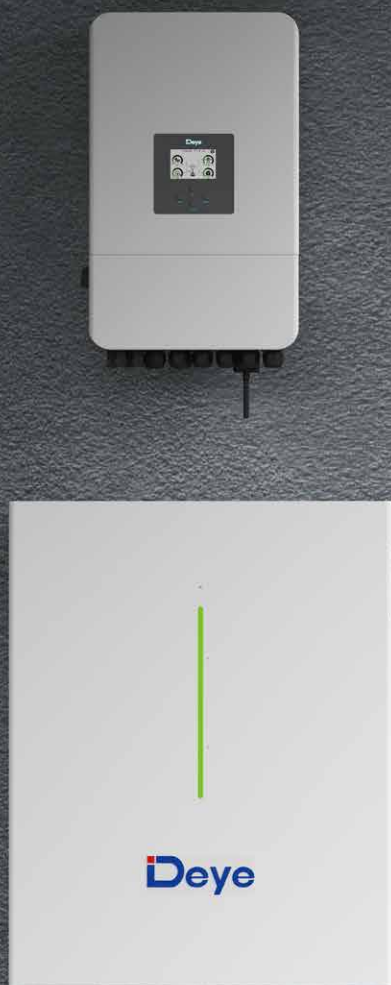


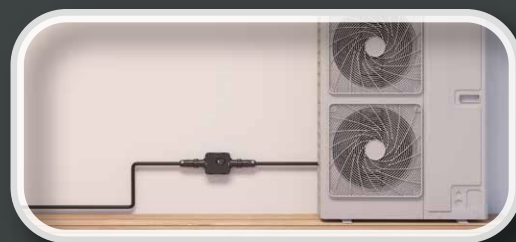


## wireless energy management system

A smart load management and home automation solution based on LoRa communication



Smart Plug



Smart Switch



Smart EV Charger




Wireless CT

 low latency

 Supports all Deye hybrid inverters

 Easily define non-essential and critical loads

 Offline operation

 Maximize the use of solar power

 Minimize the electricity bill as much as possible

 LoRa communication

 Smart Load management

 Charging control strategy based on time and SOC

# Deye

## wireless energy management system

A smart load management and home automation solution based on LoRa communication.

All Deye hybrid inverters can serve as the local control center for the Deye Smart Home IoT System. Simply install the Deye Smart Transmitter(TX) to the inverter's Meter port to easily pair with Deye LoRa devices.



Deye Wireless CT is installed in the distribution box to monitor power consumption, Supports both LoRa and RS485 communication methods simultaneously.



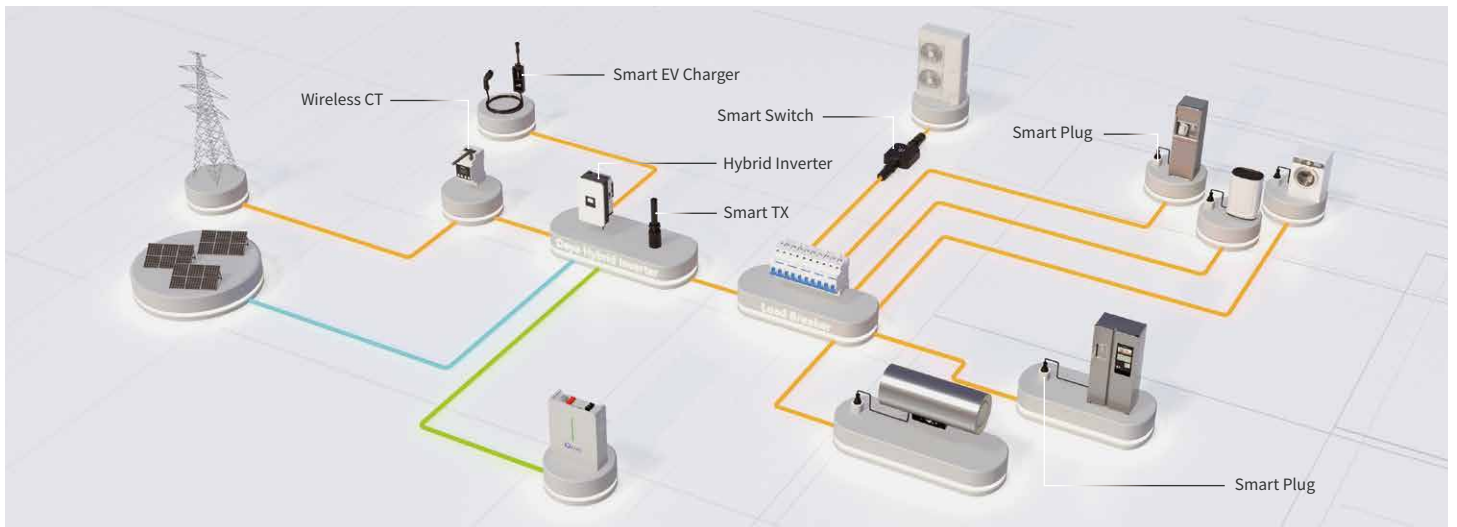
Deye Smart Plug can be easily installed in any standard socket, instantly upgrading the appliance plugged in to a smart device.



