

Specifications



ELECTRICAL VEHICLE FAST CHARGING STATION

EVduty3

CHARGER DESCRIPTION

ELMEC is a manufacturer of EV charging stations. Our EVduty3 charging station is a 50 kW Level-3 charging station that is able to quickly charge the battery of an electric vehicle.

Electrical features

- › 50 kW Output Power
- › Wide input voltage: 360-508 VAC 3-phases
- › Overall efficiency > 94%
- › Input power factor > 0.93

Output connector (vehicle side):



COMBO 1



CHAdeMO

CHARGER DESCRIPTION

Electrical safety

The charger design includes reinforced protections:

Mains input side:

- › 80A Circuit breaker
- › Maximum Earth Leakage Current < 3.5 mA
- › 3-poles AC contactor coupled with Emergency Button

Galvanic isolation:

- › Input/Output: 3 kVAC
- › Input/PE: 1.5 kVAC
- › Output/PE: 2.2 kVDC

Charger output side:

- › 2x output fuses
- › 2-poles DC contactor coupled with Emergency Button

Electrical protections

- › Mains input voltage out of range
- › Output Short circuit
- › Output open load
- › Output over voltage
- › Thermal runaway
- › Charging plug disconnection or defective locking
- › Reverse voltage

Standard

Directive:

- › EMC 2004/108/EC
- › LVD 2006/95/EC

Safety:

- › IEC 61851-1; IEC 61851-23
- › UL2202; UL2231-1; UL2231-2
- › CSA C22.2 NO.107.1-01; CSA C22.2 NO.281.1&2-12

EMC:

- › IEC EN61000-3-12

Communication:

- › SAE J1772 (COMBO CCS)
- › CHAdeMO
- › OCPP 1.6

Note: In case of high ambient temperature or improper charger cooling, the charger automatically reduces its output power and keeps on charging in safe conditions.

CHARGER DESCRIPTION

INPUT

Voltage Range: 360-508VAC 3-phases 50/60Hz

Max. Current: 80A @ 400VAC; 67A @ 480VAC

Power Factor: > 0.93

Efficiency: > 94%

Earth Leakage Current: < 3.5mA

HARDWARE PROTECTIONS

Output diode on power module

HPC 200 A fuse on output

ELECTRONIC PROTECTIONS

Overload and output short-circuit

Over temperature and temperature regulation

Output over voltage/reverse polarity

Charging plug defects

Commutation failure

OUTPUT

Voltage Range: 200-485 VDC

Max. Current: 125A DC

ISOLATION

Input/Output: 3kVAC

Input/PE: 1.5kVAC

Output/PE: 2.2kVAC

OPERATING TEMPERATURE

-20 °C to + 40 °C / Altitude maxi 3500 m

COMMUNICATION BUS

OCPP 1.6

RJ45 Ethernet port (for Internet access)



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