Technical Data Sheet - 40kW Ground- Mounted CCS2 Single Connector

TDS 技术参数表	DECRIPTION 分项	SPECIFICATIONS 明细
Input Characteristics 输入特性	Power Supply 电源	Three-Phase 三相
	Input Voltage 输入电压	380Vac±15%
	Rated Voltage 额定电压	380Vac
	AC Input Frequency 额定频率	50Hz/60Hz
	Power Factor 功率因素	0.99
	Safety Features 安全特性	Surge Protection 浪涌保护
Output Characteristics 输出特性	Output Voltage 输出电压	200Vdc-1000Vdc
	Maximum Output Current 最大输出电流	100A
	Rated Current 额定电流	40A
	Rated Power 额定功率	40kW
	Charging Mode 充电模式	DC Fast Charging 直流快速充电
	Charging Connector Type 充电连接器类型	CCS2 欧标,
	No. of Charging Connectors 接口数量	Single Connector 单充
	Charging Efficiency 充电效率	95%(full power output)
	Metering Method 计量方式	Energy Meter 电表
	Safety Features 安全特性	Overvoltage/Under voltage, Overcurrent, Short circuits, or, Overheating Protection 过欠压保护, 过流保护,短路保护, 过热保护
User Interface and Interaction 用户界面与交互	Display Type 显示类型	7-inch Industrial display Touch Screen 7英寸工业级触摸屏
	Status Indicators 状态指示灯	Power, Charging, Fault 电源, 充电, 故障
	User Interface Language 用户界面语言	Multi- language Support 支持多语种
	Emergency Stop 紧急停止	Available 有
Communication and Connectivity 通信与连接性	Network Connection 网络连接	4G/Standard RJ45 Interface
	Communication Protocol 通信协议	OCPP1.6J
	Authentication (Activation) 身份验证(启动)	QR Code, APP / RFID card reading 扫码, 应用 / RFID单机刷卡版
Environmental Characteristics 环境特性	Operating Temperature 工作温度	-20~50℃
	Humidity Range 湿度范围	5%-95%
	Working Altitude 工作海拔	< 2000m
Electrical Safety 电气安全	Dielectric Strength 介电强度	≥2000V
	Leakage Current 漏电流	≤3.5mA
Mechanical Characteristics 机械特性	Housing Material 外壳材料	Sheet Metal 钣金
	Protection Rating 防护等级	IP54
	Cooling Method 冷却方式	Air Cooling 风冷
	Installation Type 安装方式	Ground-Mounted 落地式
	Cable Length 线缆长度	5m
	Dimensions 尺寸	Product: 465*245*1400mm Packing: 850*450*1600mm
	Weight 重量	<NW:160KGS <GW:190KGS
Certification and Compliance 认证与合规	International Standard 国际标准	IEC61851-1/2017
	CE Certification CE 认证	SGS UKCA
	ISO Standards ISO 标准	ISO9001:2015
Warranty and Service 保修与服务	Warranty Period 保修期	Typically 2 Years with remote support 常规2年远程质保
	Customer Support 客户支持	Online Chat support 线上支持

1.2 Technical Characteristics and Overview

Our self-developed charging equipment follows international practices and adopts an intelligent, modular design concept. The entire charging control system consists of an AC distribution unit, a charging control unit, a human-machine interaction unit, a charging module unit, and a DC distribution unit. The system is configured with RS485, CAN interface, Ethernet, and PLC, and it uses a CCS2 standard charging connector suitable for the European region.

This product has the following features:

Advanced Constant Power Charging Module: The module maintains constant power within the range of 300-1000V, allowing the charger to provide high charging power even at lower voltages, delivering fast and powerful charging speeds.

2. Modular Structure Design: Multiple modules work in parallel, and faulty modules automatically exit, enhancing the user experience.

3. Distributed Control Monitoring Unit: This design maximizes risk control and improves the reliability and safety of the charging equipment. The user-friendly human-machine interface (available in both Chinese and English) allows for easy querying of charging orders and system parameter settings via touchscreen.