Deye Smart Switch is designed for outdoor high-power loads, offering the same logic control as Smart Plugs, supporting both single-phase and three-phase loads. With the Deye Cloud APP or directly on the inverter's screen, you can customize the on/off logic for each Smart Plug based on factors like time and battery SOC levels.



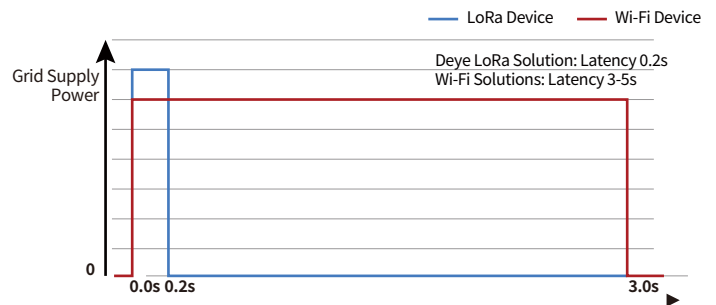
Deye Smart EV Charger can be directly connected to any AC port of the inverter and is controlled by the inverter via LoRa communication. It offers flexible options to take advantage of low-cost electricity, with modes such as Plug and Play, Time of Charge, or Solar Energy Only.



## Why choose LoRa communication solutions?

LoRa devices have shorter wake-up times and lower communication latency, ensuring instant response. In comparison, Wi-Fi devices typically take longer to wake up and may experience longer communication latency due to routing data and commands through the cloud platform. Excessive latency makes it difficult for household energy systems to maintain stable operation. If the Internet is not available, the Wi-Fi device may not be able to communicate with the server. But Deye's IoT devices communicate via LoRa protocol, so these devices can continue to conduct local commands.

### Zero-Export Function Response Time Diagram



Comparison of Response Times for CTs Based on LoRa Communication vs. WiFi Communication

