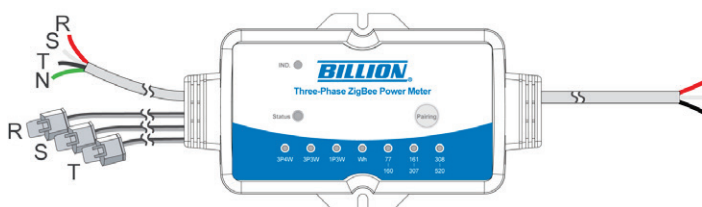


### Billion SG3030



**Three-phase ZigBee Power Meter**

### Billion SG3030S



**Three-phase RS485 Power Meter**

## Three-phase Power Meter Series

The Billion SG3030/SG3030S series is a cost-effective energy monitoring and management solution deployed in Home Area Networks (HAN), building, solar system and factory energy management. The Billion SG3030 is a ZigBee-based wireless power meter, while the Billion SG3030S is based on RS485 standards. Both meters can help households and building owners monitor power consumption in real time.

The Billion SG3030/SG3030S series is a wide range of multiphase line electronic meters that support single-phase three-wire, three-phase three-wire and three-phase four-wire systems. It supports a flexible power supply compatibility of AC 77~520V. User can be able to know the number of phases used and to monitor the status of device via the LED indicators on the front panel easily.

#### Comprehensive Measurement Capability

The Billion SG3030/SG3030S Series supports 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), etc. It allows users to capture energy usage statistics for trend analysis and usage profiling, a crucial step in adjusting energy usage patterns, ultimately saving money and energy consumption.

#### High Measurement Accuracy

The Billion SG3030/SG3030S Series is capable of measuring very small power consumption up to 0.001kWh, allowing users to monitor every moment of energy loss. Its measurement accuracy is in the range of  $\pm 1\%$  (At PF=1.0, based on rated current).

#### Dry Contact for External Appliance Control

The Billion SG3030/SG3030S Series supports Normal Open (NO) and Normal Closed (NC) dry contact for co-working with external magnetic contactor to control load side for reduce peak demand.

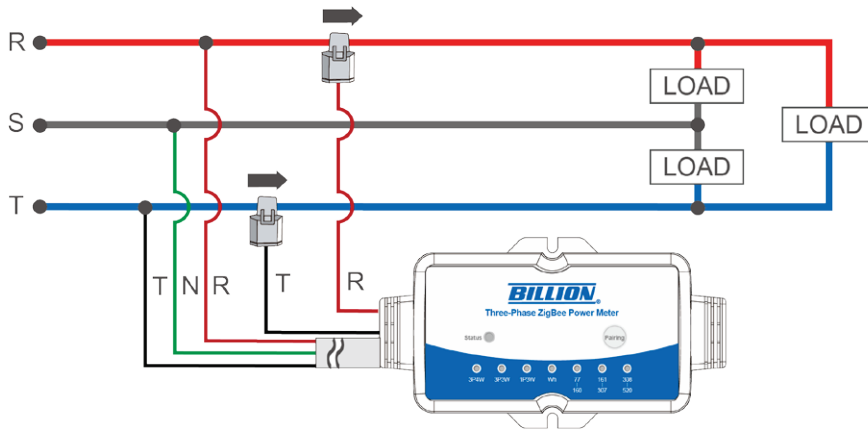
#### Easy Installation

The Billion SG3030/SG3030S is a compact-sized smart power meter which can be used as a standalone unit. It allows you to measure the energy usage of electronic appliances anywhere in your building.