4. Advanced Flexible Intelligent Control Technology: Our proprietary technology intelligently allocates dual-port charging power, dynamically adjusting the charging process based on factors such as the charger, vehicle, environment, and user. This ensures the battery operates in its optimal state, extending the lifespan of the vehicle’s battery pack while meeting the demand for quick charging in a short time.

5. Robust Internet Service Capabilities: The product can connect to the internet via GPRS/4G modules, enabling real-time data exchange with a backend management system platform. It supports the OCPP1.6 protocol, giving you an advantage in commercial operations.

6. Global Payment Capabilities: The charger can be equipped with a universal POS machine, supporting various global credit card payment channels such as UnionPay and VISA, solving payment issues for commercial charging stations abroad.

1.3 Function Introduction

Charging Method: During the charging process, the integrated charger dynamically adjusts charging parameters and executes corresponding actions based on data from the vehicle's Battery Management System (BMS), the charger's self-check parameters, and commands from the server, completing the charging process and automatically stopping when fully charged.

2. Metering Function: The charger includes an intelligent energy meter that measures the energy output of the DC charger. The meter is installed on the output side of the charger but can be adjusted to the input side upon the owner's request.

3. Billing Function: The system supports billing based on the amount of electricity charged. It can be configured with parameters such as rate periods, billing units, and pricing. The billing management module reads the energy meter data in real-time and calculates charges based on the energy consumption and the set unit price. The system supports a self-built non-contact IC card that stores user and account information. Additionally, it can be equipped with a POS machine for credit card payments.

4. Human-Machine Interaction Function: The user interface features a color LCD touchscreen with complete and rich information display, easy operation, and a user-friendly interface. It includes card swipe and emergency stop buttons. The interface displays charging current, charging voltage, charging time, charged energy, and alarms for errors during charging. Users can query personal and charging information or set personal information, such as password changes, at the charger terminal.

5. Display Function: The charger displays key information such as power status, charging status, fault status, charging voltage, charging current, charged energy, the highest and lowest voltages of vehicle battery cells, vehicle SOC (State of Charge), estimated remaining charging time, and fault and alarm messages. Under admin privileges, settings such as charger IP address, coding, maximum/minimum output voltage, and maximum output current can be configured, and factory settings can be queried. The display characters are clear and complete, visible without relying on ambient light.

6. Communication Function: The charger has a PLC interface for communication with the vehicle's Battery Management System (BMS), obtaining real-time charging parameters and data from the vehicle's battery system. It also supports communication with a higher-level monitoring system via GPRS wireless communication, Ethernet, and meets relevant encryption requirements.

7. Emergency Stop Function: The charger has an emergency stop function, allowing it to stop charging immediately through a manual switch or upper-level monitoring command.

8. Charging Monitoring Function: The charger monitors leakage current, insulation, and provides alarms in case of faults, with visual and audible alerts via LED indicators. The charger adjusts charging current, voltage, and charge curves based on battery temperature, voltage, and individual cell capacities.

9. Protection and Alarm Function: When there is a DC output overcurrent, the charger automatically cuts off the DC output and triggers an alarm. In case of a DC output short circuit, the charger enters a current limiting state. If the AC/DC conversion power unit overheats, the charger cuts off the DC output and triggers an alarm. The charger is equipped with surge protection and prevents battery current backflow.

10. Record and Storage Function: The monitoring system records alarms and events, storing historical charging and consumption information.

11. Emergency Power Off Handling: In emergencies like activating the emergency stop button, control guidance failure, or communication failure with the charging management system, the charger disconnects the DC output contactor within 100ms, and the output voltage drops to below 60V within 1 second.

12. Over-temperature Protection: The charger continuously monitors the temperature of the charging gun and charger body. If overheating is detected, it reduces power operation until charging stops.

13. Remote Upgrade Function: The charger can be remotely upgraded via the backend management platform.

14. Other Safety Considerations: The charger is equipped with a door access switch that triggers an alarm when the cabinet door is opened, preventing operations under live conditions.

Thank you