

# Sigen Gateway HomeMax SP

## User Manual

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## Revision History

Version	Date	Description
01	2023.10.27	First official release.

# Overview

## Introduction




The focus of this document is to provide an overview of the Sigen Gateway HomeMax SP, including product description, networking, system operation, maintenance, etc.

## Readers

This document is suitable for product users and professionals.

## Sign Definition

The following signs may be used in the document to indicate security precautions or key information. Before installation and operation, familiarize yourself with signs and their definitions.

Signs	Definition
 <b>Danger</b>	Danger. Failure to comply may result in death or serious personal injury.
 <b>Warning</b>	Danger. Failure to comply may result in serious personal injury or property damage.
 <b>Caution</b>	Caution. Failure to comply will result in property damage.
<b>Tips</b>	Important or key information, and supplementary operation tips.

# Chapter 1 Safety Precautions

## Basic Information

Before installing, operating, and maintaining the equipment, familiarize yourself with this document.

The "Danger ", "Warning", "Caution" items described in this manual are only supplementary to all precautions.

The Company shall not be liable for equipment damage or property loss caused by the following reasons:

- Failure to obtain approval from the national, regional power authority.
- The installation environment does not meet international, national, or regional standards.
- Failure to observe local laws, regulations and norms when operating and maintaining equipment.
- The installation area does not meet the requirements of the equipment.
- Failure to follow the instructions and precautions in this document.
- Failure to follow the warning labels on equipment or tools.
- Negligent, improper operation or intentional damage.
- Damage caused by your or a third party's replacement of our equipment.
- The equipment is damaged by your or the third-party company to use the accessories supplied with the package and purchase and use the accessories of the same specifications for installation.
- Equipment damage caused by improper operations such as disassembling, replacing, or modifying the software code without authorization.
- Equipment damage caused by force majeure (such as war, earthquake, fire, storm, lightning, flood, debris flow, etc.).
- Damage caused by the failure of the natural environment or external power parameters to meet the standard requirements of the equipment during actual operation (for example, the actual operating temperature of the equipment is too high or too low).

- The equipment was stolen.
- The equipment is damaged after the warranty period.

## Safety Requirements

### Danger

- Do not expose the device to high temperature or heat sources (such as sunlight, fire, or heaters) around the equipment for a long time.
- Do not clean or soak the equipment with water, alcohol, or oil to avoid power leakage.
- Do not knock or impact the equipment. In case of an accident, please stop using the equipment immediately and contact your sales agent. The equipment shall be inspected and evaluated by professional personnel before continuing to use.

### Caution

- Do not use the equipment with faults. If the equipment appears abnormal (for example, appearance distortion), contact your sales agent.
- Carbon dioxide fire extinguishers and ABC dry powder fire extinguishers are recommended at home.

