

## Compact ZigBee Power Meter Series

The Billion SG3010 series of meters are a cost-effective energy monitoring and management solution designed for Home Area Networks. They are a ZigBee-based plug-in power meter that can help households and building owners save up to 15% off their electricity bills. The device allows the users to measure the consumption of electricity for specific electronic devices so that energy efficiency can be improved.

The Billion SG3010 series is available in four models providing different types of connector to meet a variety of electrical requirements. Household users can measure the energy usage of an air conditioner by plugging it into the Billion SG3010-T1. The Billion SG3010-T3 or the Billion SG3010-T4 can also be deployed in a power cabinet to measure and monitor power consumption throughout the entire home.

### Remote Control and Energy Management

Type T1 and T2 meters with remote control function enable users to optimize energy management of in-home appliances. The meter can measure and store electricity usage data and transfer it to any available PC, PDA, or mobile phone by wireless transmission to ZigBee gateway (Billion SG6410) or ZigBee USB adapter (Billion SG1100). With Billion SG6410 ZigBee gateway, real-time power usage data and status of any connected appliance as measured by Billion SG3010 can be available by remote access. The user can even re-act to switch on/off electrical appliances remotely by sending control events back to SG3010. With SG1100 ZigBee USB adapter and Power Management Software(PMS) installed in an in-home PC, the user can control, trace and profile electricity usage that is measured by the SG3010.

### Comprehensive Measurement Capability

The Billion SG3010 Series provides comprehensive measurement functions including Active Power (W), Total Accumulated Electricity Consumption (kWh), Interval Electricity Consumption (kWh), Voltage (V), Current (A), Apparent Power (VA), Power Factor (PF). It allows users to collect energy usage statistic for trend analysis and usage profiling, and by shifting usage patterns will lead to savings.

### Accurate Measurement

The Billion SG3010 Series is capable of measuring even small power consumption up to 0.001kWh . With an accurate measurement result, you can prevent power loss 24/7. (Measurement accuracy is in the range of ± 0.5% (At PF=1.0, at Rated Current)).

### Power Surge Protection

Available in the type T1 and T2 meter, built-in real zero-crossing switch and soft start power surge protection features enable the device to protect your electronic appliances from power surges in your electrical system.

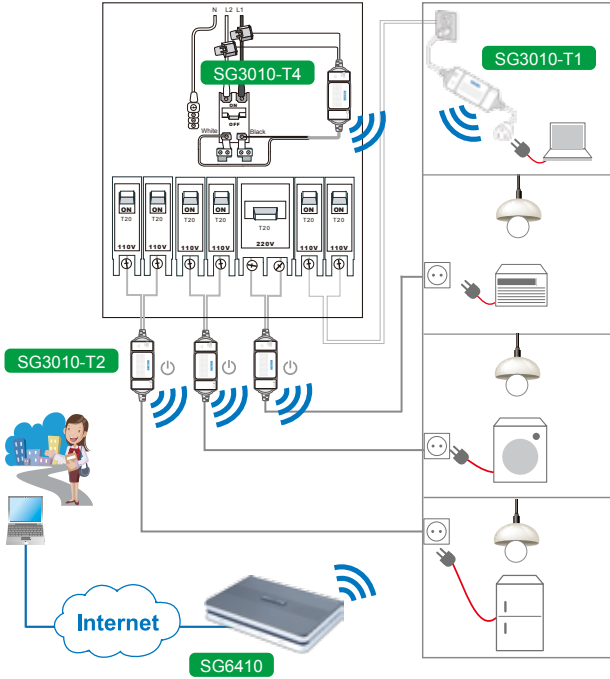
**Ideal for**  
Residential,  
office users,  
and Utility

- Fully compliant with IEEE 802.15.4 ZigBee standards
- Electricity usage data and other indicator information collection
- < 0.5% Wh accuracy
- Consumption cost calculation
- Remote control available in type T1 and T2
- 4 connection types
- Power surge protection
- Easy installation
- Ideal for:
  - Residential and office users
  - Utilities companies
- Works as part of ZigBee –based Energy management solution for business partners:
  - Power Utilities: solar power, wind power... etc.
  - ZigBee network system integrator and planners
  - House builders
  - Suppliers of Smart Energy devices in IHD, Load Control, and PCT

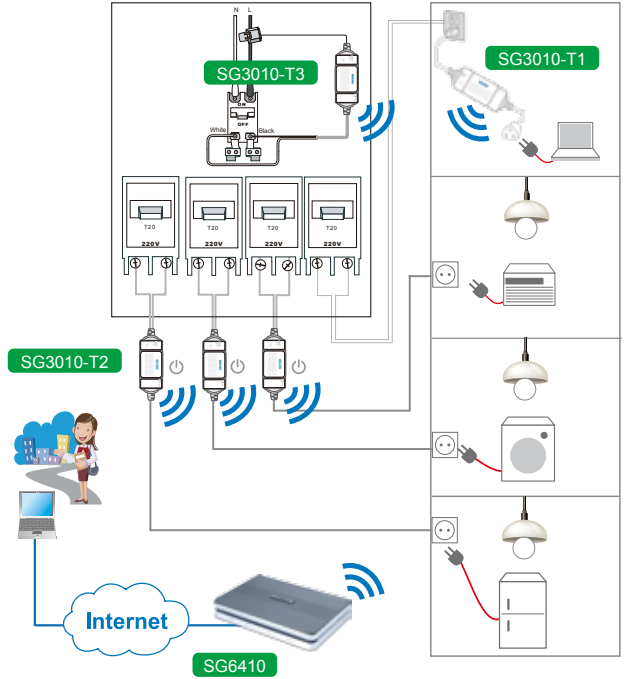
# Application Scenarios for Home and Small Enterprises

