

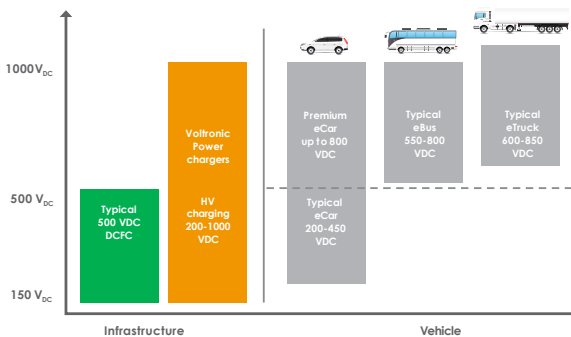
EVA 5460S, EVA 5490S, EVA 54120S, EVA 54150S, EVA 54180S IP54, 60kw-180kw DC EV charger

- Patent ECO energy saving mode: Once vehicle charging is complete, the charging station will go into sleep mode (consumption < 12W) even with nozzle connected. The charging station will resume charging if the nozzle is connected to another vehicle
- Patent full-modularized design including control system, power source system, distributed power system, power factor system
- In-house developed controllers, CCS and OCPP charging modules
- Supports multiple charging standards: GB, CCS1, CCS2 and CHAdeMO
- The charger had successfully passed 33 sets of rigorous environmental and thermal shock tests from -35°C to 55°C to ensure the system reliability
- The DC power module is equipped with UL approved epoxy resin automatic injection to sustain the dusty and salty air tests to improve environmental adaptability
- IP54 protection, IK10 for cabinet and IK08 for touch screen
- Each charging mode with dedicated LED status indicator light (easy and intuitive charging experience)
- Multilingual support for 7" colored touch LCD
- Maximum efficiency up to 95%
- Input power factor >0.99
- THDi < 5% at full load
- Built-in RFID card reader
- Supports OCPP 1.6 JSON network and 3G/4G
- Adapting OCPP network security protocol to implement the OTA feature
- The charger had successfully passed cloud network protocol test and was verified by OCTT
- The charger had passed vehicle end protocol DIN 70121, ISO15118, and was verified by TUV
- The Linux 5.10 OS and CPU conformed with cybersecurity standards
- Third-party certified CE EN61851



High Voltage Charging Capability

Charging systems for electric vehicles, which are capable to charge battery with high voltage in short load times become more and more important. Therefore in the industry the effort had been increased to specify and develop DC (Direct Current) fast charging systems of the new generation, especially with increased charging power and decreased load times.



CAR	60 kWh BEV 400 VDC
	90 kWh BEV 400 VDC
	100 kWh BEV 800 VDC
	120 kWh BEV School Bus 400 VDC
BUS/Truck	150 kWh BEV Delivery Van 800 VDC
	200 kWh BEV Work Truck 800 VDC
	300 kWh BEV 60' Transit Bus 800 VDC

Charging time (minutes)					
60 kW	90 kW	120 kW		180 kW	
		2 EVs	1 EV	2 EVs	1 EV
CAR	50	25	40	20	13
	70	40	60	30	20
	80	45	65	33	22
	95	53	80	40	26
BUS/Truck	120	65	100	50	33
	160	88	133	66	44
	240	130	200	100	66

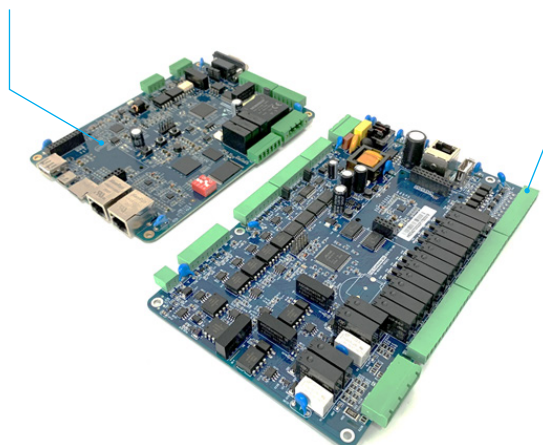
Product Outlook

Patent full modularized design



In-house developed CCS and OCPP

- Integrated dual-gun control system with insulated circuits
- Integrated with protocol converter to implement GB, CCS1, CCS2 and CHAdeMO charging
- Software supports OCPP protocol to compliance with international standard
- Supports remote OTA to allow easy maintenance
- Supports to charge two vehicles simultaneously
- Hardware design meets the IV grade EMC standard to support 4G, Ethernet and DPU network connectivity.