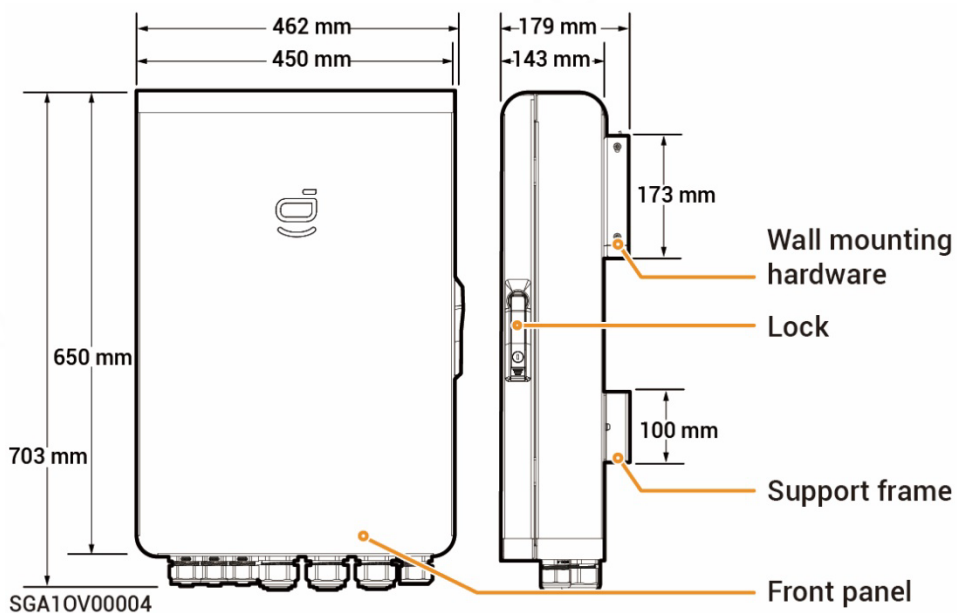
# Chapter 2 Product Introduction

## 2.1 Product Model

Product code	Model No.	Name	Function specification
Gateway	Sigen Gateway HomeMax SP	Sigen Energy Gateway HomeMax Single Phase	It's applicable for PV storage applications to facilitate data acquisition and monitoring, off-grid backup power switching, diesel generator control, energy management; it must be used with SigenStor BAT and inverter.

## 2.2 Appearance Introduction

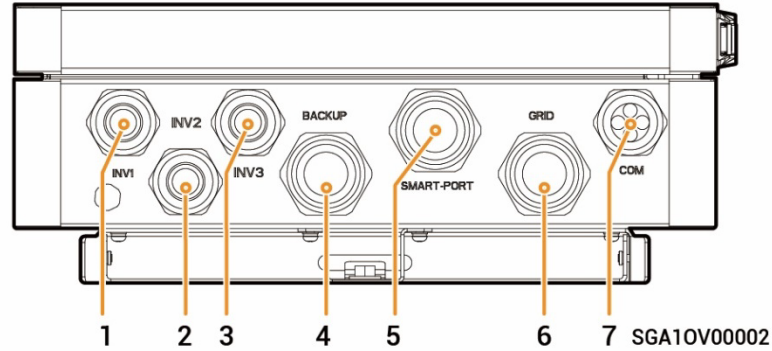
### 2.2.1 Appearance and Dimensions





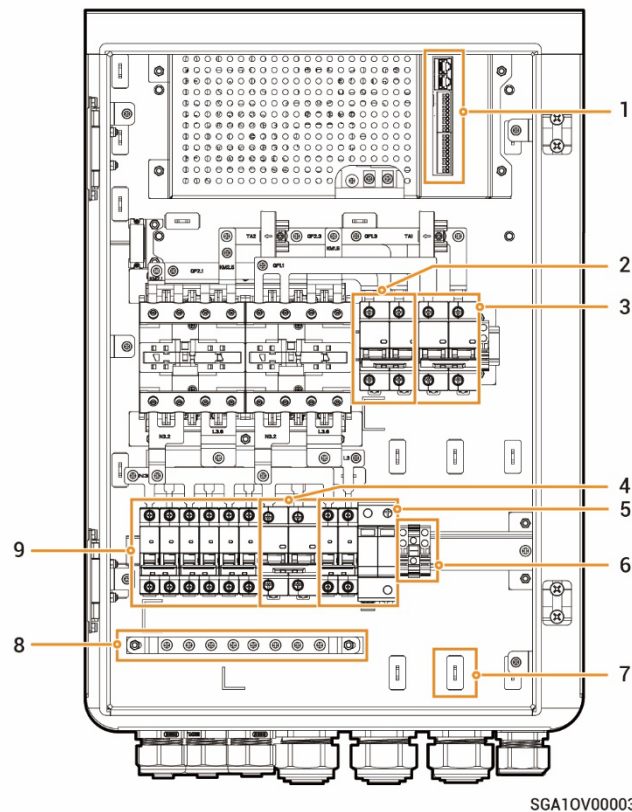
## 2.2.2 Port Introduction

### Bottom View








S/N	Name	Marking
1	Wire-in port of inverter 1	INV1
2	Wire-in port of inverter 2	INV2
3	Wire-in port of inverter 3	INV3
4	Wire-in port of distribution panel	BACKUP
5	Wire-in port for diesel generator/Electric equipment	SMART-PORT
6	Wire-in port of power grid	GRID
7	Wire-in port of communication	COM

## Interior View



S/N	Name
<b>1</b>	RJ45, RS485, DI, and DO interfaces
<b>2</b>	Miniature circuit breaker (Diesel generator/ Electric equipment)
<b>3</b>	Miniature circuit breaker (Power grid)
<b>4</b>	Miniature circuit breaker (Distribution panel)
<b>5</b>	Miniature circuit breaker + Surge protection Device
<b>6</b>	GND
<b>7</b>	Cable clamp
<b>8</b>	Ground copper bar
<b>9</b>	Miniature circuit breaker (Inverters 1, 2 and 3)

