



# Off Grid Solar Solutions

2022



POWERED BY  
PROME





# Solar Energy around the world

In the past thousand of years, humankind mainly uses fossil energy, like oil, natural gas etc.

However, with global warm becoming worse, it will be not sustainable, since photovoltaic effect was found in 1839, solar energy has been developed dramatically. From earth to space , It is transforming our life and thinking.

In solar system, inverter is key device which is used to convert PV power to AC. Good inverter will improve your electrical quality and make us own better life.



# Why to choose hybrid inverter

## Inverter Function

Hybrid inverter integrates 2 function : Grid and EPS function, which means they can work like Grid tied inverter and Off grid inverter. When power cut occurs, battery system could provide enough power for the load.

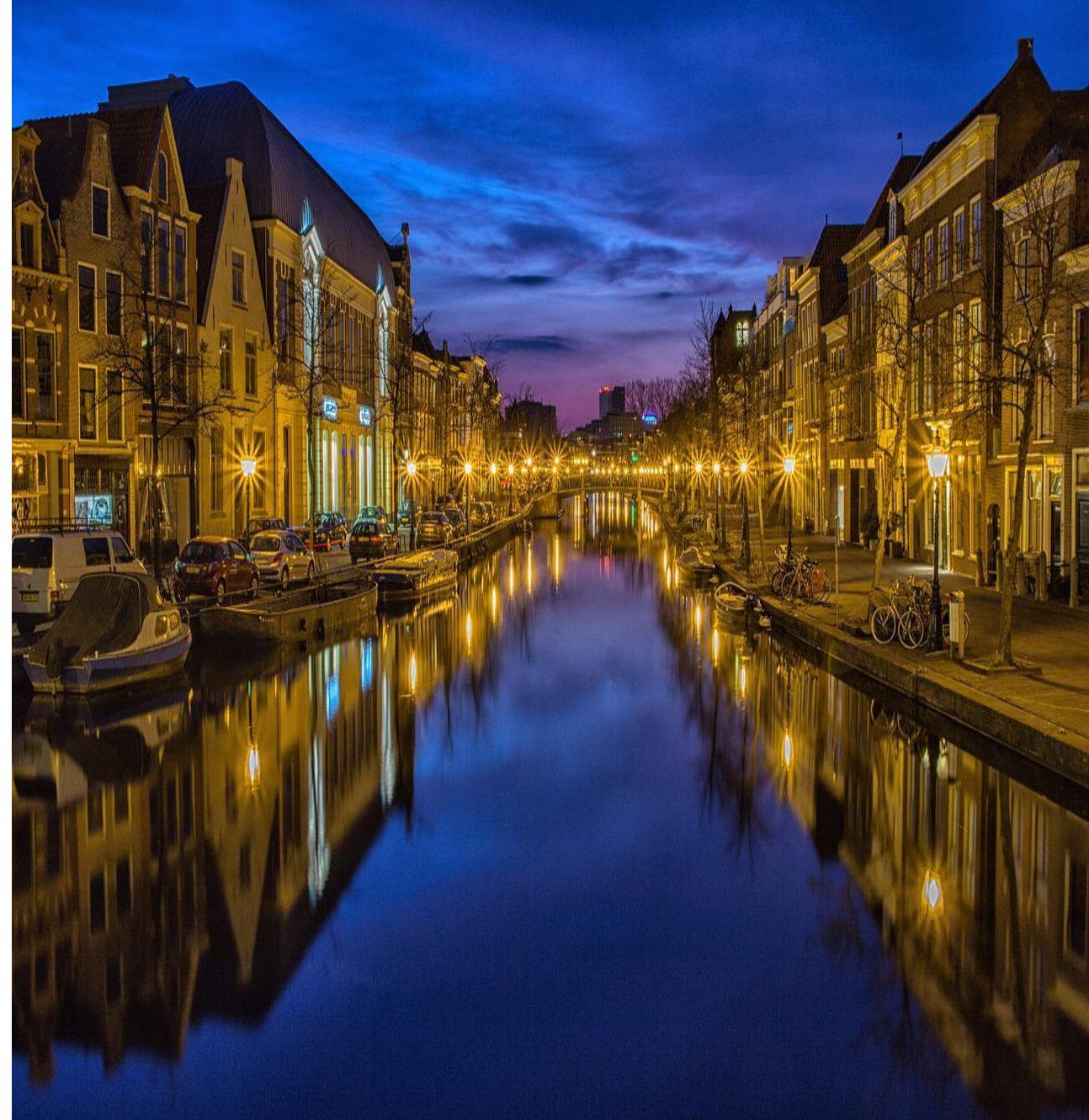
It can make full use of valley energy and benefit you a lot.

