

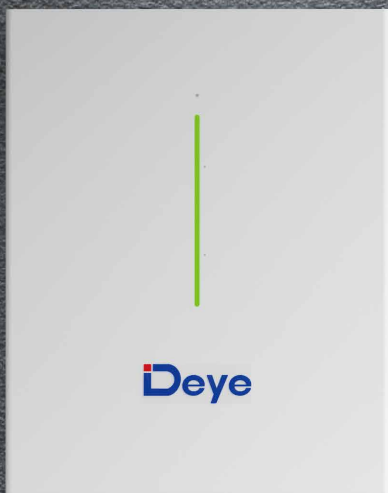


wireless energy management system

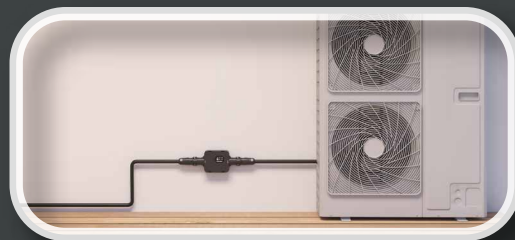
A smart load management and home automation solution based on LoRa communication

One Smart TX supports up to:

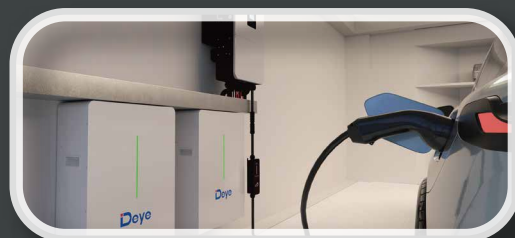
- 10 × Smart Plugs & Smart Switches
- 2 × Wireless CTs
- 1 × Smart EV Charger



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 wired (RS485) & wireless (LoRa/Wi-Fi) communication.



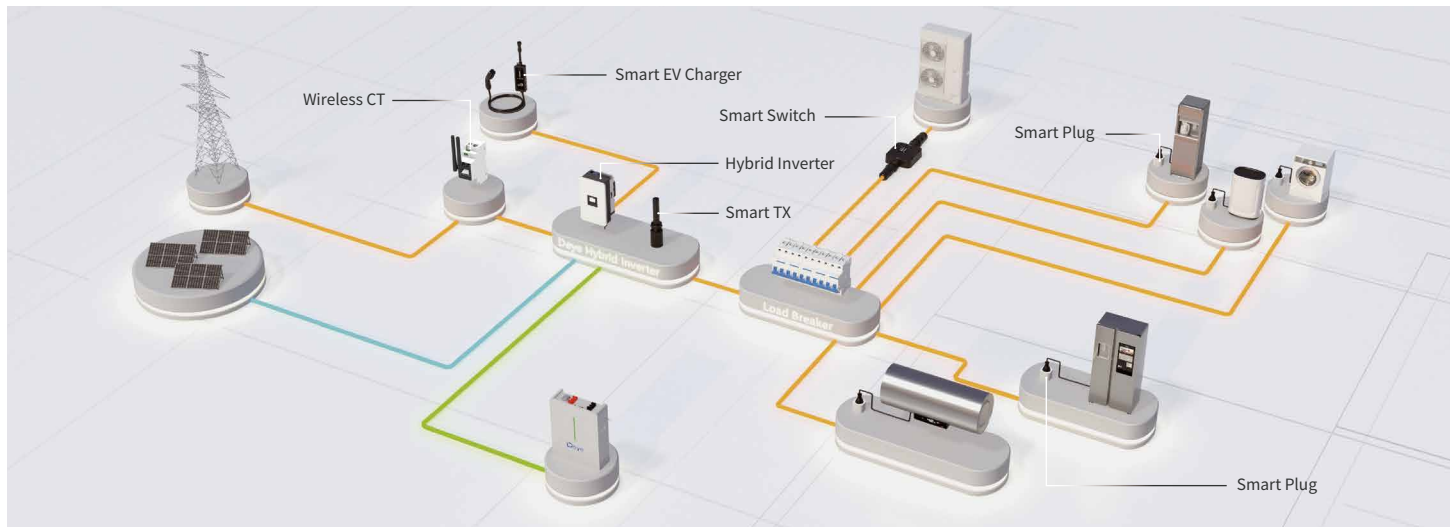
Deye Smart Plug can be easily plugged into any standard socket, instantly upgrading the plugged-in appliance to a smart device.