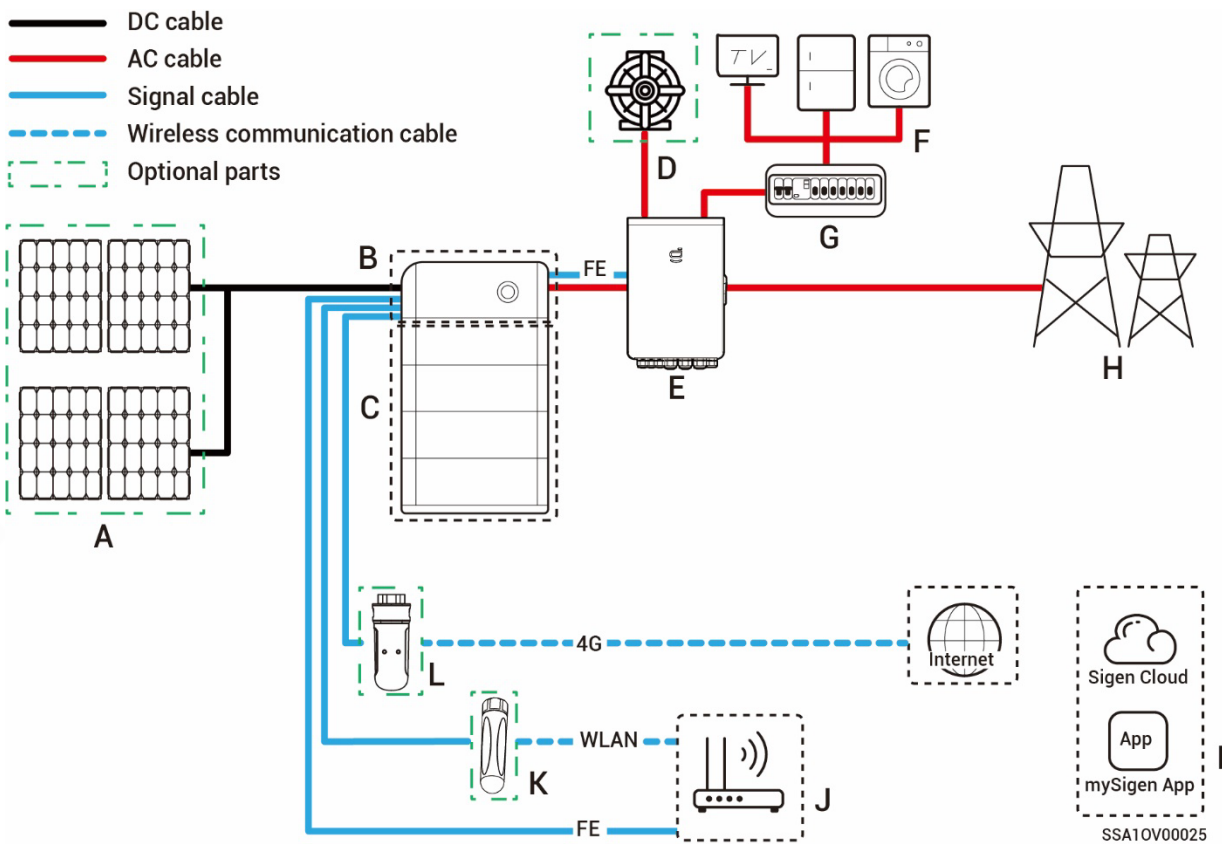
## 2.3 Label Description

Symbols	Definition
	Warning! Risk of High voltage. There is a risk of high voltage in the cover of the equipment. Please take precautions when operating the equipment.
	After the equipment is powered off, the discharge of internal components is delayed. Wait 5 minutes until the inverter is fully discharged according to the label time.
	Warning! Risk of burns. The equipment surface is hot. Do not touch the inverter when it is running. Doing so may result in burns.
	Please refer to the instructions to operate the equipment.
	Earthing mark

## 2.4 Typical Networking Introduction

The Sigen Gateway HomeMax SP is designed for a on-grid and off-grid systems on for home rooftop PV power. The on-grid and off-grid systems consists of photovoltaic panel, Gateway, Battery pack, inverters, Distribution panels, Electric equipment, Power grid and other components.

