HuPrix

USER MANUAL
360kW

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PROFESSIONAL & TIMELINESS

Powering the Future: Safe, Flexible, and Efficient E-Mobility Solutions

At Chengdu THD Co., Ltd, branded as Sparklearth, we are more than just a company; we are a beacon in the journey towards a greener future. Our passion for innovation drives us to create e-mobility solutions that not only meet the demands of today but inspire a sustainable tomorrow. From our high-powered integrated DC chargers to our space-efficient flexible charger stacks and user-friendly AC home chargers, every product is a testament to our commitment to excellence, safety, and environmental stewardship. Join us in driving the sustainable energy future, where every charge is a step towards a cleaner, more efficient world.

Product Introduction

Please read this specification carefully before using the product and keep it properly

Product Overview

User scenarios
Parking lots, garages, highways, streets, etc.

Industrial design
Integrated plug-and cable design

Enclosure IP54
Dustproof, waterproof, sturdy and durable

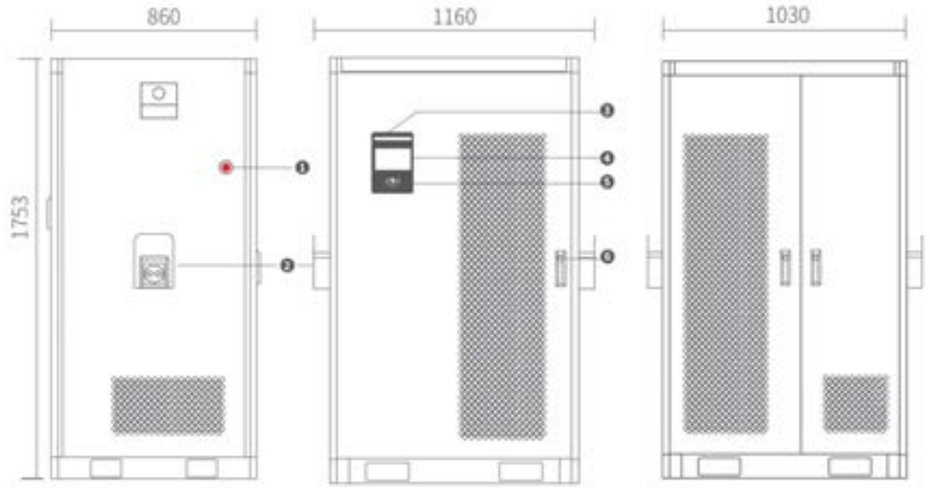
Status detection
Emergency stop when abnormal status detected

User interface
High-definition industrial-grade LCD screen

Indicator light
Different lights indicate different status

Product name	480kW Integrated EV Charger
Model	THD02480HUB2
Applications	New energy vehicles Charging
Product scope	New energy vehicles
Description	With a specific holder, display, and communication module, AC power will be delivered to the EVs for charging.

Dimensions (unit: mm)



❶Emergency Stop ❷Free gun holder + Cable reeler ❸LED indicator ❹LCD screen ❺Card reader ❻Locker

Parameters

Technical Parameters	
Item	**Specifications and parameters**
Model	THD02480HUB2
Rated power	480kW
Connectors	2*GB/T connectors
Interface	7-inch touch screen, high brightness, low reflection
Charging method	Card swipe, App scan, VIN code charge, reserved charge, QR code
Modes	Timed charging, electric quantity charging, fixed amount charging, reserved charging, forced charging
Input Characteristics	
Item	**Specifications and parameters**
Input mode	3-phase 5-wire input
Input voltage	380Vac±15% (Vac)
Input current	≤737A
AC input frequency	50±1Hz
Max efficiency	⩾95%
Power factor	⩾99%
Input harmonic content	⩽5%
Output Characteristics	
Item	**Specifications and parameters**
Output voltage range	200Vdc~1000Vdc
Max current only single gun working	200A
Constant power range	300Vdc~500Vdc & 600Vdc~1000Vdc

Parameters

Output Characteristics	
Item	**Parameters and characteristics**
Power of charge modules	30/40kW
Number of charge modules	16/12 pcs
Voltage regulation accuracy	⩽±0.5%
Current regulation accuracy	⩽±1%
Ripple coefficient	≤±1%
Current sharing imbalance	≤±5% (typical value 3%, 50~100% rated load)

Safety Characteristics		
Item		**Specifications and parameters**
Output overvoltage protection Output undervoltage protection Input overvoltage protection Input undervoltage protection AC phase loss protection Battery reverse protection	Door open protection Over-temperature protection Insulation fault protection Abnormal connection protection Communication fault protection	No output after protection, recoverable
Output short circuit protection	**Emergency stop protection**	No output after protection, manual recovery requires
Fan control mode		Fan starts as charging starts, stops 1min after charging stops

Environmental Parameters	
Item	**Specifications and parameters**
Operating temperature (°C)	-20～+50 +50°C～+65°C with derating output
Storage temperature (°C)	-40～+70
Delivery temperature (°C)	-40～+70
Relative humidity	⩽95%
Atmospheric pressure (KPa)	70～+106