## Quality

Hybrid inverter has integrated perfect function and make inverter run without malfunction. Key components are designed for better quality and come from TI etc.

## Warranty

In usual, the warranty is 5 years. Not like off grid inverter, just 2 years.







## Mission Statement

Our mission is to create excellent smart products, including Inverter, Storage system, Smart remote monitoring, Smart Maintenance via Big Data etc.

## About US

HK Prome Smart Science Ltd. has been registered in HK, which aims to achieve the goal that make new energy become more affordable and help those people who can't use electricity. Equity is our pursue in the world.



## Hybrid inverter Application



Hybrid inverter is integrated with Grid and EPS function and own longer life span.

Our Hybrid products has been exported to many countries like America, Europe, Africa etc.







Mountain Aria



Family House



Island



Tour



Pasturing



Touring car

# How to choose hybrid inverter

## Inverter power

You need to have the statistics about your load and know about what are resistive and inductive load.

Our family load mainly contains Resistive and inductive load.

Capacitive load is like Light, Water heater, Electric oven etc.

Inductive load is like Air fan, Washing machine, Air conditioning, refrigerator, Electromotor etc.

In usual, hybrid grid inverter can have 2 times of rated AC output power. When Inductive load starts working, 3-7 times rated power of appliance is needed. For example, 1000W air conditioning, Peak surge power is 7000W, so you must choose 3500W inverter at least.

Air conditioner has 2 types: variable frequency air conditioner and Non-variable frequency. Non-variable frequency air conditioner needs to be calculated according to 7 times rated power. While variable frequency air conditioner is almost 4 times rated power. So 1000W variable frequency air conditioner can choose 2000W inverter.

## Inverter Efficiency

Hybrid inverter is integrated with Grid and EPS function. The efficiency should be larger than 96%

## IP Level

IP65; It could be used outdoors.

## Perfect protection function

anti-islanding protection; PV anti-reverse protection; Overcurrent protection etc.

## Warranty

5-10 years; Longer warranty could make you have no anxiety about after sale .