### Networking Diagram (Whole Home Backup)

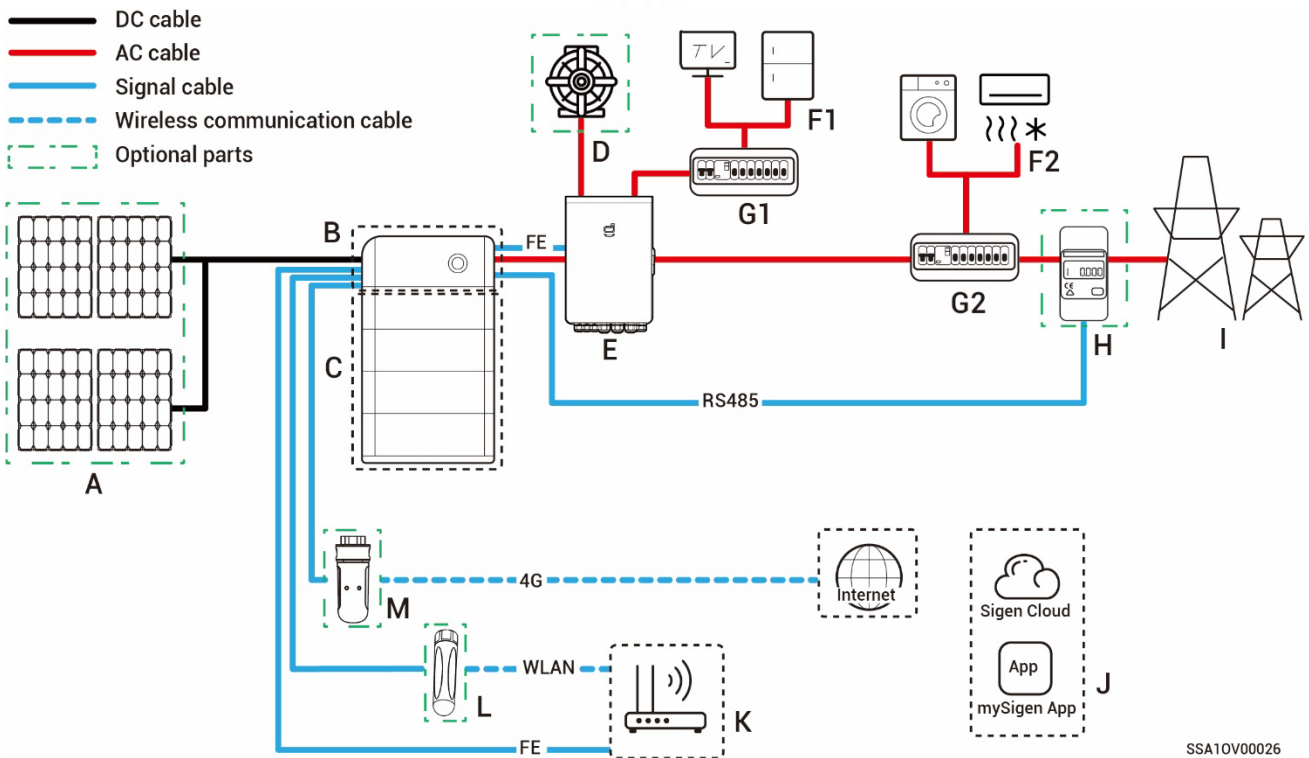


- A.** PV panel
- B.** SigenStor EC/SigenStor AC /Sigen Hybrid
- C.** SigenStor BAT
- D.** Diesel generator
- E.** Gateway
- F.** Backup Electric equipment
- G.** Backup Distribution panel
- H.** Power grid
- I.** mySigen
- J.** Router
- K.** Antenna
- L.** CommMod

**Tips**

- When B is SigenStor AC, A is not configured.
- As a backup energy source for long-term off-grid applications, the diesel generator can work in tandem with the Gateway to provide a smooth transition between PV, storage and diesel power generation.
- It is recommended to use FE and WLAN for communication with inverter. CommMod users must top up their own 4G data plan after a period of 2 years.

