

## Billion SG7500 / SG7501

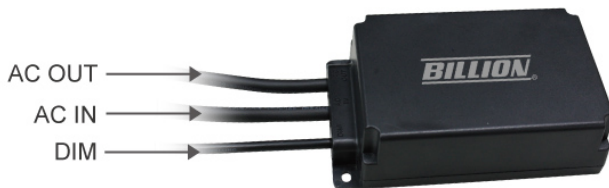
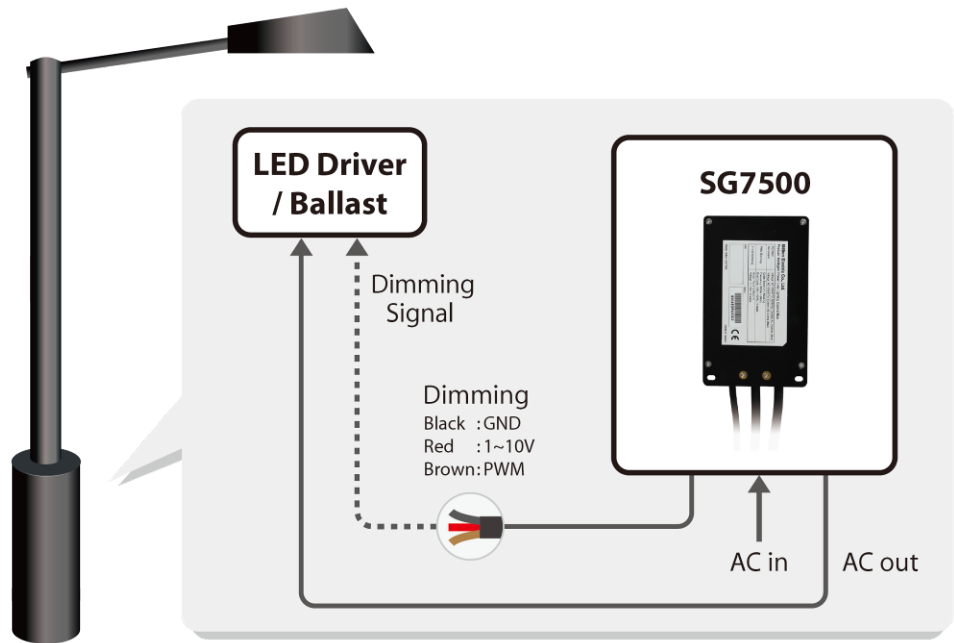
### Intelligent Power Line Lighting Control Box



The Billion Intelligent Power Line Lighting Control Box(SG7500 · SG7501) is installed each streetlight, serving as a transceiver transmitting data to PLC communication gateway over AC power line. It also plays as an end-point controller in the Intelligent Lighting Control Management System (LCMS) network, enabling administrators to make dimming and relay on/off remotely.

( ※ SG7501 meets ANSI C136.41 standard )

### SG7500



- Communicate over AC power line
- Remote lighting switch on/off functionality
- Dimming adjustment 10% ~ 100 %
- Measure AC output for
  - Voltage
  - Current
  - Power Consumption.
- Compact and modest model size
- IP-65 compliant rugged design for high level of protection against dust and water