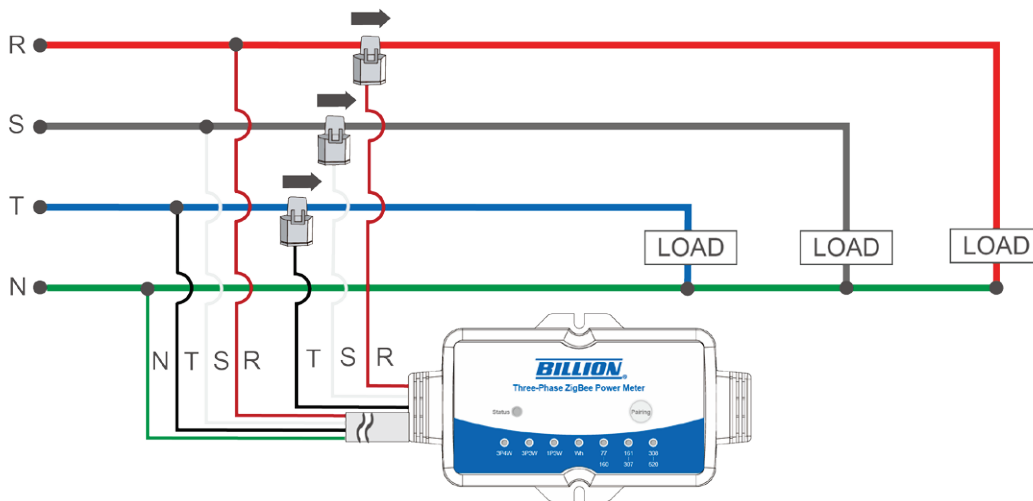
- Fully complied with IEEE 802.15.4 ZigBee standard
- Electricity usage data and other indicator information collection
- < 1% Wh accuracy
- Isolated RS-485 interface
- Dry contact for external appliance Control
- Compact size
- Designed for:
  - Building and office users
  - Utility companies
  - Solar monitoring
  - ZigBee network system integrator and planners
  - ZigBee end device manufacturers

## Wiring Installation:

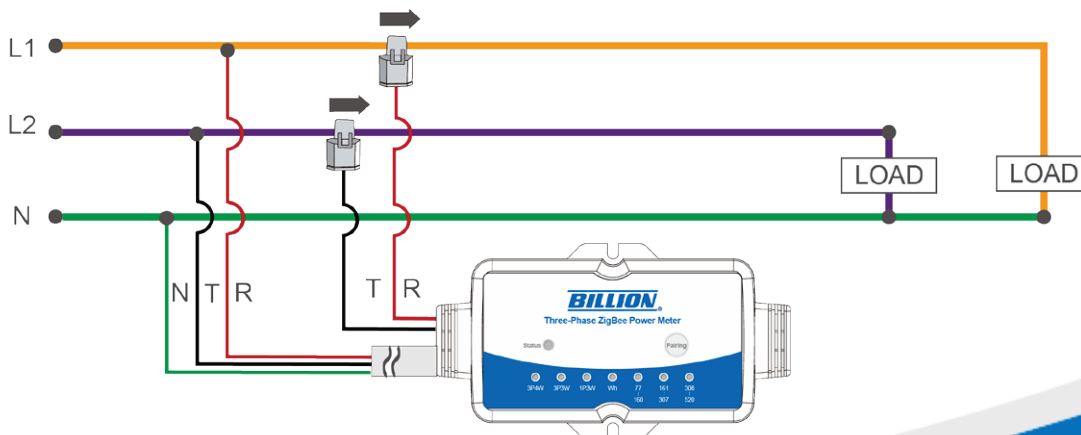
### 1. 3P3W:



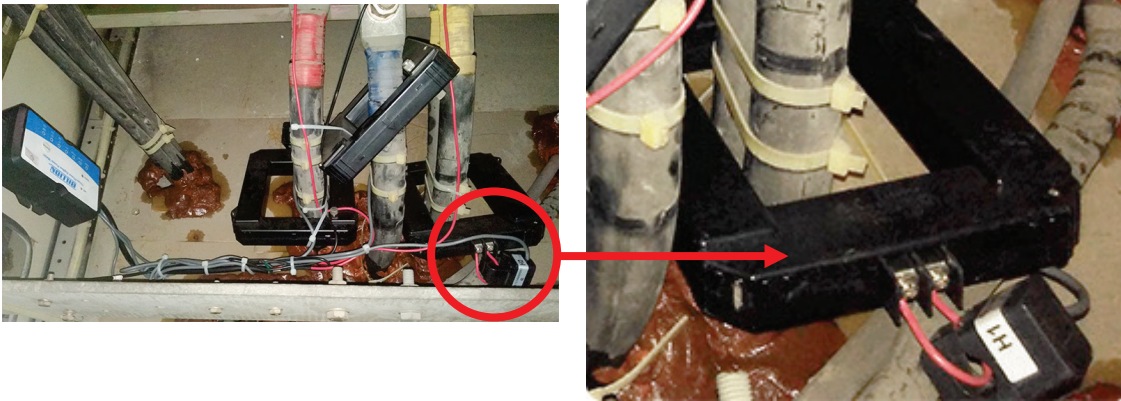
### 2. 3P4W:



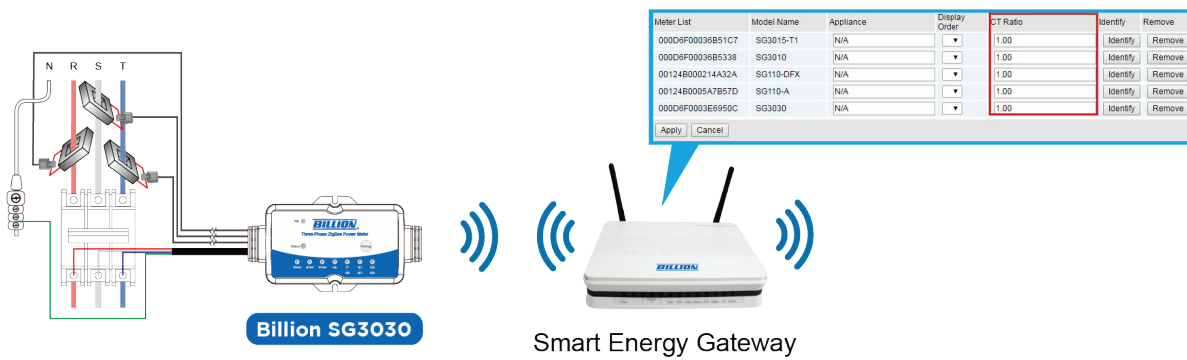
### 3. 1P3W:



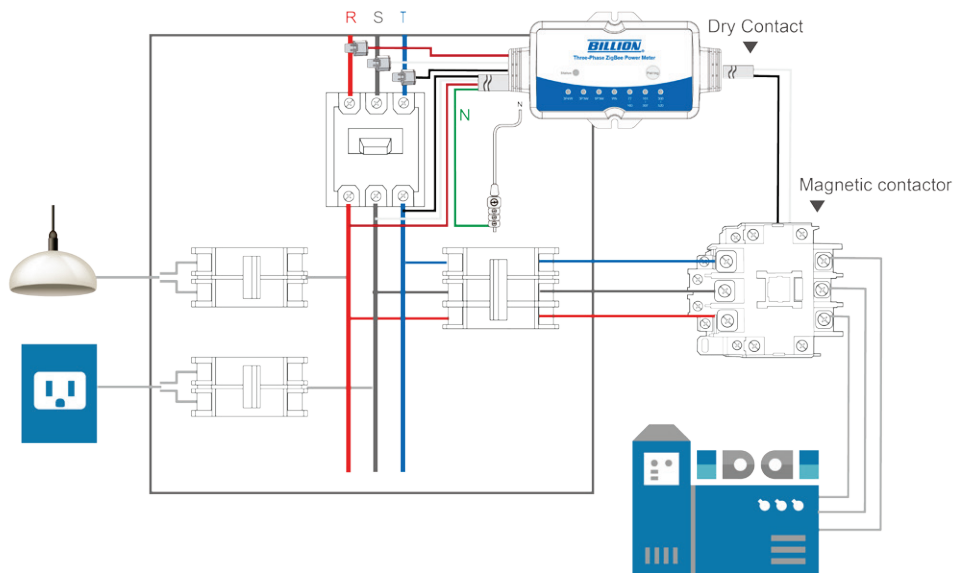
### Measurement of secondary site when current is over 300A:



CT ratio setting



### External appliance power on/off control via meter's dry contact:



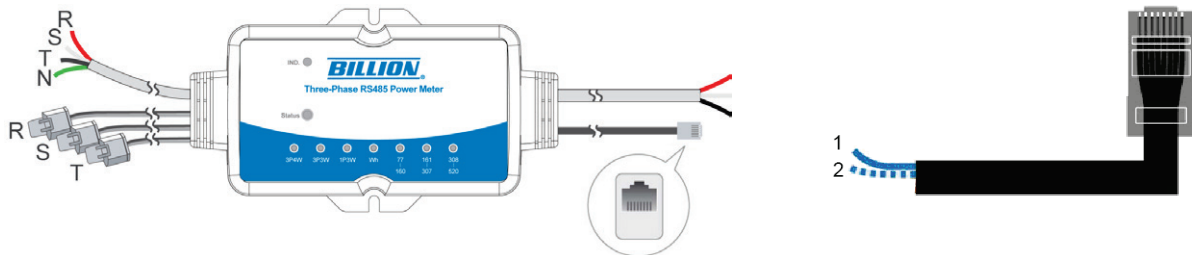
## PIN Definitions:

### 1. Pin definition for power cable



PIN	Color	Pin defines
1	Red	R
2	White	S
3	Black	T
4	Green	N

### 2. Pin definition for RS485 (SG3030S only)



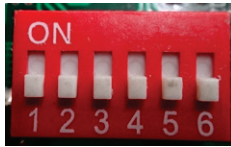
PIN	Color	RS-485 PORT
1	Blue	RS-485 – A signal
2	White Blue	RS-485 – B signal

### 3. Pin definition for dry contact:



PIN	Color	Pin defines
1	Red	Relay NO
2	White	Relay COM
3	Black	Relay NC

## Dip Switch Pin Defines



1	2	3	4	Modbus ID
ON	OFF	OFF	OFF	01
OFF	ON	OFF	OFF	02
ON	ON	ON	ON	0F
5		6		Phase
OFF		OFF		3P4W
OFF		ON		3P3W
ON		OFF		1P3W

## Installation Notice

1. Make sure that AC voltage does not exceed 520V.
2. Make sure that system for power supply is 3P4W, 3P3W or 1P3W.
3. Refer to the pin defines for RS485 (RS485 communication: RS-485 · 19200 bps N/8/1).
4. AC operation power is 77~520V (Out-of-spec is not allowed).
5. Avoid using the products outside or exposure to sunlight.
6. Avoid product exposure to rain, dust, dirt, oil, and gas.
7. Make sure that screws for terminals are tightened.

## Technical Specifications

Product Model		Billion SG3030	Billion SG3030S
Rated Current (CT inner diameter)		Standard: 100A CT(15.7mm) Option: 200A CT(24mm) / 300A CT(35mm)	
Rated Voltage	1P3W	2 x 110V	2 x 110V
	3P3W	3 x 110V / 220V / 440V	3 x 110V / 220V / 440V
	3P4W	3 x 110V / 220V / 277V	3 x 110V / 220V / 277V
Communication Interface		ZigBee	RS485
Operation power		0.6W~1.0W	0.6W~1.0W
Accuracy	Watt-hour	1% (at PF=1.0, based on rated current)	
	Others	1% (Tested measurement functions include Active Power, Voltage, Current, Apparent Power, Power Factor, and current ranging based on rated current)	
Operating Temperature		-20°C ~ +60°C	
Dimensions(cm)		17.3(W) x 9.5(H) x 4.0(D)	17.3(W) x 9.5(H) x 4.0(D)

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