**Networking Diagram (Partial Home Backup)**



SSA10V00026

- A.** PV panel
- B.** SigenStor EC/SigenStor AC /Sigen Hybrid
- C.** SigenStor BAT
- D.** Diesel generator
- E.** Gateway
- F1.** Backup Electric equipment
- F2.** Non-Backup Electric equipment
- G1.** Backup Distribution panel
- G2.** Non-Backup Distribution panel
- H.** Power sensor
- I.** Power grid
- J.** mySigen
- K.** Router
- L.** Antenna
- M.** CommMod

## Tips

- When B is SigenStor AC, A is not configured.
- H has the function of data acquisition for grid connection points enables zero-power grid connection. For partial home backup, H does not need to be configured. For partial backup power and zero-power grid connection control networking, F2, G2 and H are all configured.
- As a backup energy source for long-term off-grid applications, the diesel generator can work in tandem with the Gateway to provide a smooth transition between PV, storage and diesel power generation.
- It is recommended to use FE and WLAN for communication with inverter. CommMod users must top up their own 4G data plan after a period of 2 years.

# Chapter 3 Site Selection

## Requirements

### Installation Environment Requirements

- Do not install the equipment in smoky, flammable, explosive, or corrosive environments.
- Do not install the equipment outdoors in areas prone to salt damage area, which are located less than 500 meters from the coastline or affected by sea wind.
- Do not install the equipment in environments exposed to direct sunlight, rain, standing water, snow accumulation, sand, and dust. It is recommended to install in a sheltered location. If the area is susceptible to natural disasters such as floods, landslides, earthquakes, or typhoons, take preventive measures during equipment installation.
- Do not install the equipment in an environment with strong electromagnetic interference.
- Ensure that the temperature and humidity of the installation environment comply with the equipment's requirements.

### Installation Position Requirements

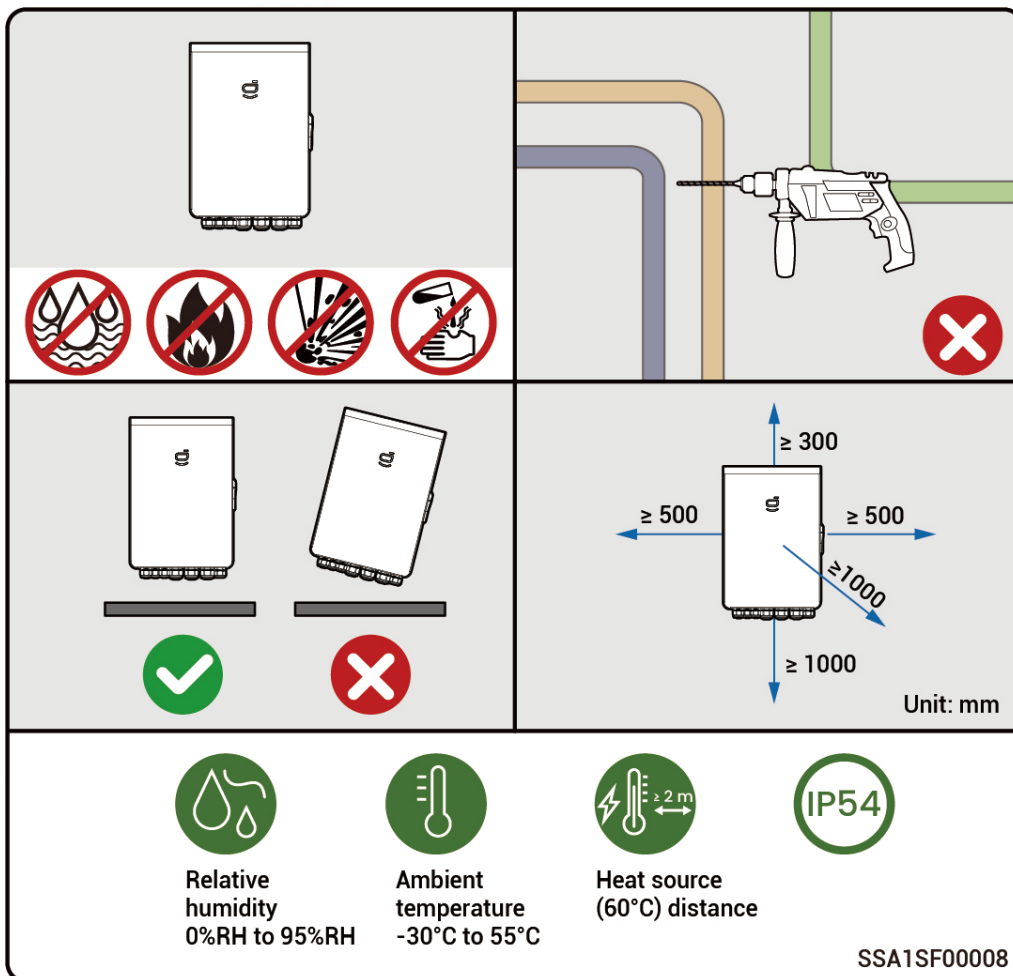
- Do not tilt or overturn the equipment to ensure that it is installed horizontally.
- Do not install the equipment in a place where children can easily reach it.
- Do not install the equipment in areas subject to fire or moisture (including but not limited to kitchen, tea room, toilet, shower room, laundry room, etc.).
- Please keep away from daily working and living areas (including but not limited to living room, bedroom, studio, lounge, study, etc.).
- Do not install the equipment in areas that are difficult to access (including but not limited to attic, basement, etc.).
- Do not install the equipment in mobile scenarios such as RVS, cruise ships,