## Using Environment

-45~60°C

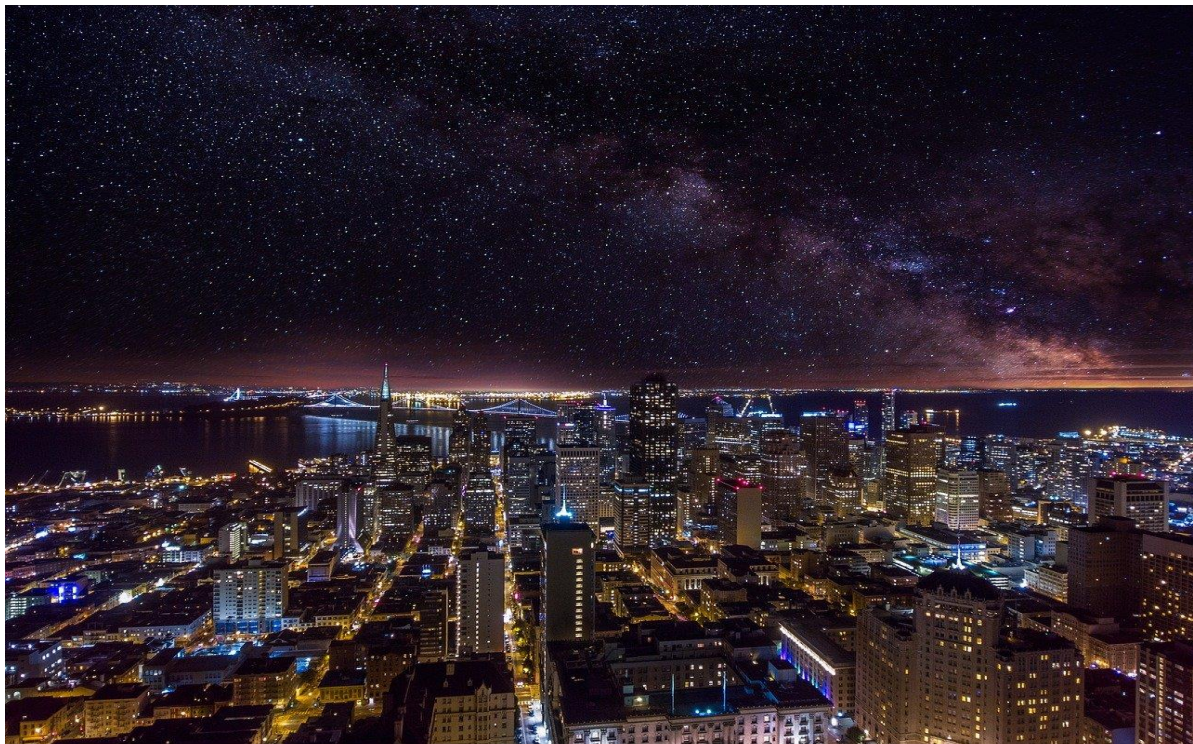
## Monitoring

Remote monitoring

## Communication

485 or CAN communication

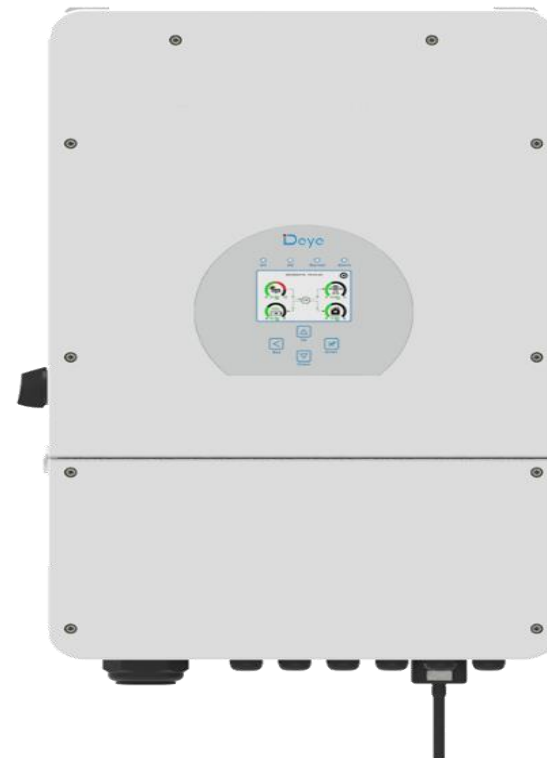




Here is SUN-5K Hybrid Inverter that is very popular in the world

IP65 protection level and it can be installed outdoor.

MAX 16 PCS in parallel for on-grid and off grid operation



## SUN-5K Hybrid INVERTER

SUN 5000VA

### Main Features

- Rated power 5000VA
- MAX 16 pcs in parallel
- MAX Charging and discharging current 120A



- DC couple and AC couple to retrofit existing solar system
- Support storing energy from diesel generator
- Colorful touch LCD, IP65 protection degree

- 6 time periods for battery charging/discharging



**Ideal Inverter for solar power**

**SUN-5K-SG03LP1-EU**

|                                |               |
|--------------------------------|---------------|
| Max PV Array Power             | 6500W         |
| Rated PV Input Voltage (V)     | 370 (125~500) |
| MPPT Voltage Range (V)         | 150-425       |
| Start-up Voltage (V)           | 125           |
| Full Load DC Voltage Range (V) | 300-425       |
| Parallel Capability            | YES, 16 Units |



|                                   |   |
|-----------------------------------|---|
| PV Input Current (A)              | 13+13                                     |
| Number of MPPT / Strings per MPPT | 2/1+1                                     |
| AC Output                         |   |
| Rated AC Output and UPS Power (W) | 5000                                      |
| Max. AC Output Power (W)          | 5500                                      |
| AC Output Rated Current (A)       | 22.7                                      |
| Max. AC Current (A)               | 25  |
| Peak Power                        | 2 time of rated power, 10 S               |
| Power Factor                      | 0.8 leading to 0.8 lagging                |
| Output Frequency and Voltage      | 50/60Hz; L/N/PE 220/230Vac (single phase) |
| Grid Type                         | Single Phase                              |
| DC injection current (mA)         | THD<3% (Linear load<1.5%)                 |
| Efficiency                        |   |
| Max. Efficiency                   | 97.6%                                     |
| Euro Efficiency                   | 96.5%                                     |
| MPPT Efficiency                   | > 99%                                     |



