

EN+ Nano AC charger

Nano Duo 22kW AC EV Charger

The Nano Dual EV AC charger is EN+'s cutting edge solution for the semi-public scenario such as workplace and residential units.

It can be wall or pole mounted with three inlet ways (Back wiring/Rear wiring/Bottom wiring). It houses two sockets, with optional load balancing controller box.

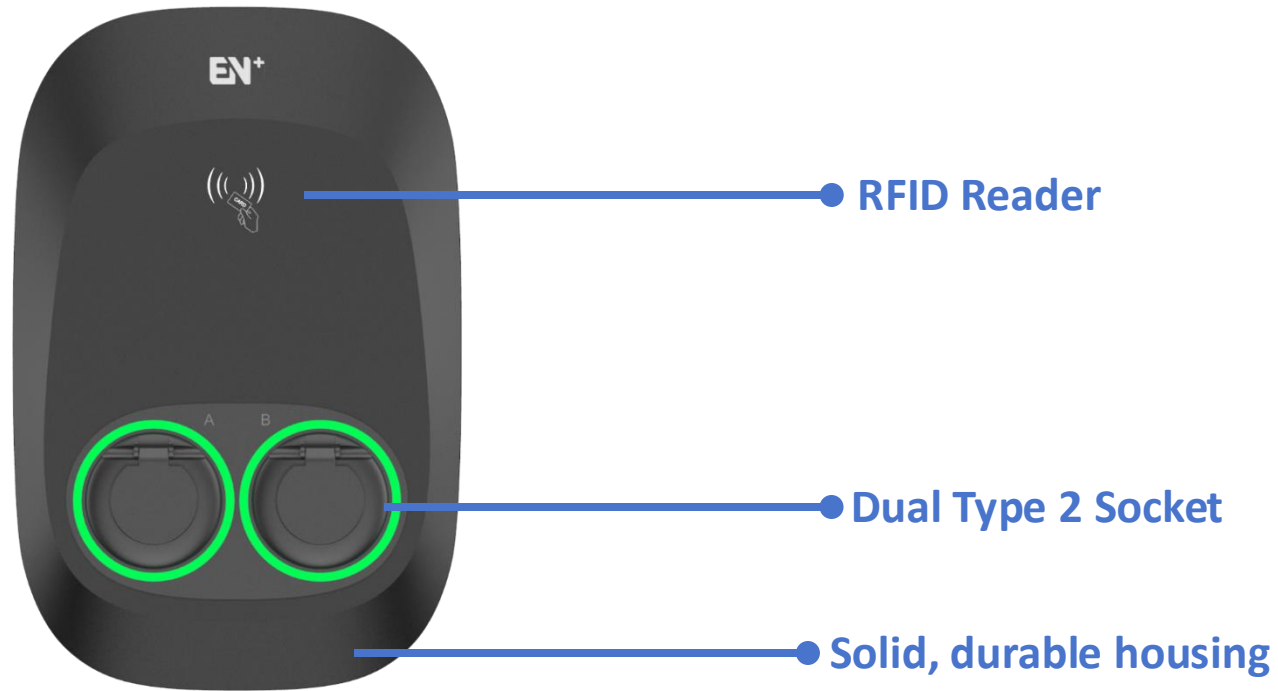
An integrated RFID reader supports user identification, and a MID-meter enables financial settlement.

Supporting three communication functions including Wi-Fi/LTE/Ethernet to connect to the Cloud platform which can be Monta and EV.Energy etc.



EN+ Nano AC charger

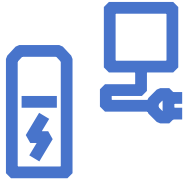
Portfolio



AC022K-BE-44D w/ MID
AC022K-BE-42D w/o MID



Value Propositions



Smart Charging

- 2x11KW, 1x22KW
- Nano supports various features such as smart charging networks, load balancing and OCPP 1.6.1 J(OCPP2.0 upgraded)
- MID meter inside



Easy Installation

- Black plate installation with one person
- Power line and ethernet cascade
- Installation cost savings is down to 30%



Build in Protection

- IK08 prevents from unexpected issues happening
- Equipped with 2 Residual Current Device of type A which allows for a more safe and cost-efficient installation