## Gateway-based Energy Management Application

► Single-phase 3-wire (e.g. USA and Taiwan)

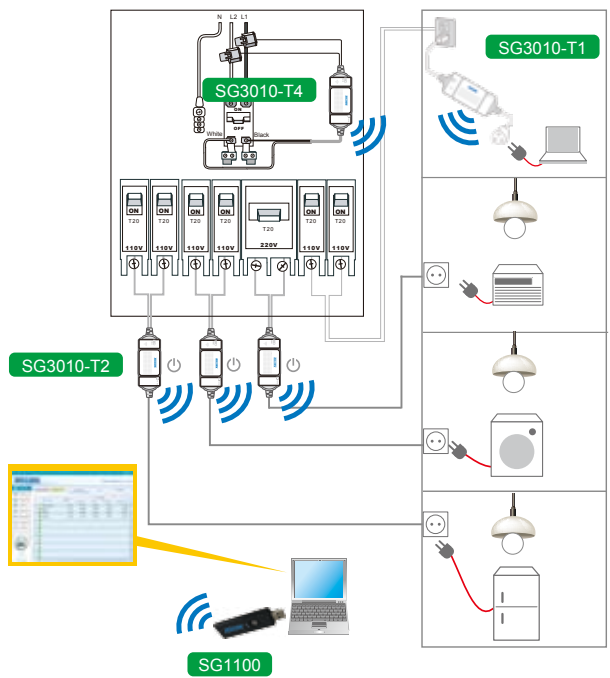


► Single-phase 2-wire (e.g. Europe)

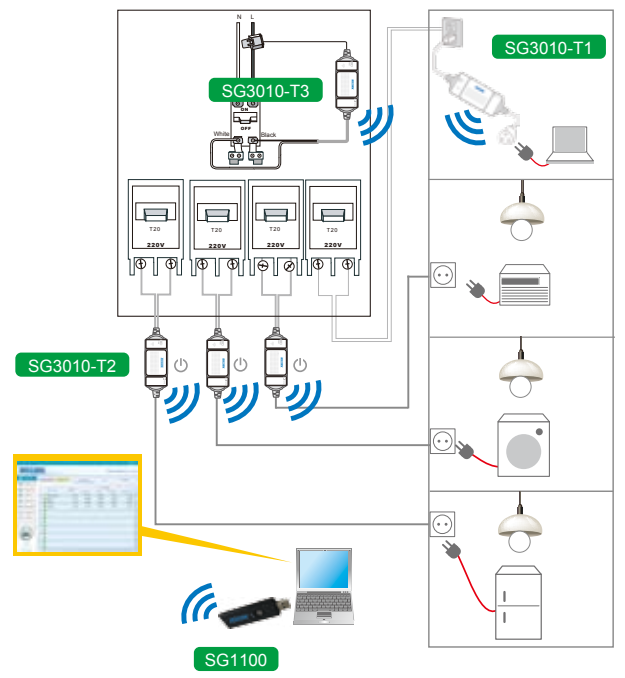


## PC-based Energy Management Application





► Single-phase 3-wire (e.g. USA and Taiwan)



► Single-phase 2-wire (e.g. Europe)



## Technical Specifications

Product Model		Billion SG3010-T1	Billion SG3010-T2	Billion SG3010-T3	Billion SG3010-T4	
Connect Type						
		Left: Power Plug Right: Power Outlet	Left: 2 cores 16 AWG wire Right: 2 cores 16 AWG wire	Left: 2 cores 16 AWG wire Right: 1 x split-core CT (Single-phase 2-wire)	Left: 2 cores 16 AWG wire Right: 2 x split-core CT (Single-phase 3-wire)	
Rated Voltage		100~240V				
Rated Current		10A		50A(max100A)		
Frequency		50~60Hz				
Watt-hour Constant		kh 1.0		kh 7.2		
Accuracy	Watt-hour	0.5% (PF 1.0 Current ranging from 0.5 to 10Amp)		1% (PF 1.0 Current ranging from 2.5 to 50Amp)		
	Others	1% (Testing targets include Active Power, Voltage, Current, Apparent power, Power factor and Current ranging from 0.5 to 10 Amp)		2% (Testing targets include Active Power, Voltage, Current, Apparent power, Power factor and Current ranging from 2.5 to 50 Amp)		
Interface Connection		ZigBee				
Range	Wattage	0.01W-3000W	●	●		
		0.1W-30KW			●	●
	Power Factor	0-1.00	●	●	●	●
	Voltage	100.0V-240.0V	●	●	●	●
	Current	0.01A-10.00A	●	●		
		0.1A-100.0A			●	●
	Apparent power	5VA-3000VA	●	●		
		25VA-30KVA			●	●
	Total WH	0.001-9999kWh	●	●	●	●
	Interval WH	0.001-9999kWh	●	●	●	●
Power Surge Protection & Relay		●	●			
Power Consumption		Around 0.4W (Relay off) ~ 0.7W (Relay on)		Around 0.4W (Relay off) ~ 0.7W (Relay on)		
Operating Temperature		-20°C ~ +40°C				
Safety Certification		UL (CAT III 300V)				
Dimensions(cm)		10.06(W) x 3.8(H) x 3.4(D) (excluding cords) 126(W) x 3.5(H) x 3.4(D) (including cords)		10.06(W) x 3.8(H) x 3.4(D) (excluding cords) 68(W) x 3.5(H) x 3.4(D) (including cords)		
Weight		256g	139g	165g	230g	

\* Notes:  
1. Percentages are for reference and subject to change according to environment.  
2. All specifications are subject to change without prior notice.