### Battery input data

|   |                                  |
|---|----------------------------------|
| battery type                              | Lead acid battery or Lithium-ion |
| Battery Voltage Range (V)                 | 40~60V                           |
| Max. Charging Current (A)                 | 120                              |
| Max. Discharging Current (A)              | 120                              |
| Charging Curve                            | 3 Stages / Equalization          |
| Charging strategy for lithium-ion battery | Self-adaption to BMS             |

### Protection

PV Input Lightning Protection  
Anti-islanding Protection  
PV String Input Reverse Polarity Protection  
Insulation Resistor Detection  
Residual Current Monitoring Unit  
Output Over Current Protection,  
Surge protection

### Certifications and Standards

|                       |   |
|-----------------------|---|
| Grid Regulation       | EN50549, AS4777.2, VDE0126, IEC61727, VDE N4105, G99, NBT32004, CEI0-21, NRS097, NBR16149/16150, RD1699 |
| Safety EMC / Standard | IEC62109-1/-2, EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4                                       |

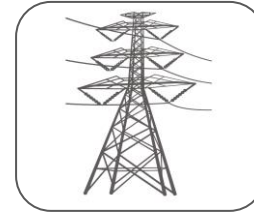
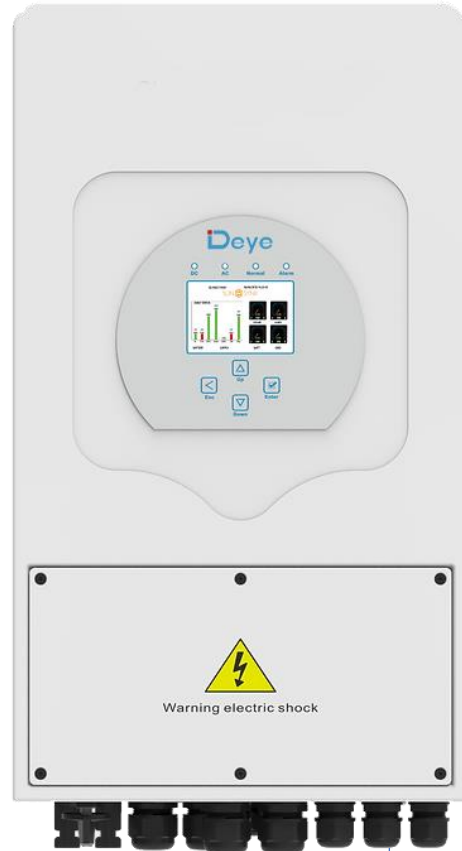
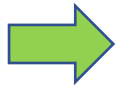
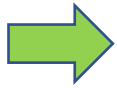
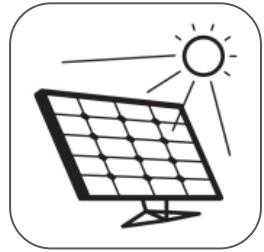


General Data

|                                  |                          |
|----------------------------------|--------------------------|
| Operating Temperature Range (°C) | -45~60°C, >46°C derating |
| Cooling                          | Natural cooling          |
| Noise (dB)                       | <30 dB                   |
| Communication with BMS           | RS485; CAN               |
| Weight (kg)                      | 20.5                     |
| Size (mm)                        | 330W x 580H x232D        |
| Protection Degree                | IP65                     |
| Installation Style               | Wall-mounted             |
| Warranty                         | 5 years                  |



