PowerGate
Wireless Home Automation
Home Energy Meter

모델명	PG200
품명	파워게이트-센서형
정격	220V, 16A
제조사	㈜스타코프
제조년월일	2016년11월30일

SPECIFICATIONS

Model Number: PG200
Z-Wave Signal Frequency: KR (920.9MHz, 921.7MHz, 923.1MHz)
Power: 220V, 60Hz
Measure range: 0A to 32A
Range: Up to 100 metres LOS
Operating Temperature: 0 °c ~ 40°c
Product Type: Electric power meter in fuse box
Dimensions: 93 x 32 x 24 (mm)

FEATURES

It is a device that is installed in the fuse box of the house and can display current electric power and electricity amount in the house using Z-wave network in real time.

①	Clamp	③	Function Button
②	Power AC 220V	④	CT connector

DESCRIPTION

PowerGate is a Power Meter Sensor that measure whole home electric usage.
You can view power and power usage in your Z-Wave controller or your apps.
It helps you to monitor and efficiently manage your household electricity usage.
The built-in LED is On state by default. However you can change the state to the other state you want with the Basic set command.

WARNINGS AND CAUTIONS

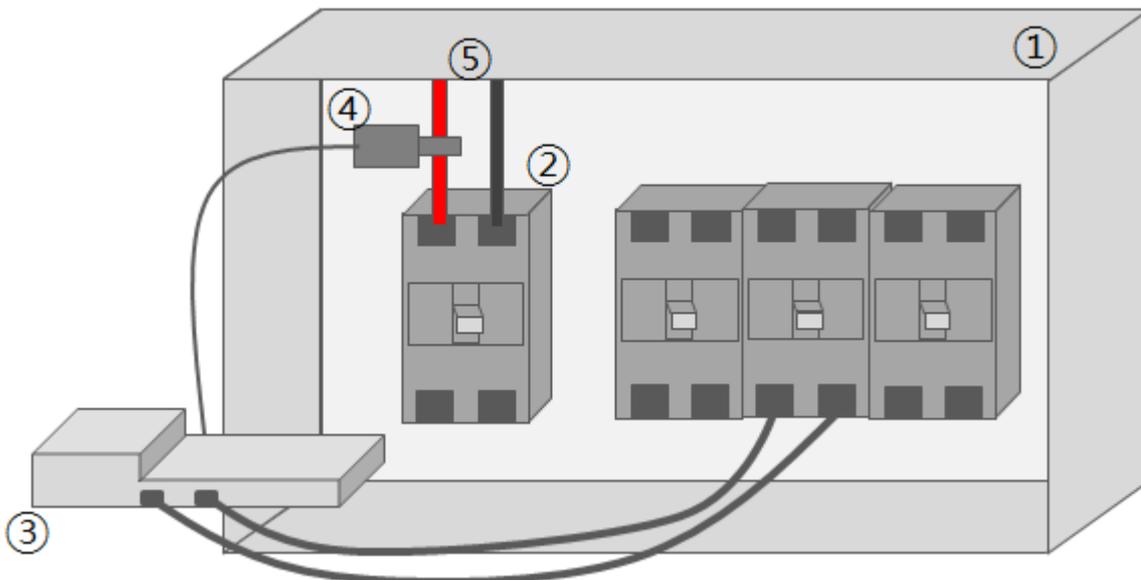Switch the main power off when installing PowerGate.
Do not disassemble this product.
This product is for two phase electric power only.
This product is not guaranteed to remotely operate in certain circumstances such as radio shadow area.
Do not install the products outdoors and/or humid environment.

INSTALLATION

①	Fuse Box	③	PowerGate
②	Main Circuit Breaker	④	Clamp
⑤	Incomming Power Lines		

1. Shut off power to the circuit at main circuit breaker.

   ※ **Warning: Verify switch is OFF to breaker before continuing.**
2. Open the fuse box panel.