and trains.

- You are advised to install the equipment in a position that is easy to operate, maintain, and view indicator status.
- When installing the equipment in the garage, do not install the equipment in the position where the vehicle passes through to avoid collision.

### Mounting Surface Requirements

- Do not install the equipment on a flammable carrier.
- The installation carrier must meet load-bearing requirements. Solid brick-concrete structure, concrete walls, and ground are recommended.
- The surface of the installation carrier must be smooth and the installation area must meet the installation space requirements.
- No water or electricity is routed inside the carrier to prevent drilling hazards during equipment installation.





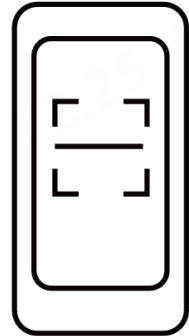
# Chapter 4 Equipment

## Installation and Wiring

Only company authorized personnel should install and connect the equipment.  
For details, see ***Sigen Gateway HomeMax SP Installation Guide***.

## 4.1 mySigen App Query

The App can be downloaded in the following two ways. For details, see **mySigen App User Manual**.



SSA1CM00014

# Chapter 5 System Maintenance

## 5.1 Routine Maintenance

To ensure the long-term running of the equipment, you are advised to perform routine maintenance according to this section.

Inspection content	Inspection method	Power off or not	Maintenance cycle
System cleaning	Check the device regularly for shielding and dirt. If so, clean it up. Do not use tools that may cause electric shock or insulation damage, such as wire brushes and wet towels during the cleaning process.	Yes	Once every three months.
System running state	<ul style="list-style-type: none"> <li>● Check whether the equipment is damaged or deformed.</li> <li>● Listen for any abnormal noises during the operation of the equipment.</li> <li>● When the equipment is running, check whether the equipment parameters are correctly set.</li> </ul>	No	Once every six months.

## 5.2 Troubleshooting

### Warning

- When gateway fails, immediately switch off all the miniature circuit breakers and check the circuit. Switch them on again after the failure is removed.
- The Gateway should be disconnected in the following order:
  1. Switch off the miniature circuit breaker (distribution panel) QF6 to disconnect the distribution panel from the equipment.
  2. Switch off the miniature circuit breakers (inverter) QF3, QF4, and QF5 to disconnect the inverter from the equipment.
  3. Switch off the miniature circuit breaker (power grid) QF1 to disconnect the equipment from the power grid.
  4. Switch off the miniature circuit breaker (diesel generator) QF2 to disconnect the diesel generator from the equipment. (Optional)
  5. Switch off the miniature circuit breaker (surge protection device) QF7 to disconnect the surge protection device from the equipment.

## 5.3 Emergency Treatment

### Emergency Measures for Fire

 **Danger**

- Please shut down the equipment or disconnect the main power switch when it is safe.
- If the fire is small, use carbon dioxide or ABC dry powder extinguisher to extinguish the fire.
- If the fire is spreading, evacuate the building or equipment area immediately and call the fire department. Re-entry to burning buildings is prohibited.
- Do not contact with high voltage components during fire fighting, otherwise it may lead to the risk of electric shock.
- After extinguishing the fire, do not use the equipment, please contact your sales agent.

### Emergency Measures for Flood

 **Danger**

- Please shut down the equipment or disconnect the main power switch when it is safe.
- After the flood waters recede, do not use the equipment. Please contact your sales agent.

# Chapter 6 Appendix

## 6.1 Technical Parameter

For details about equipment parameters, see the Data sheets of the product.