EN+ Nano AC charger

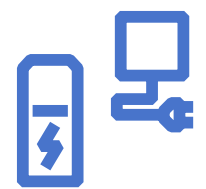
Datasheet

Input	Power Supply	3P+N+PE
	Rated Voltage	400V AC
	Rated Current	32A
	Frequency	50/60Hz
Output	Output Voltage	400V AC
	Maximum Current	32A
	Output Power	2x11kW/1x22kW
User Interface	Connector Type	2xType 2 Socket
	Enclosure	PC
	LED Indicator	Green/Yellow/Red
	RFID Reader	Mifare ISO/IEC 14443A
	Start Mode	Plug&Charge/RFID Card/App
Communi- cation	WiFi	Yes
	4G	Yes
	Ethernet	Yes
	Bluetooth	Bluetooth Low Energy (BLE 4.1) 2402-2480 MHz (for installer configuration purposes)
	OCPP	OCPP1.6 Json(OCPP2.0 Upgradable)

Safety	RCBO	40A Type A
	RCD	30mA AC+6mA DC
	Ingress Protection	IP54
	Impact Protection	IK08
	Electrical Protection	Over current protection, Residual current protection, Short circuit protection, Surge protection, Over/Under voltage protection, Over/Under frequency protection, Over temperature protection
	Certification	CE/RoHS/Reach
	Certification Standard	EN IEC 61851-1:2019, EN IEC 61851-21:2021, IEC 62955:2018, IEC 62321
	Grounding system support	TT, TN, IT
Environment	Installation	Wall-/Floor mounting (Optional)
	Working Temperature	- 30°C - +50°C
	Working Humidity	5%~95%
	Work Altitude	<2000 m
Package	Product Dims (WxHxD)	369x559x197 mm
	Package Dims (WxHxD)	466x620x245 mm
	Net Weight	10 kg
	Gross Weight	12 kg
Terminal	Specification	100A (Max.) 25 mm²
Measurement	Meter	MID

EN+ Nano AC charger

Smart Charging



Offering charging speeds of up to 11KW x2 and 1 x 22KW.
Supports load balancing management and PV solution.

*It only takes 3.5 hours to fill up for the Tesla model 3.