3. Open clamp clip and connect to incoming power line on the main circuit breaker.

    ※ **Warning: Even if the main circuit breaker is down, the Power Line is still on. You must be carefull about electric shock.**

4. Connect the AC power line of PowerGate to circuit breaker except main circuit breaker.
5. Close the fuse box panel.
6. Turn on main circuit breaker.

OPERATIONS

Manual Control

PowerGate has only one operation button.
The following operations are possible with the button.

1. **Manually turn on LED**: press and release the button. The RED LED indicator will turn on.
2. **Manually turn off LED**: press and release the button. The RED LED indicator will turn off.
3. **Add for Inclusion**: When the controller is in add mode, press and hold the button for 3 seconds until the RED LED indicator blinks.
4. **Remove for Exclusion**: When the controller is in remove mode, press and hold the button for 3 seconds until the RED LED indicator flashes. When the PowerGate unit is disconnected from the Z-Wave network, the RED LED indicator will be toggled every second.
5. **Factory Reset:** press and hold button for 10 seconds until RED led indicators blink. PowerGate will be initialized and send a device reset locally notification to the controller. Use this function only if the primary controller is lost or otherwise inoperable.

Remote Control

PowerGate is Whole Home Energy Meter. You can measure the power and power consumption of the house electric usage.
Z-Wave remote controllers provide control of an Individual device, Groups of devices and Scenes. Please refer to your remote control's instructions for details on its capabilities and instructions for controlling devices.

Basic-Command Operations

This product is equipped with Red LED. You can turn the led on or off with the Basic command if it does not look good or if it does not match the house interior design. For more information, see Z-Wave Specification's command_class_basic_v2.

Association

Grouping ID	Max number of nodes	Description
1	1	Lifeline: Send device reset locally notification

Restoring Factory Defaults

All network settings and configuration parameters can all be restored to
their factory default settings by using manual reset the device or excluding from
network. Please refer to Manual Control - 5.

WIRELESS RANGE

This device complies with the Z-Wave standard of open-air, line of sight
transmission distances of 100 metres. Actual performance in a home depends
on the numbers of walls between the remote controller and the destination
device, the type of construction and the number of Z-Wave enabled devices
installed in the control network.

Z-Wave Interoperability

This product can be included and operated in any Z-Wave network with other Z-Wave
certified devices from other manufacturers and/or other applications. All non-battery
operated nodes within the network will act as repeaters regardless of vendor to increase
reliability of the network.

Z-Wave Specification

SDK version	6.61.00 (Z-Wave Plus)
Country	KR
Z-Wave hardware platform	ZM5101
Library	slave_enhanced_232
Roll Type	ROLE_TYPE_SLAVE_ALWAYS_ON
Basic Device Class	BASIC_TYPE_ROUTING_SLAVE
Generic Device Class	GENERIC_TYPE_METER
Specification Device Class	SPECIFIC_TYPE_WHOLE_HOME_METER_SIMPLE

No	Command Class	Command	Value	Operation
1	COMMAND_CLASS_BASIC_V2	BASIC_GET	BASIC_REPORT	LED status
		BASIC_SET	0x00	LED off
			0xFF	LED on
2	COMMAND_CLASS_METER_V2	METER_GET	METER_REPORT	value of Meter(0x00) or Watt(0x02)
		METER_RESET	-	initialize Meter
		※ Delta Time : not supported. Only current Watt and Meter is supported.		
3	COMMAND_CLASS_SENSOR_M	SENSOR_MULTILEVEL_G	SENSOR_MULTILEVE	value of Watt

	ULTILEVEL_V4	ET	L_REPORT	
4	COMMAND_CLASS_CRC_16_ENCAP_V1	CRC_16_ENCAP	payload of Command	encode/decode

Operation is subject to the following two conditions:

- This device may not cause interference.
- This device may accept any interference, including interference that may cause undesired operation of the device.

TROUBLESHOOTING

Cannot carry out add, remove or association

1. Confirm that the product is powered.
2. Check if the wireless distance is too far.
3. Check if the Z-Wave network is already connected or disconnected.

The LED indicator does not turn ON

1. Check the wiring connection.
2. Manually turn on with the program button on the product.

STARKOFF

12-22-16