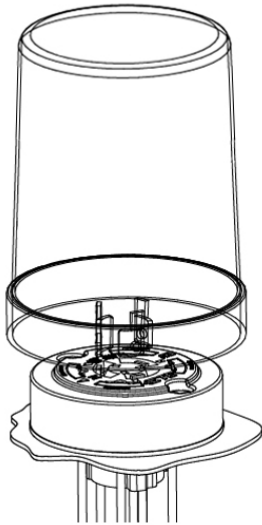
# SG7501



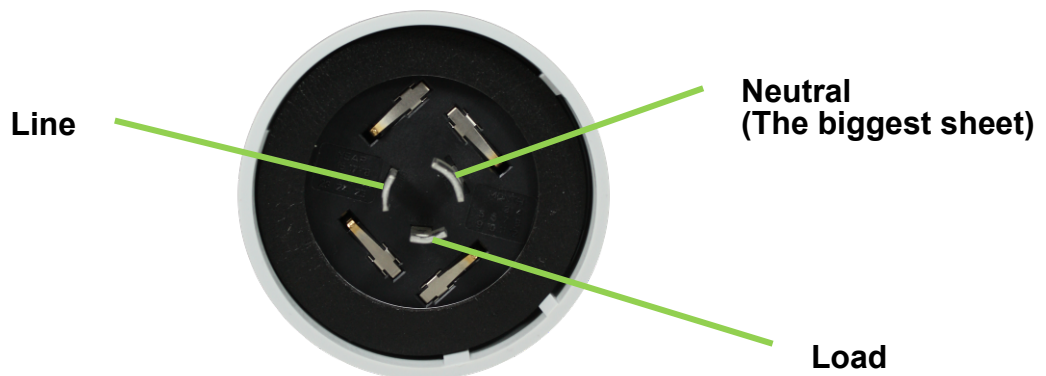
## ANSI C136.41

- International standard interface (ANSI)
- Simple wiring (power and dimming wires)
- Easy installation with streetlight
- Extra savings by dimming control