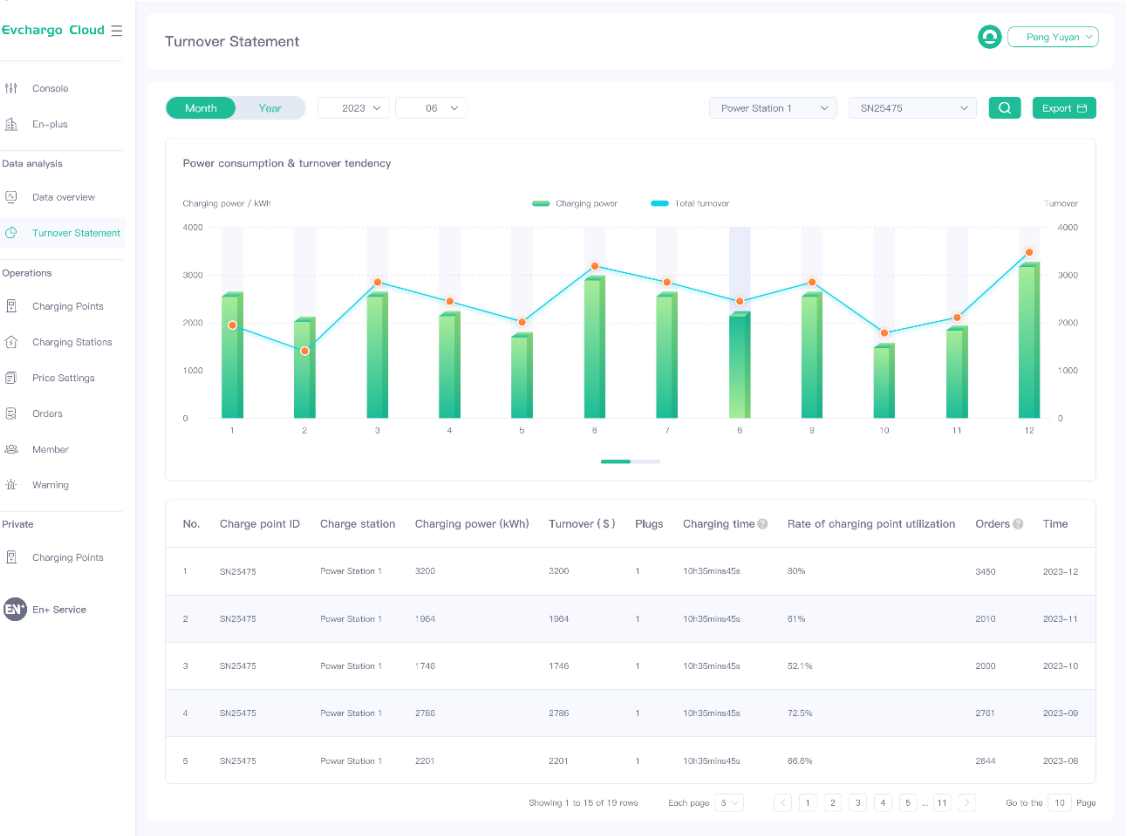
OCPP1.6J Profile 2
OCPP2.0.1J upgraded



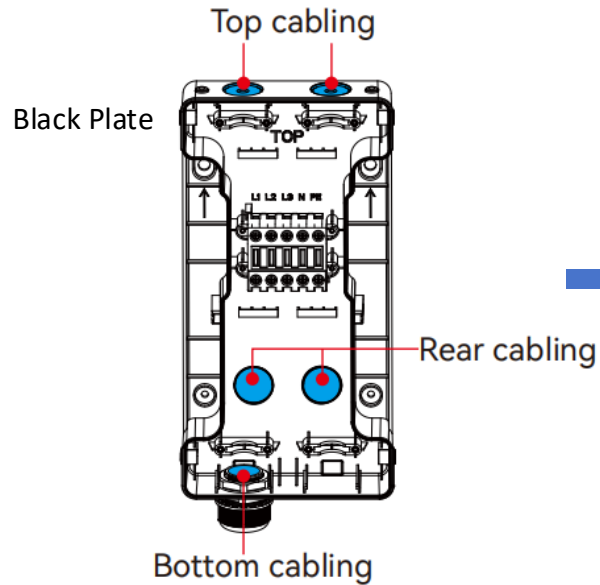
The 3rd Party Portal



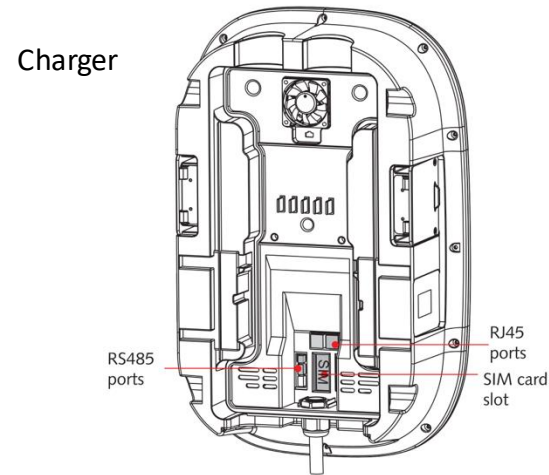
Evcharge EV chargers' management portal for operators