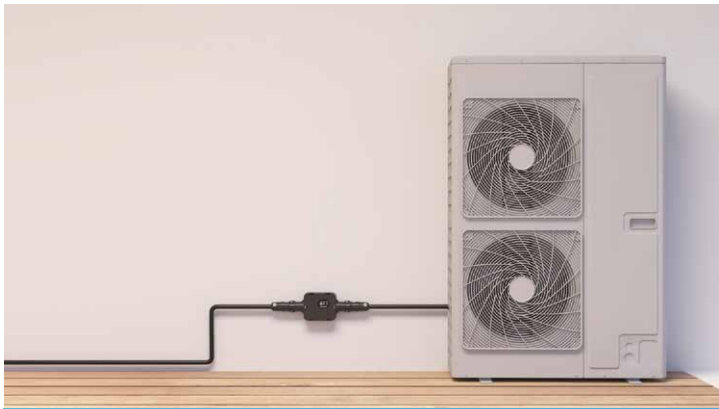


**Model** SUN-SMART-CT01

| <b>Electrical parameters</b>     |   |
|----------------------------------|---|
| Connection Type                  | L1/N(Single phase) , L1/L2/L3/N(Three phase)                              |
| CT                               | Secondary current: 50mA   |
| Operation Voltage                | 85~300Va.c.(L-N)  |
| Rated Frequency/Range            | 50Hz(45Hz-55Hz)/60Hz(55Hz-65Hz)   |
| Self Consumption Power           | ≤2W   |
| AC voltage withstand             | 4KV/1min  |
| <b>Accuracy</b>                  |   |
| Voltage                          | ±0.1V   |
| Current                          | ±0.01A  |
| Frequency                        | ±0.01Hz   |
| Power                            | ±1W   |
| <b>Communication and Display</b> |   |
| Communication Interface          | Lora/RS485  |
| Lora Communication Distance      | ≈200m(Barrier free)   |
| Display                          | LCD   |
| Display Data                     | Voltage、Current、Active power、Reactive power、Frequency、Power Factor、Energy |
| <b>General Data</b>              |   |
| Operation Temperature            | -40 to +60°C  |
| Operation Humidity               | 0-75%   |
| Ingress Protection(IP) Rating    | IP20  |
| Altitude                         | ≤4000   |
| Mounting                         | DIN-Rail Mounting   |
| Size                             | 53x96x64mm  |
| Weight                           | 0.15kg  |
| Warranty                         | 5 Years   |
| Certification standards          | IEC/EN 61010-1  |

**Model** SUN-SMART-TX01

| <b>Electrical Parameters</b>  |                               |
|-------------------------------|-------------------------------|
| Input Voltage                 | DC 5V                         |
| <b>Communication</b>          |                               |
| Communication Model           | LoRa                          |
| Communication Distance        | ≈200m(Barrier free)           |
| <b>Basic Parameters</b>       |                               |
| Operating Temperature Range   | -40 to +60°C                  |
| Permissible Ambient Humidity  | 0-100%                        |
| Ingress Protection(IP) Rating | IP20(After installation IP65) |
| Allowable Altitude            | ≤4000                         |
| Product size (WxHxD)          | 137.8x31.3x31.3mm             |
| Weight                        | 45.8g                         |
| Warranty                      | 2 Years                       |
| Standard                      | IEC/EN 62368-1                |
| <b>LoRa Parameters</b>        |                               |
| Frequency Range               | 863MHz-870MHz                 |
| Antenna                       | Built-in                      |
| Antenna Gain                  | 0.56dBi                       |



**Model** SUN-SMART-SWITCH01P3

| Electrical Parameters         |   |
|-------------------------------|---|
| Voltage Range                 | 94-238Va.c.(Phase voltage)                  |
| Connection Type               | L1/N(single phase), L1/L2/L3/N(three phase) |
| Maximum Current               | 25Aa.c.(Phase current)                      |
| Frequency and Range           | 50Hz(45Hz-55Hz)/ 60Hz(55Hz-65Hz)            |
| Connection                    | Connector plug-in type                      |
| Communication                 |   |
| Communication Model           | LoRa  |
| Lora Communication Distance   | ≈200m(Barrier free)                         |
| Basic Parameters              |   |
| Working Temperature Range     | -40 to +45°C                                |
| Allow Environmental Humidity  | 0-100% RH                                   |
| Ingress Protection(IP) Rating | IP65  |
| Protection level              | CLASS I                                     |
| Allowable altitude            | ≤4000m                                      |
| Product size (WxHxD)          | 96.7x204.7x37.7mm                           |
| Weight                        | 0.4kg                                       |
| Warranty                      | 5 Years                                     |
| Standard                      | IEC/EN 61010-1                              |
| Lora Parameters               |   |
| Frequency Range               | 863MHz-870MHz                               |
| Antenna                       | Internal antenna                            |
| Antenna Gain                  | 1.58dBi@868MHz                              |