1. Push Downward  2. Twist Clockwise to Lock 

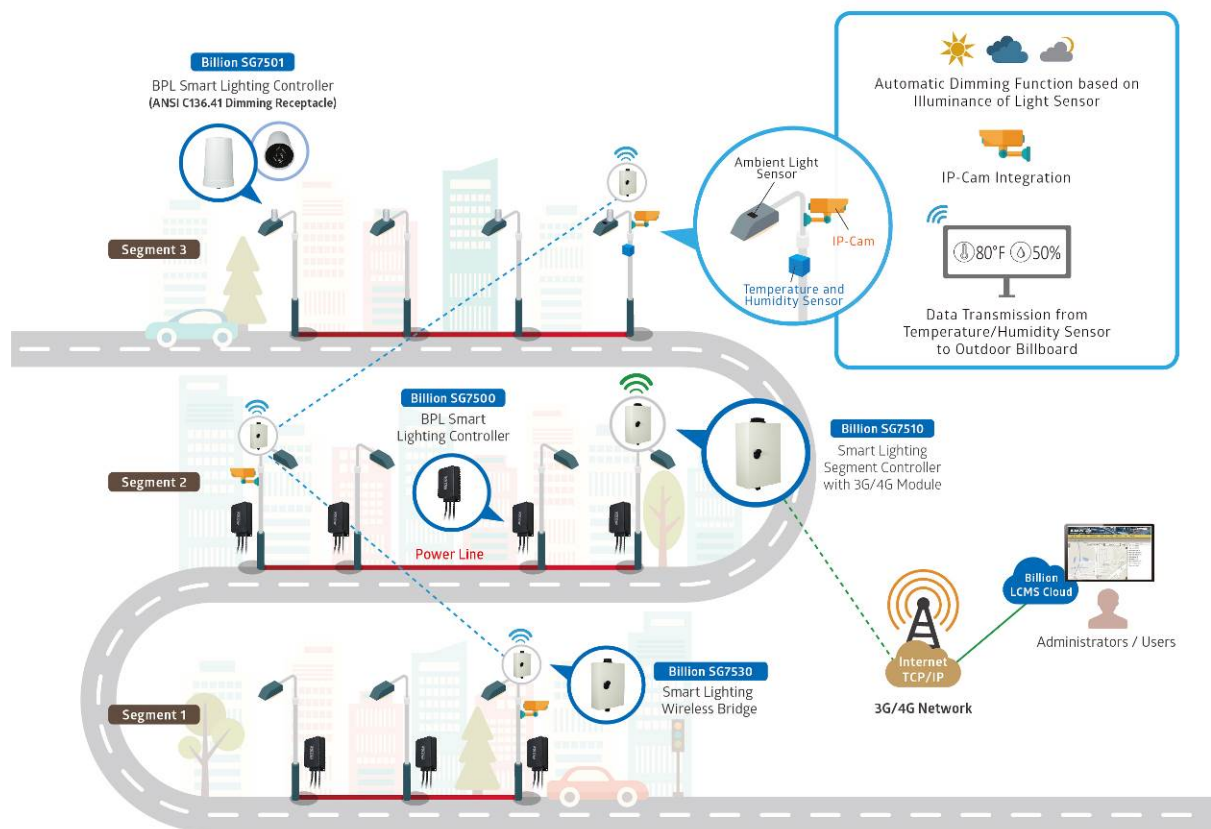


- Communicate over AC power line
- Remote lighting switch on/off functionality
- Dimming adjustment 10% ~ 100 %
- Measure AC output for
  - Voltage
  - Current
  - Power Consumption.
- Compatible with ANSI C136.41 Standard.
- IP-65 compliant rugged design for high level of protection against dust and water



The diagram indicates the system layout of Billion's LCMS broadband PLC technology. In Segment 2, the SG7510 communication gateway receives the lighting data that is transferred from the Intelligent Control Box (SG7500/SG7501) is installed for each streetlight. Users can access, monitor, and oversee a broad range of lighting status on a Billion-provided cloud computing platform. LCMS is an excellent technology grid allowing system operators to remotely control multiple streetlights at scattered locations from wherever they are located.

For any particular circumstance, SG7530 can be optionally mounted underneath the assigned street light fixtures, bridging the status of individual street-lighting segments to one versatile LCMS Communication Broadband Gateway. System operators are able to drastically reduce hardware and WAN network operational costs through this Intelligent Lighting Control System integration.



▲ Smart Lighting BPLC (Broadband Power Line Communication) System Architecture

## Technical Specifications

Item	SG7500	SG7501
<b>Standard</b>	Broadband over powerline	
<b>Carrier Frequencies</b>	2MHz ~ 30MHz	
<b>Communication Technique</b>	OFDM	
<b>AC Input Voltage</b>	<b>Voltage:</b> AC 100V ~ 277V	
<b>AC Output</b>	<b>Voltage:</b> AC 100V ~ 277V, <b>Current:</b> AC 4 Amp (Max)	
<b>PWM Dimming</b>	<b>Cable:</b> Brown (+), Black (-) <b>Frequency:</b> 200Hz ~ 8KHz <b>Duty Cycle:</b> 10 % ~ 100 %, 10 steps	N/A
<b>1~10V Dimming</b>	<b>Cable:</b> Red (+), Black (-) <b>Voltage:</b> 1 ~ 10V, 10 steps	
<b>Meter</b>	<b>Voltage Measurement:</b> 100V ~ 277V $\pm$ 1 % <b>Current Measurement:</b> < 0.3A $\pm$ 20mA > 0.3A $\pm$ 1 % <b>Frequency Measurement:</b> 50/60 Hz $\pm$ 1 % <b>Power Factor Measurement:</b> -0.95 ~ 1 $\pm$ 1 % <b>Power Measurement:</b> $\pm$ 2 % (depending on Power Factor) <b>Accumulated Energy Measurement:</b> Wh (per hour)	
<b>Power Consumption</b>	5 Watt (Max)	
<b>Operating Temperature</b>	-40 °C ~ 60 °C	
<b>Humidity</b>	10 % ~ 95 %	
<b>Dimensions (L x W x H)</b>	13 cm x 8 cm x 3.8 cm (with Mounting Flange)	$\varnothing$ 8.4 cm x 12.8 cm (with Mounting Base H: 13.7 cm)

**Note:** All the specifications are subject to change without prior notice.  
Please contact Sales for the most updated information.

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