In-house developed controllers

- CPU 120Mhz
- PN-OS embedded operating system
- Large capacity Flash & RAM
- 8 inputs and 15 outputs
- 6 analog
- 9-channel communication
- 2-channel insulation resistance test
- 2-channel control pilot
- 1-channel power source
- IV-grade EMC standard

Specification

MODEL	EVA 5460S	EVA 5490S	EVA 54120S	EVA 54150S	EVA 54180S
Charging Type	DC fast charging				
Outlet Options	C: CCS2 cable, A: CCS1 cable, J: CHAdEMO cable, G: GBT cable				
AC Input Power	93 A, 64 kVA @ 400V 50 Hz	139 A, 96 kVA @ 400V 50 Hz	185 A, 128 kVA @ 400V 50Hz	224A,160kVA @ 400V 50Hz	278 A, 192 kVA @ 400V 50Hz
Input Voltage Range	400 VAC or 380 VAC ± 10%				
Input Frequency	50 Hz or 60 Hz				
DC Output Power Rating	60 kW	90 kW	120 kW	150 kW	180 kW
DC Output Voltage	200-1000 Vdc (Constant power from 300-1000Vdc)				
Number of EV Served	Up to 2 (CC, AA, JC, JJ ,GG models) Up to 1 (C, A, J, G models)				
Cable Length	5 m default, optional 6.0 m/ 7.0 m				
Maximum Current	CCS Cables	200 A	200 A, Optional: 300 A		
	CHAdEMO Cables	125 A, Optional: 200 A			
	GBT Cables	200 A	250 A		
Electro-Magnetic Compatibility	Class A (optional Class B) according to EN 61000-6-3:2007				
Network Type	TN-S, TN-C, TN-C-S, TT (required external RCD)				
Connector Type	3P + N + PE				
Protection	Overcurrent, overvoltage, undervoltage, integrated surge protection, grounding fault including DC leakage protection, door opening protection				
Overvoltage Category	Type II				
Power Factor (Full Load)	≥ 0.99				
THDi	≤ 5%				
Efficiency	94% (peak)				95% (peak)
Standby Power	< 35W				
Short Circuit Current	10 kA				
Pre-charge Current	< 1 A				
Inrush Current	< 100 A				
Leakage Current	0.8 mA				
Energy Metering	Standard: Meter for DC outlet, Optional: AC inlet				
Cellular Communication	GSM, 4G, LTE				

USER INTERFACE

Connectivity	Internet access via 4G/3G/Ethernet (RJ45)
User Authentication	RFID, QR code
User Interface	7" LCD high-contrast touchscreen
Communication Protocols	Proprietary and OCPP 1.6J
RFID Reader	ISO/IEC 14443 A Mifare RFID reader
Emergency Button	Yes
Language System	English, Chinese, French, Spanish

GENERAL CHARACTERISTICS

GENERAL CHARACTERISTICS						
Protection Rating	IP54 and IK10 (cabinet) / IK08 (touchscreen)					
Housing Material	SGCC, Optional: SUS430					
Operating Altitude	Up to 2000m					
Operating Temperature	-35 °C to 55 °C					
Storage Temperature	-40 °C to 70 °C					
Humidity	< 95%, non-condensing					
Mounting	Free-standing cabinet					
Dimensions (D x W x H) mm	750 x 740 x 1830					
Net Weight (kgs)	295	335	355	375	395	

COMPLIANCE STANDARDS

Codes & Standards	IEC 61851-21-2, IEC 61000, IEC/EN 61851-1, IEC 61851-23, IEC 61851-24, IEC 62196-1, IEC 62196-3, GBT18487, GBT20234, NB/T 33008.1, NB/T 33001
Communication to the EV	DIN 70121, ISO/IEC 15118, CHAdeMO 1.6J, GBT27930, GBT 34657, GBT 34658

Product specifications are subject to change without further notice