

## **Bi-Level Motion Sensor** w/ Daylight Harvesting

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Project:	Part #:		
Type:			

Sensors



#### Features:

LOCALIZED LIGHTING CONTROL: Light-level schedules, preferences and profiles for each fixture are wirelessly communicated at system setup and stored for continuous operation.

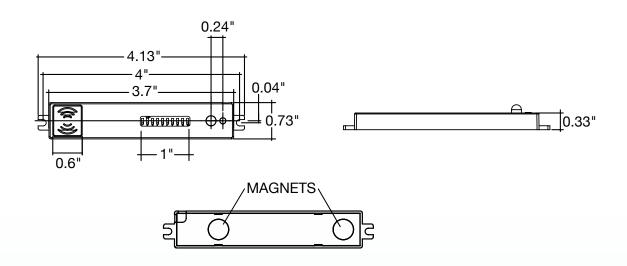
**OCCUPANCY/VACANCY/MANUAL:** A microwave sensorcombined with ambient with 3 different mode options.

**DAYLIGHT HARVESTING:** Captured ambient light information is locally processed to raise and lower light levels based on available daylight.

ROOM AND ZONE CONTROL: Pairs with room switches for code compliant manual-on or auto-off capability. Sensors can be grouped into zones that share occupancy sensing data and coordinate light control based on detected motion.

#### **TECHNICAL DATA**

Motion Sensor	Microwave Sensor
Input Power	12-24V DC, >50mA
Control Output	0-10V Max., 25mA Sinking Current
Mounting Height	13ft. (4m) Max.
Detection Angle	360°
Operating Temperature	-40°F~158°F

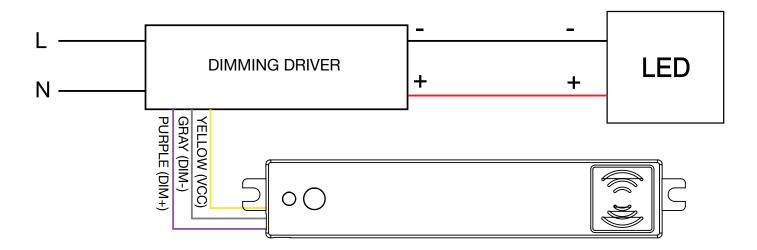


Series S-BMS-INT-1 12-24V DC

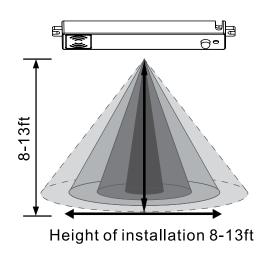


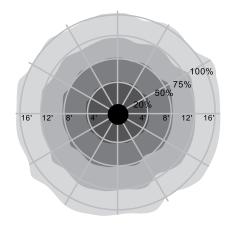
# **Bi-Level Motion Sensor** w/ Daylight Harvesting

### **WIRING DIAGRAMS**



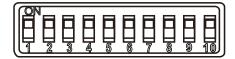
### **SENSOR COVERAGE**





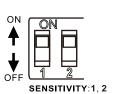
### PARAMETER SETTING DIP SWITCH

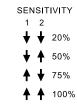
Consider the picture: 1, 2 set sensitivity; 3, 4 set hold time; 5, 6 set the lux; 7, 8 stand-buy the light level; 9, 10 set stand-by time.



### **DETECTION RANGE SETTING (SENSITIVITY)**

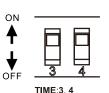
Detection rang can be reduced by selecting the combination on the DIP switches to fit precisely each application:

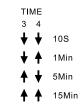




### **HOLD TIME SETTINGS**

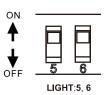
The lamp can be set to stay ON for any period of time between approx. 10sec and a maximum of 15min. Any movement detected before this time elapse will re-start the timer. It is recommended to select the shortest time for adjusting the detection zone and for performing the walk test. Switch location and hold time of the corresponding table is as follows:

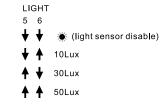




### LIGHT-CONTROL SETTINGS

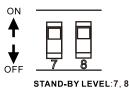
The chosen lamp response threshold can be infinitely from approx. 10-50lux, switch location and light-control of the corresponding table is as follows:





#### STAND-BY LIGHT LEVEL SETTINGS

The correspondin file of switch location and stand-by level as follows





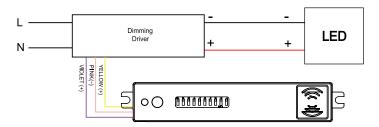
#### STAND-BY SETTINGS

The corresponding file of switch location and stand-by time setting as follows



### PARAMETER SETTING BY REMOTE CONTROL IN MANUAL

WIRING DIAGRAM ANT-7 wiring with dimming ballast or LED driver





Sensors





#### Features:

The remote control wireless IR configuration tool is a handheld tool for remote configuration of IR-enabled fixture integrated sensors. The tool enables device to modify vua push button without ladders or tools. Stores up to four sensor parameter modes to speed configuration of multiple sensors.