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 Switch 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-Use Charging, or Solar Energy Only.



Why choose LoRa communication solutions?

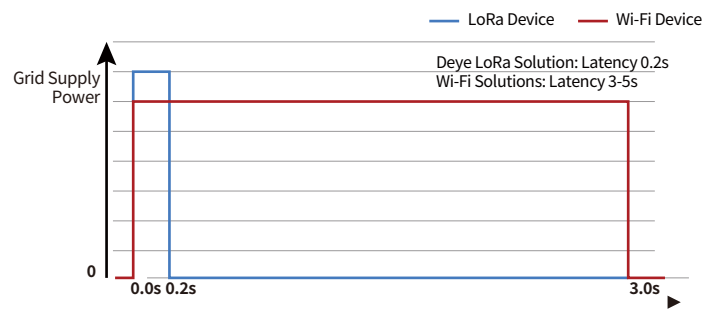
LoRa devices have shorter wake-up times and lower communication latency, ensuring instant response.

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.

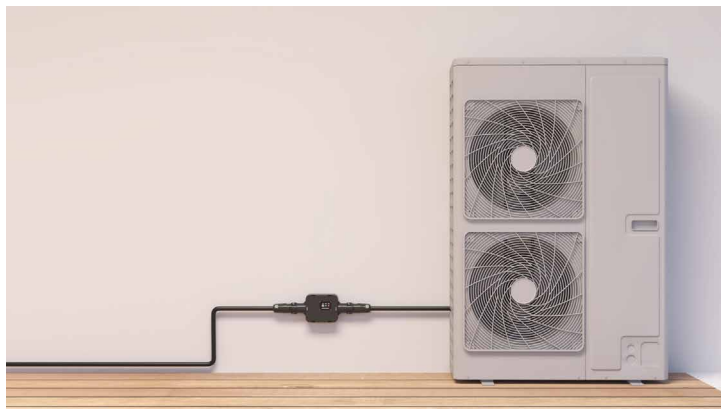
Excessive latency makes it difficult for household energy systems to maintain stable operation.

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 execute local commands.

