69"

SIDE

- SUPPLIED MOUNTING SCREWS
  FOR MOUNTING TO SINGLE GANG SWITCH BOX

0.94"

1.39"

** DIMMER FACE IS FIELD REMOVABLE IN ORDER TO CHANGE COLORS. CONTACT FACTORY FOR ADDITIONAL FACES
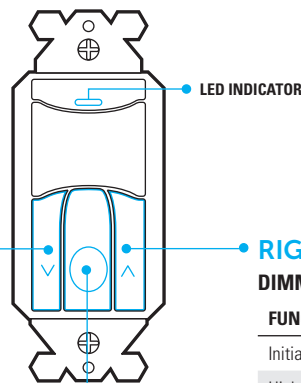
CONFIGURATION SETTINGS

STEPS FOR CHANGING CONFIGURATION SETTINGS

1 From the lists of Configuration Functions below, note the Button Position and number (#) of the Function to be changed. For example, HIGH TRIM setting is the Right Button, #3.

2 Enter programming mode by pressing and holding the CENTER button until the blue LED begins rapid flashing.

3 Press and release the applicable button for the chosen function. For example, press the RIGHT button 3 times for the HIGH TRIM setting.

4 The LED will flash back white the setting number of the current value as it appears in each function's detailed table of values. For example, the default HIGH TRIM is setting #2 (10V) for the RIGHT button. Following a short pause, this blink back sequence will repeat.

5 Press and release the applicable button the number of times equal to the new setting #. For example, RIGHT button 3 times (for 9V).

6 The LED will flash back the new setting number as confirmation. Following a short pause, this blink back sequence will repeat.

7 To Save and Exit programming mode, press and hold the function's applicable button again until the blue LED changes to white, then release. The LED will then blink white twice as confirmation of success. Note: To Exit without saving during any step, wait until unit double flashes blue.

NOTE: IF THE LED DOUBLE FLASHES TWICE BLUE AT ANY POINT, START THE ABOVE PROCEDURE OVER.

CONFIGURATION FUNCTION OVERVIEW

LED INDICATOR

LEFT BUTTON
DIMMING

FUNCTION NAME	BUTTON POSITION	FUNCTION #
Turn Off Scheme	Left	2
Low Trim	Left	3
Fade Off Time	Left	4

RIGHT BUTTON
DIMMING

FUNCTION NAME	BUTTON POSITION	FUNCTION #
Initial Turn On Dimming Level	Right	2
High Trim	Right	3
Fade On Time	Right	4
Dimming Curve Type	Right	5

CENTER BUTTON

FUNCTION NAME	BUTTON POSITION	FUNCTION #
LED	Center	3
Factory Reset	Center	8

DETAILED DIMMING FUNCTION TABLES (LEFT & RIGHT BUTTONS)

FUNCTION #2 TURN OFF SCHEME
LEFT BUTTON

SETTING #	VALUES	NOTES
2	Unit's relay opens immediately, switching power off to load. Dim level goes to low trim.	Default for all models, wired in either 2-way or 3-way
3	Unit fades dimming output down to low trim level then opens relay.	For applications wired in 2-way configuration only
4	Unit fades dimming output down to low trim and then drops to 0 volts (i.e. below a connected driver's electronic off level). Relay remains closed	
5	Unit fades dimming output down to low trim level. Relay remains closed	

FUNCTION #2 INITIAL TURN ON DIMMING LEVEL
RIGHT BUTTON

SETTING #	VALUES	NOTES
2	Fade on to 100% of High Trim	
3	Fade on to 50% of High Trim	
4	Fade on to last user level	Default
5	Fade on to current (custom) level	

FUNCTION #3 LOW TRIM
LEFT BUTTON

SETTING #	VALUES	NOTES
2	Saves current level as low trim	
3	0%	
4	10% (Default)	
5	20%	Exact output voltage level depends on Dimming Curve selected (e.g. Linear, Log). Light output at each level depends on driver/ballast and luminaire.
6	30%	
7	40%	
8	50%	

FUNCTION #3 HIGH TRIM
RIGHT BUTTON

SETTING #	VALUES	NOTES
2	Saves current level as high trim	
3	100% (default)	
4	90%	
5	80%	Exact output voltage level depends on Dimming Curve selected (e.g. Linear, Log). Light output at each level depends on driver/ballast and luminaire.
6	70%	
7	60%	
8	50%	

FUNCTION #4 FADE OFF TIME
LEFT BUTTON

SETTING #	VALUES	NOTES
2	0.75 Sec	
3	1.5 Sec (Default)	Fade to low trim functionality is only active when the Turn Off Scheme (FN#2) is not set to immediately open the relay.
4	3 Sec	
5	5 Sec	
6	15 Sec	

FUNCTION #4 FADE ON TIME
RIGHT BUTTON

SETTING #	VALUES	NOTES
2	0.75 Sec	
3	1.5 Sec	Default
4	3 Sec	
5	5 Sec	
6	15 Sec	

FUNCTION #5 MANUAL DIMMING RESPONSE CURVE
RIGHT BUTTON

SETTING #	VALUES	NOTES
2	Linear	Default
3	Log	
4	Square Log	

DETAILED FUNCTION TABLES FOR CENTER BUTTON FEATURES

FUNCTION #3 LED FUNCTION
CENTER BUTTON

The units five LEDs show the current dim level. When dimmed down to minimum the top LED will turn on white by itself. When the unit is off, by default the top LED turns blue to assist in locating.

SETTING #	DESCRIPTION	NOTES
2	White LEDs indicate dim level, blue locator LED enabled	Default for all models
3	White LEDs indicate dim level, blue locator LED disabled	
4	White LEDs indicate dim level and turn off 2 seconds after adjustment, blue locator LED disabled	

FUNCTION #8 RESTORE FACTORY DEFAULTS
CENTER BUTTON

SETTING #	DESCRIPTION
3	Restore Factory Defaults

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