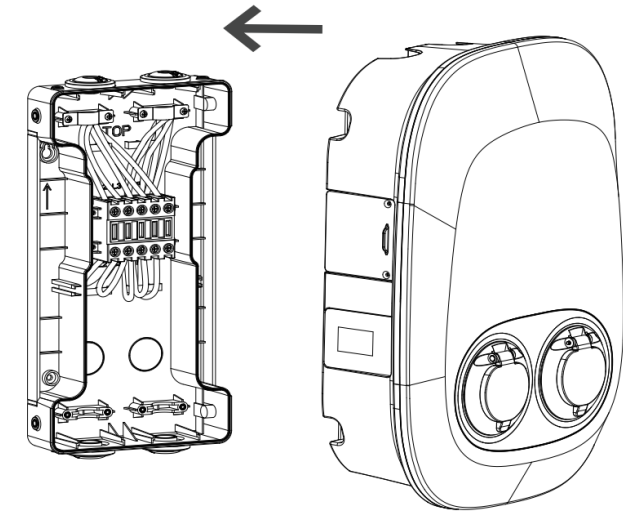
Key Value -- Easy Installation



Choose the cabling method and
Drill the holes and install the black plate



Connect to RJ485 or Ethernet or Insert 4G

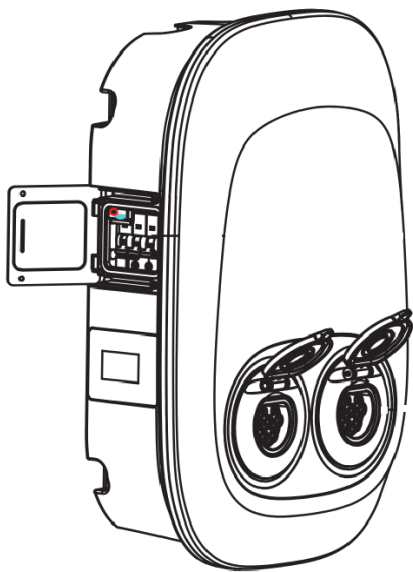


Hold the charger and plug to black plate
Take off the charger if maintain

Easy installation and easy maintenance

Key Value -- Easy Maintenance

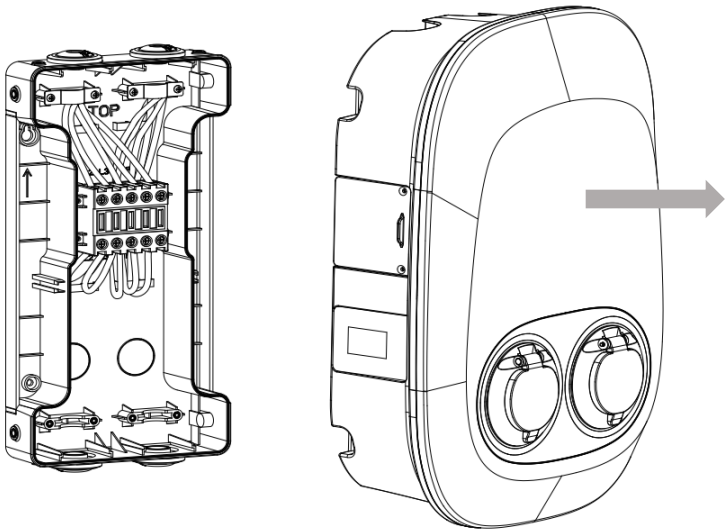
Reset the RCBO regularly



Rich indications of EV charger's status

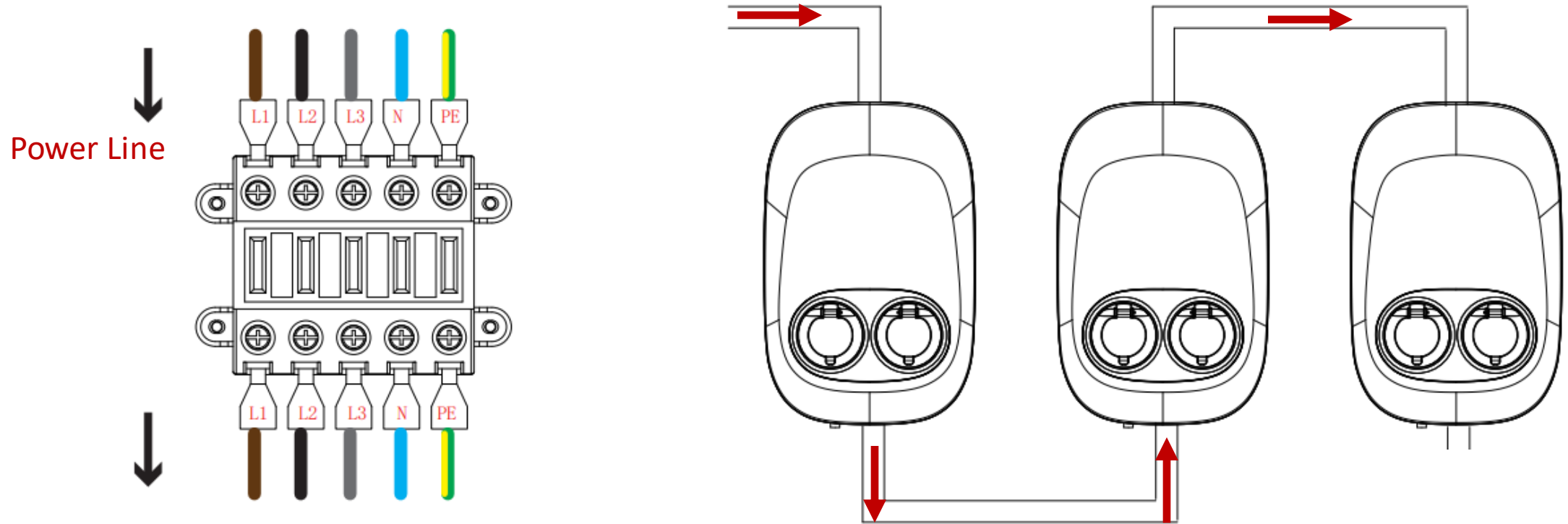
<div><div></div></div> <div>Green</div>	Steady Green	Idle (default state) / swipping card with connector not plugged, sounds a "beep" signal three times
	Cycle: flashing green twice (on for 200ms and off for 1000ms), then off for 3000ms	Charger started successfully, and wait for EV's feedback
	Cycle: flashing green for five times (on for 200ms and off for 1000ms), then off for 3000ms	Charging connector plugged
	Fades in and out at intervals of 1s	Charging in progress
	Cycle: flashing green (on for 1s and off for 3s)	Charging ended
<div><div></div></div> <div>Yellow</div>	Steady yellow	Warnings
	Cycle: flashing yellow (on for 2000ms and off for 2000ms)	The connector has been reserved (occupied)
	Cycle: flashing yellow for five times (on for 200ms and off for 1000ms), then off for 3000ms	Insufficient power allocated, charging suspended
	Cycle: flashing yellow for up to five times (on for 100ms and off for 100ms)	Successful card swiping
<div><div></div></div> <div>Red</div>	Flashing red / Steady red	Faulty
<div><div></div></div> <div>White</div>	Steady White	Charging connector disabled
	Cycle: flashing white (on for 1000ms and off for 1000ms)	Self-test upon power-on