The remote control sensor settings at mounting height up to 50ft. The device can display previously established sensor parameters, copy parameters and send new parameters or store parameter profiles. For projects where identical settings may be set across a large number of areas or spaces, this capability provides a streamlined method of configuration. Settings can be copied throughout a site, or in different sites.

Series S-LINE-R 1W • 12V



### **FEATURES**



LED	DESCRIPTION
BRIGHTNESS	High end trim turning function (to set the putput level of connected lighting during occupancy.
SENSITIVITY	To set the occupancy sensitivity of the sensor.
HOLD TIME	The time the sensor will turn OFF (if you choose stand-by level is 0) or dim the light to a low level after the area is vacated.
DAYLIGHT SENSOR	Represents various thresholds of natural light level for the sensor.
	To select the current surrounding lux value as the daylight threshold. This feature enabkles the fixture to function well in any real application circumstances.
<b>\(\frac{\dagger}{\dagger}\)</b>	The daylight sensor stops working and all motion detected could turn on the lighting fixture, no matter how bright the natural light is.
STAND-BY DIM	To set the output level of connected lighting during vacancy. The sensor will regulate the lighting output at the set level. Setting the STAND-BY DIM level at 0 means light full off during vacancy.
STAND-BY TIME	Represents the time at the sensor will keep the light at low dim level after the HOLD-TIME elapsed.

BUTTON	DESCRIPTION		
ON/ OFF	Press the ON/OFF button, the light goes to permanent ON or permanent OFF mode and the sensor is disabled. (MUST press the ON/OFF button to stop this mode for setting.	AUTO	Press AUTO button, the sensor starts to function and all settings remain the same as the latest status before the light is switched ON/OFF
DISP	Display the current/latest setting parameters in LED indicators (the LED indicators will be ON for showing the setting parameters).	(TEST)	The button TEST2s is for testing purpose sensitivity only. After you choose sensitivity thresholds, then you press TEST2s button.  The sensor goes to test mode
RESET	Press the RESET button, all settings go back to the settings of dip switch in sensor.	2s	(hold time is 2s) automatically, meanwhile the stand-by period and daylight sensor are disabled. Press AUTO button to quit from this mode.
	Enter in the setting condition, the parameter of remote control will flash to be selected and navigate to UP and DOWN to choose selected parameters in LED indicators.		Navigate LEFT and RIGHT for chosen selected parameters in LED indicators.
(OK)	Confirm the selected parameter in the remote control.		Open and close smart daylight
SEND	Press SEND button, upload the current parameters to sensor(s) the LED light which the sensor connects will ON/OFF as confirmed.		sensor. Press UP button or DOWN button. Enter in the setting condition, the parameter leds of remote control will flash to be selected. Press (f) for open or close smart daylight sensor.
MODE1 MODE2 MODE3 MODE4	4 scene modes with preset parameters which are available to be changed and saved in modes.		

### **SETTING**

The setting content contains all available settings and parameters for remote sensors. It allows you to chige the available control, parameters and operation of the sensor from factory default or current parameters.

### **CHANGE MULTIPLE SETTINGS IF SENSOR(S)**

- 1. Press (DISP) button, the remote control LEDs will show the latest parameter you set.

  NOTE: If you push (ON) button before (DISP), you must push (AUTO) button to unlock the sensor.
- 2. Press  $\blacktriangle$  or  $\blacktriangledown$  enter in the setting condition, the parameter leds of remote control will flash to be selected, navigate to the desired setting by pressing  $\blacktriangle$   $\blacktriangledown$   $\blacktriangleright$  to select the new parameters.
- 3. Press OK to confirm all settings and save.
- 4. Aim at the target sensor and press to upload the new parameter, the LED light which the sensor connects will on/off as confirm.

**NOTE**: The setting works key step is by pushing  $\triangle$  or  $\nabla$ , enter in the setting condition.

**NOTE:** The LED light which the sensor connects to, will flash on/off to confirm receiving the new parameters.

**NOTE:** If you press (DISP) button, the remote LED indicators will show the latest parameters which were sent.

### CHANGE MULTIPLE SETTING OF SENSOR WITH SMART PHOTOCELL SENSOR OPEN

- 1. Press (DISP), the remote LED indicators will show the latest parameters.
- 2. Press 🛦 or 🔻 enter in the setting condition, the parameter LED indicators of remote control will flash to be selected.
- 3. Press , 2 LED indicators will flash in daylight sensor settings, select daylight as setpoint to light off automatically.
- 4. Press ok) too confirm all setting and saving.
- 5. Aim the target sensor and press (SEND) to upload the new parameter. The LED light which the sensor connects will on/off.