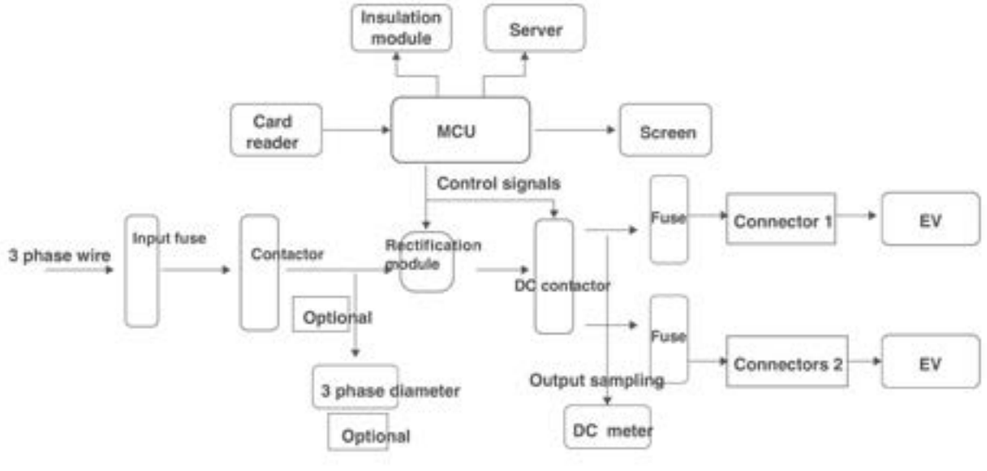
Environment Parameters	
Item	**Specifications and parameters**
Altitude	⩽2000m
Enclosure level	IP54
Protection level	PCB boards, connectors, and other circuits are treated for moisture resistance, mold resistance, and salt fog resistance. The salt fog corrosion resistance meets the requirements of Table 9 in GB/T4797.6—1995, ensuring that the charging and discharging devices can operate normally in outdoor humid and salt-fog environments.

Installation characteristics	
Item	**Specifications and parameters**
Withstand voltage test voltage (input - chassis)	2000Vac 1min 10mA
Withstand voltage test voltage (output - chassis)	2000Vac 1min 10mA
Input to chassis insulation resistance (DC500V)	≥10MΩ (ambient relative humidity 90%, no condensation)
Output to chassis insulation resistance (DC500V)	≥10MΩ (ambient relative humidity 90%, no condensation)
Surge	Differential mode: ±1KV Common mode: ±2KV
Electrostatic discharge (ESD)	Contact discharge: ±6KV Air discharge: ±8KV
Ultimate temperature rise	Power switching devices: 70K, transformers/reactors: 80K, semiconductor device connections: 55K, plastic insulated wires at semiconductor connections: 25K
Lightning protection	Module design considers C-level lightning protection, discharge current capability 20KA; the system's AC input end should be equipped with surge protection devices, capable of withstanding voltage pulses (10/700μs, 20kV) and current pulses (8/20μs, 40kA) impacts.
Radiated susceptibility (RS)	80M~1GHz 10V/m,80% AM
Conducted susceptibility (CS)	150KHz~80MHz 10V, 80% AM
Electrical fast transient/ burst (EFT)	±2KV

Product Introduction

Paramaters

Mechanical Parameters	
Item	**Specifications and parameters**
Dimensions	W1190*D860*H1753mm
Weight (kg)	≤300
Installation method	Floor mounted (see installation foundation drawing)
Communication interface	Internal: RS485,RS232, CAN; External: RS485, CAN, Ethernet, GPRS, 4G
Indicat light	Power indicator light on (green): Charging pile is on standby Charging A-B light steady on (yellow): Charging pile is connected to the vehicle Charging A-B light running left and right (yellow): Charging pile is charging the vehicle Fault light on (red): Charging pile has a fault
BMS Auxiliary Power Voltage	12Vdc
Hot Plugging Requirements	Rectifier module meets hot-plugging requirements
Failure isolation	Reliable system isolation after module failure
Battery reverse damage protection	Module not damaged by battery reverse connection
Packaging and transportation	Wooden case
MTBF	MTBF≥8000h



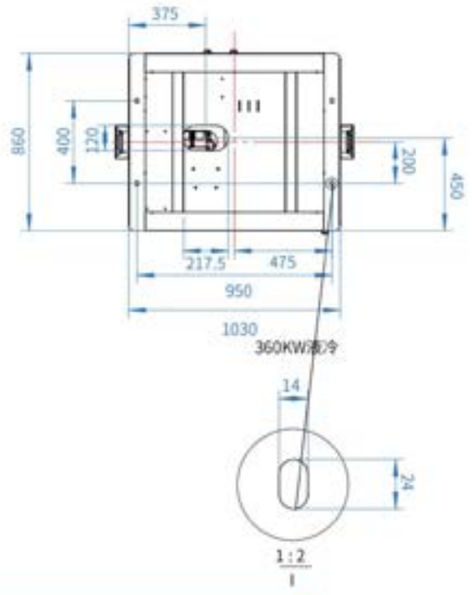
Drawings of Installation

Drawing of installation base

Instructions:

- The charging station should be installed on a concrete foundation (C25). Four M12 stainless steel bolts should be embedded in the installation surface as shown in the diagram, with the threads exposed 30mm above the ground.
- The installation surface must be treated with cement hardening, and the hardened area must not be less than 770mm x 840mm.
- The hardened installation surface must be leveled to ensure it is at.
- It is recommended to embed a conduit with a diameter of 120mm, protruding 10mm above the base.
- Yellow and black warning tape or yellow and black warning paint should be applied around the cement base.

If the charging pile uses a four-core incoming cable, a grounding flat steel must also be added to the charging pile foundation.



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