	Cycle: flashing white for five times (on for 200ms and off for 1000ms), then off for 3000ms	Firmware upgrading

Take off charger from back plate for maintenance easily



Change easily and Maintain easily

Optional: Cascade Installation For Powerline



Power line can be connected to maximum 3 of Nano together by cascading to save the installation cost

Optional: Cascade Ethernet Cable



Easily connect ethernet cable to switch or hub without more cable.

Comparison with Single Charger

Two 11KW Chargers



Timing of installation : ~ 21 mins
Cabling : Ethernet cable + Powerline
Maximum Power : 11KW



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V.S

Nano Dual Charger 1x22 KW or 2x11KW



Timing of installation : ~ 15 mins
Cabling : Cascade ethernet and powerline
Maximum Power : 22KW

Cost savings of Nano should be decreased to 50% of 2 charger solution cost

Key Value – Flexible Load Balancing Management

It describes the strategies and the various load management topologies (with installation and configuration options).

After reading this text, one should be able to understand which load management options are available for the EN+ home AC charger and how these can be set.

Features:



Effectively protect the power grid of commercial place from tripping, overloading



Easy installation, supports offline and online load balancing management

Semi-Public Scenario

Key features:



Load Balancing for Multi Chargers



Ad Hoc
RFID
APP



Chargers Management in
Cloud

Payment/Invoice/Monitoring



Invoice

Invoice number : 20030704000
Date : Oct 10/2023 10:00:00

Invoice To

Name : Shenzhen E+ Technologies Co., Ltd.
Address : Nanjing Second Industrial Park, Nangang Community, 58 Street, Nanshan District, Shenzhen
VAT number : 91440300327794291