**NOTE:** is disabled by default.

- 1. Open or close the smart daylight sensor by pushing when remote control is in setting condition.
- 2. When the smart daylight sensor open, 2 LED indicators are flash in daylight sensor setting. Select daylight 10 30 50 as setpoint to light in automatically, select daylight 100 300 500 as setpoint to light off automatically. When smart daylight sensor close, 1 LED indicator is flash in the daylight sensor setting for choose daylight sensor threshold.
- 3. When the smart daylight sensor open, the stand-by time is only +∞
- 4. Smart daylight sensor takes place of normal photocell sensor and works independently.
- 5. See Daylight Sensor Function.



### **CORRIDOR FUNCTION**

This function inside the motion sensor to achieve tri-level control, for some areas which require a light change notice before switch-off. The sensor offers 3 levels of light: 100%--->dimmed light (natural light is sufficient)--->off; and 2 periods of selectable waiting time: motion hold-time and stand-by period; selectable daylight threshold and freedom of detection area.



With sufficient natural light, the light does not switch on when presence is detected.



With insufficient natural light, thesensor switches on the light automatically when presence is detected.



After hold-time, the light dims to stand-by level if the surrounding natural light is below the daylight threshold.



Light switches off automatically after the stand-by period elapses.

### **DAYLIGHT SNESOR FUNCTION**

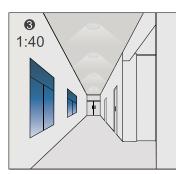
Open the daylight sensor by pushing  $( \Box )$  when remote control is in setting condition.



The light switches on at 100% when there is movement detected.

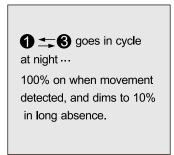


The light dims to stand-by level after the hold-time.



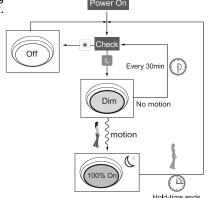
The light remains in dimming level at night.

Settings on this example: Hold-Time: 30 min.
Setpoint to light on: 50lux
Setpoint to light off: 300lux
Stand-by dim: 10%
Stand-by period: +
When the smart photocell
sensor is open, the stand-by
time is only +









### CORRIDOR FUNCTION VS DAYLIGHT SENSING FUNCTION

- 1. In corridor function, turn on the light must by natural light level lower daylight sensor setting and occupancy. In smart daylight sensor function, turn on the light by natural light level lower daylight setpoint to light on even if vacancy.
- 2. In corridor function, turn off light by stand-by time finished, if vacant. In smart daylight sensor function, turn off the light by natural light level higher than daylight setpoint to light off even if occupied.
- 3. In smart daylight sensor function, natural light level lighter/lower than daylight setpoint to light on/off MUST keep at least 1 minute, that will turn off/on the light automatically.



**ABOUT RESET AND MODE (1, 2, 3, 4)** 

The remote control comes with 4 scene MODES which are not default. You may make desired parameters and save as the new MODE (1, 2, 3, 4) to configure the isntalled sensors.

**RESET:** All settings go back to settings of DIP switch in sensor.

### **SCENE MODES (1, 2, 3, 4)**

Application	Scene Options	Brightness	Detection Area	Hold Time	Stand-by Time	Stand-by Dim Level	Daylight Sensor
Indoor	Mode 1	100%	75%	5min	30min	30%	
Indoor	Mode 2	100%	75%	1min	+∞	30%	
Indoor	Mode 3	100%	75%	5min	30min	30%	30LUX
Outdoor	Mode 4	100%	75%	1min	+∞	30%	(30LUX/300LUX)

### **CHANGE THE MODES**

- 1. Press (MOE) (MO
- 2. Press ( ) to select the new parameters.
- 3. Press (ok) to confirm all parameters and saving in the mode.

### **UPLOAD**

The upload function allows you to configure the sensor with all parameters in one operation. You may select CURRENT SETTING parameters or the MODE for uploading. Current setting parameters or the MODE are displayed by the remote control.

### UPLOAD THE CURRENT PARAMETERS TO SENSOR(S), AND DUPLICATE THE SENSOR PARAMETERS FROM ONE TO ANOTHER

1. Press (DEP) button or press (MODE) (MODE)

NOTE: Check if all parameters are correct.

2. Aim at the sensor amd press button, the light that sensor connects will be on/off as confirm.

NOTE: If other sensors need some parameters, just aim at the sensor and press (END) button.