# System Diagram

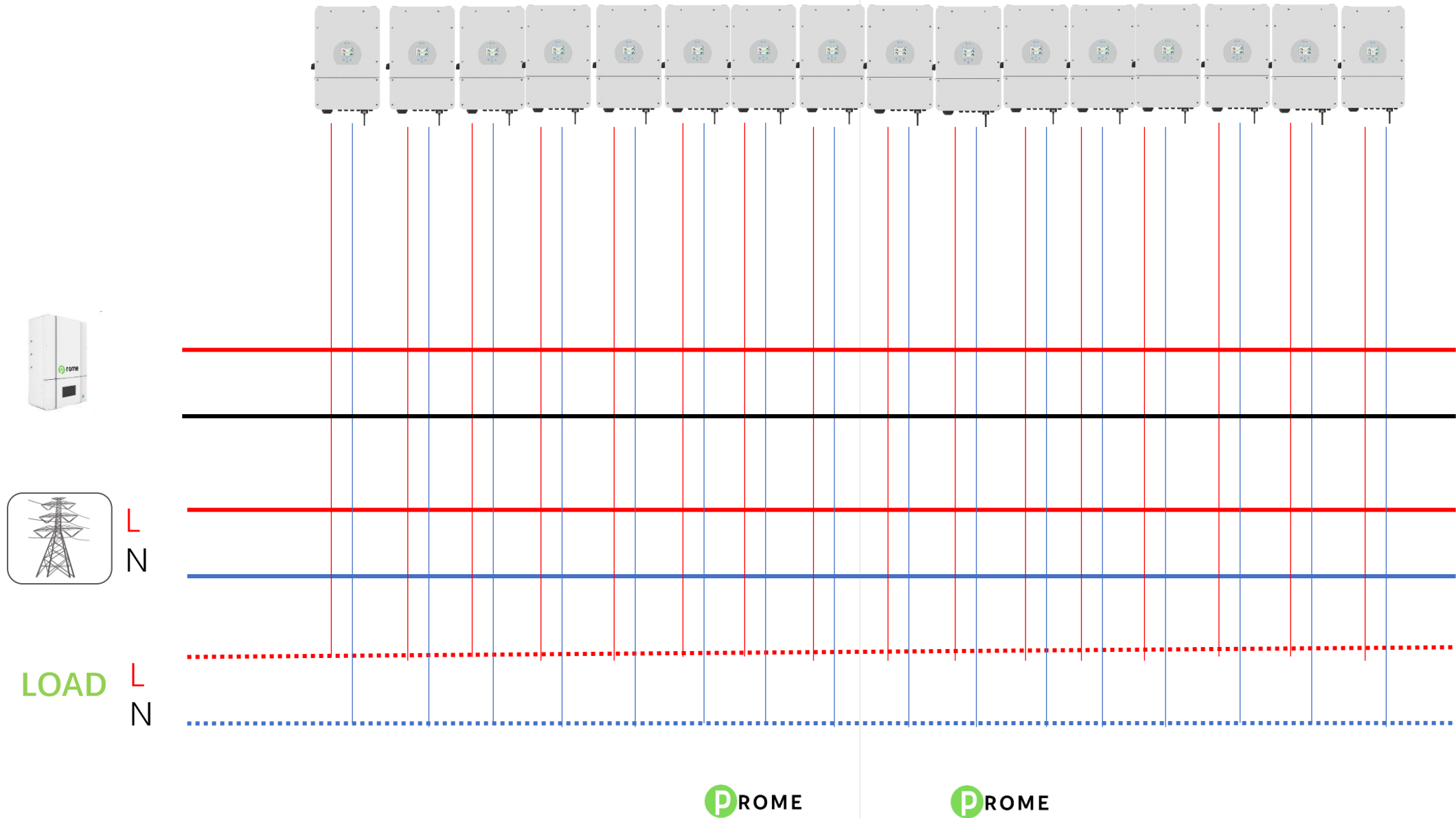


 PROME

 PROME



# 80KW GRID APPLICATION









## **PROME SMART SCIENCE Ltd. HK**



8th Floor, Qishi Bldg., number 45-51, Qixiandao Blvd., Jianshazhui, Jiulong, Hongkong

Want to know more?

Email us: [sales@promesx.com](mailto:sales@promesx.com)

Website: [www.promesx.com](http://www.promesx.com)