**Model** SUN-SMART-PLUG01-F

| Electrical Parameters         |                                 |
|-------------------------------|---------------------------------|
| Rated voltage                 | 220-250Va.c.                    |
| Maximum current               | 16Aa.c.                         |
| Frequency and Range           | 50Hz(45Hz-55Hz)/60Hz(55Hz-65Hz) |
| Connection                    | Plug-type                       |
| Communication                 |                                 |
| Communication Model           | LoRa                            |
| Lora Communication Distance   | ≈200m(Barrier free)             |
| Basic Parameters              |                                 |
| Working Temperature Range     | -40 to +60°C                    |
| Ingress Protection(IP) Rating | IP20                            |
| Protection level              | CLASS I                         |
| Allowable altitude            | ≤3000m                          |
| Product size (WxHxD)          | 51.2x51.2x64mm                  |
| Weight                        | 0.08kg                          |
| Warranty                      | 5 Years                         |
| Standard                      | VDE 0620-2-1;EN 61058           |
| LoRa                          |                                 |
| Frequency Range               | 863MHz-870MHz                   |
| Antenna                       | Internal antenna                |
| Antenna Gain                  | 0.3.23dBi@868MHz                |



| Model | SUN-EVSE11K01-EU-AC | SUN-EVSE22K01-EU-AC |
|-------|---------------------|---------------------|
|-------|---------------------|---------------------|

| Product Parameter                |   |   |
|----------------------------------|---|---|
| Input Voltage/Range (V)          | 230/400   | 230(single phase), 230/400(three phase) |
| Connection Mode                  | 3L+N+PE   | L+N+PE,3L+N+PE                          |
| Input Current (A)                | 16  | 32                                      |
| Input Frequency/Range            | 50/45-55, 60/55-65  |   |
| Maximum Output Power (kW)        | 11  | 7(single phase)/ 22(three phase)        |
| Starting Method                  | Plug and Charge /Charge after Scanning/Appointment for Charging   |   |
| Equipment Protection             |   |   |
| Over Temperature Protection      | Yes   |   |
| Low Temperature Protection       | Yes   |   |
| Over Voltage Protection          | Yes   |   |
| Under Voltage Protection         | Yes   |   |
| Short Circuit Protection         | Yes   |   |
| Over Load Protection             | Yes   |   |
| Earth Fault Protection           | Yes   |   |
| Leakage Current Protection       | DC 6mA  |   |
| Surge Protection Level           | TYPE II   |   |
| General Data                     |   |   |
| Operating Temperature Range (°C) | -40 to +55  |   |
| Permissible Ambient Humidity     | 5%~95% No condensation  |   |
| Permissible Altitude (m)         | ≤3000   |   |
| Noise (dB)                       | <25   |   |
| Ingress Protection(IP) Rating    | IP 66   |   |
| Cabinet Size (WxHxD mm)          | 104x264x57.5  |   |
| Weight (kg)                      | 3.7   |   |
| Gun Cable Length (m)             | 4.2   |   |
| Number Of Charging Guns          | 1   |   |
| MTBF                             | 100,000h  |   |
| Safety EMC/Standard              | EN IEC 61851-1:2019, IEC 61851-1:2017, EN 300 220-2 V3.1.1:2017, EN 300 328 V2.2.2:2019, EN IEC 62311:2020<br>EN 301 489-1 V2.2.3:2019, EN 301 489-3 V2.3.2:2023, EN 301 489-17 V3.3.1:2024, EN IEC 61000-6-1:2019<br>EN IEC 61000-6-3:2021, EN IEC 61851-21-2:2021 |   |
| Interface                        |   |   |
| Communication Mode               | LoRa/Wi-Fi/BLE  |   |





**Ningbo Deye Inverter Technology Co., Ltd.**

Address: No. 26 South YongJiang Road, Daqi, Beilun, NingBo, Zhejiang, China.



Deye Inverter