Charging Station

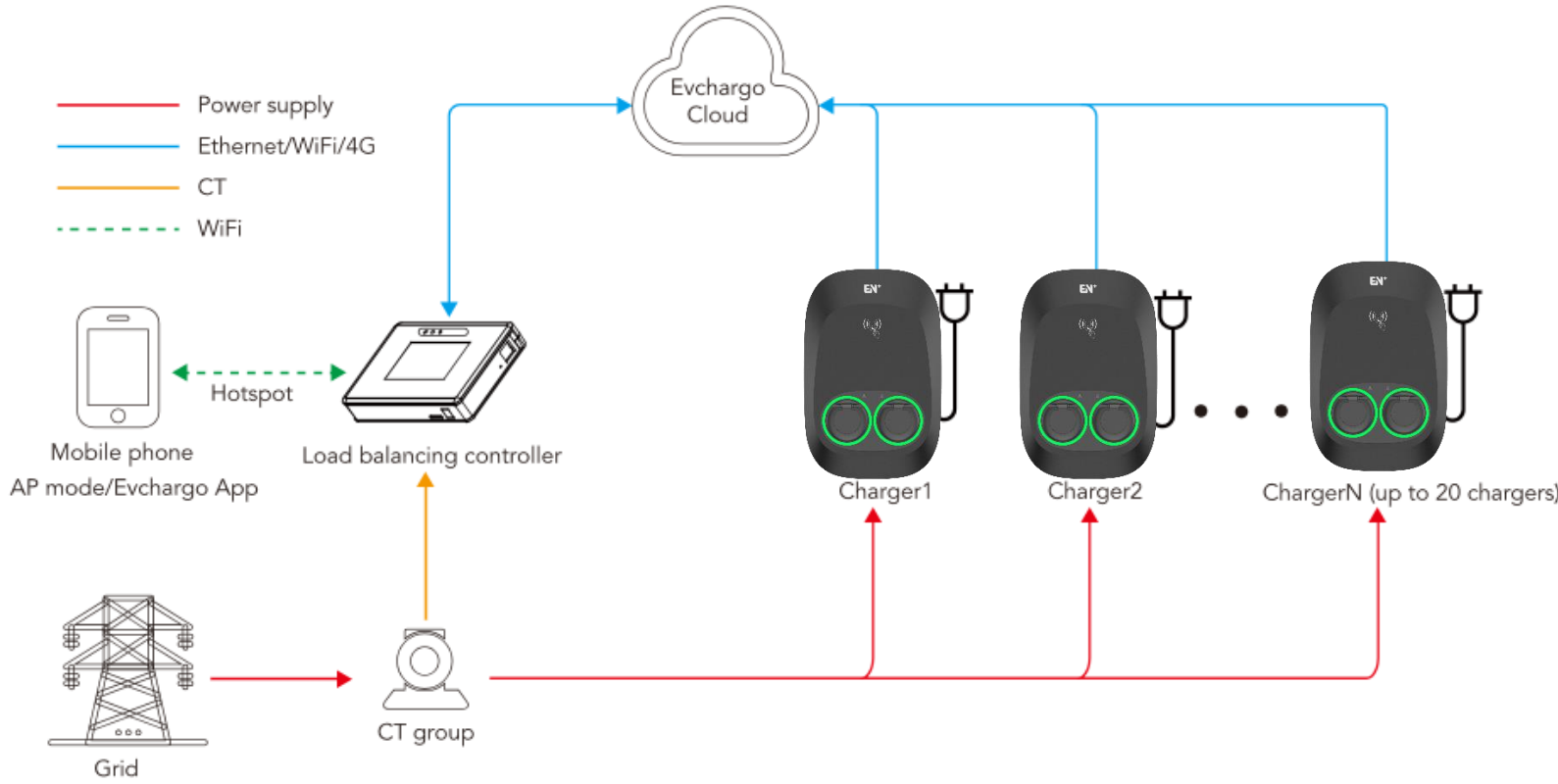
Name : Test Station
Address : Shenzhen Nanshan District
Charge point ID : 20030704000

Order details

Transaction ID	Card ID	Charge started	Charge complete	Electricity price	Energy	Tax rate	Tax	Total cost
20030704000	10000000000000000000	2023-10-10 10:00:00	2023-10-10 10:05:00	1.00/kWh	0.005 kWh	0%	0.000	0.005

Invoice of Charging

Hybrid load management is recommended for multiple charger installations. Load managed via Evcharge cloud.



Home Based Scenario



Single Charger Load Balancing

Single charger load balancing is used to adjust the current of charging depending on how much the consumption of household electricity is to keep the safe of home grid.



PV solution

PV solution make the charger totally controlled by the Energy Management System(EMS), providing the convenience of quick charging from home with renewable energy, save grid consumption.