Zero-Export Function Response Time Diagram



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

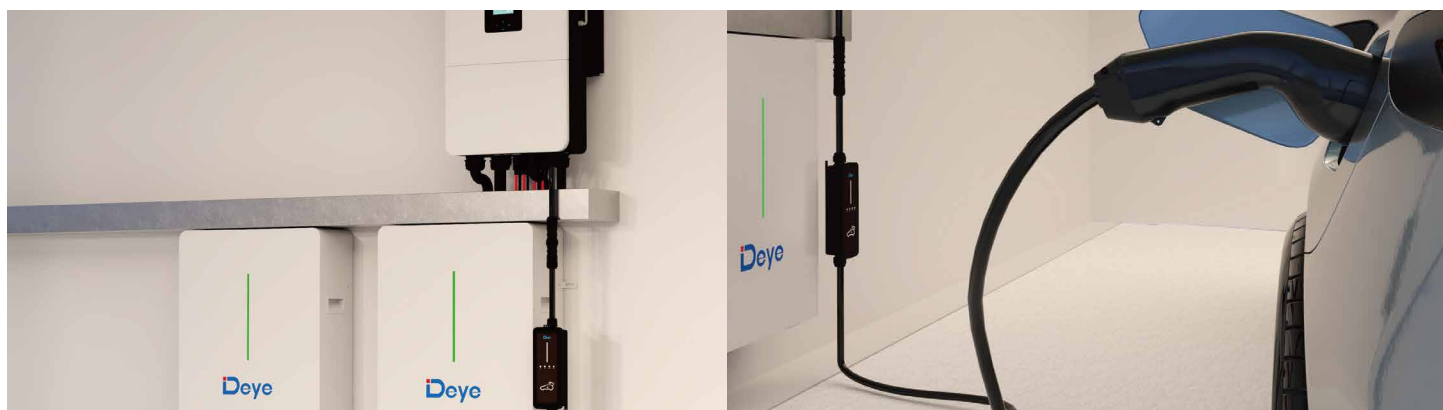


Model	SUN-SMART-SWITCHU2P3
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Electrical Parameters	
Voltage Range	94-238Va.c.(Phase voltage)
Connection Type	L1/N(Single phase), L1/L2/L3/N(Three phase), L1/L2/N(Split phase)
Maximum Current	25Aa.c.(Phase current)
Frequency and Range	50Hz(45Hz-55Hz)/ 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	RCM, UL 61010-1:2012; CAN/CSA-C22.2 No. 61010-1-12
Lora Parameters	
Frequency Range	920MHz-928MHz
Antenna	Internal antenna
Antenna Gain	-0.03dBi@927MHz

Model	SUN-SMART-PLUG01-I
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Electrical Parameters	
Rated voltage	220-250Va.c.
Maximum current	10Aa.c.
Frequency and Range	50Hz(45Hz-55Hz)
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)	59.1x59.6x37.6mm
Weight	kg
Warranty	5 Years
Standard	RCM, VDE 0620-2-1;EN 61058
LoRa	
Frequency Range	920MHz-928MHz
Antenna	Internal antenna
Antenna Gain	-1.78dBi@868MHz



Model	SUN-EVSE22K01-AC
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Product Parameter	
Input Voltage/Range (V)	230(single phase), 230/400(three phase)
Connection Mode	L+N+PE,3L+N+PE
Input Current (A)	32
Input Frequency/Range	50/45-55, 60/55-65
Maximum Output Power (kW)	7(single phase)/ 22(three phase)
Starting Method	Plug and Play /Charge after Scanning/Appointment for Charging
Equipment Protection	
Integrated	Over Temperature Protection, Low Temperature Protection, Over Voltage Protection, Under Voltage Protection, Short Circuit Protection, Over Load Protection, Earth Fault Protection
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)	104x264x58
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 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 EN IEC 61000-6-3:2021, EN IEC 61851-21-2:2021
Interface	
Communication Mode	LoRa/Wi-Fi/BLE

Model	SUN-SMART-TXU1
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Electrical Parameters	
Input Voltage	DC 5V
Communication	
Communication Model	LoRa
Communication Distance	≈200m(Barrier free)
Basic Parameters	
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	5 Years
Standard	IEC/EN 62368-1
LoRa Parameters	
Frequency Range	920MHz-928MHz
Antenna	Built-in
Antenna Gain	0.56dBi



Model	SUN-SMART-CTU2-L
Electrical parameters	
Connection Type	L1/N (Single phase), L1/L2/L3/N (Three phase), L1/L2/N (Split phase)
CT(Rated Secondary Output)	50mA/5A
Operation Voltage	85~300V a.c.(L-N)
Rated Frequency/Range	50Hz(45Hz-55Hz)/60Hz(55Hz-65Hz)
Self Consumption Power	≤2W
AC voltage withstand	4KV/1min
Accuracy	
Voltage	±0.1V
Current	±0.01A
Frequency	±0.01Hz
Power	±1W
Communication and Display	
Communication Interface	LoRa/RS485
Lora Communication Distance	≈200m(Barrier free)
Display	LCD
Display Data	Voltage, Current, Active Power, Reactive Power, Frequency, Power Factor, Energy
General Data	
Operation Temperature	-40 to +60°C
Operation Humidity	0-75%
Ingress Protection(IP) Rating	IP20
Altitude	≤3000
Mounting	DIN-Rail Mounting
Size	36x94x64mm
Weight	0.12kg
Warranty	5 Years
Certification standards	RCM, IEC 61010-1, CE, FCC
Lora Data	
Frequency Range	920MHz-928MHz
Antenna	External Antenna
Antenna Gain	0.81dBi@925MHz



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Deye Inverter

