25kW DC/DC Charger Module

Based on years of experience PRE has developed a standard 25kW Modular Isolated Power Concept designed for multiple charge posts. The Output of the Charger Module can be switched in parallel and in series for systems up to 1000V. The Charger Module is based on the latest resonant technology which results in high efficiency and excellent overall performance. Output Voltage and Current can be controlled by a CAN-bus Interface. Other controls and configurations are optional.

Features

- CCS / CHAdeMO compatible
- High Efficient Resonant Topology (>98%)
- Easy parallelable, CAN-bus Control Interface
- Output switchable between 500V/1000V

Applications

- EV Charger Parks
- Modular EV Fast Chargers
- Industrial Battery Chargers
- Industrial Current Source

CHAdeMO

Key Specifications

Model		EVDC500V63A
Output (Battery)	Voltage range (series option)	150 – 500Vdc (300 – 1000Vdc)
	Current Range (series option)	0 – 64Adc (0 – 32Adc)
	Rated Power (5)	25.000W
	Voltage Ripple + Noise (2)	500mVp-p
	Voltage & Current Tolerance (3)	0.5% (typ.) 1% max.
	Load Regulation	1%
	Current Ripple	<1Arms @ Rated Power (measured on a resistive Load)
	Hold up Time	N/A
Input (DC bus)	DC Voltage Range (nom.) (5)	600 – 800Vdc
	DC Voltage Range (Max.)	400 – 900V (No defects up to 1400Vdc for 5 Sec.)
	DC Current (Max.)	43A @ 600Vdc
	Efficiency (Max.)	98%
	Off / Stand-by consumption	<1.5W / <8W @ 700Vdc
	Inrush Current	No inrush Current (≤43A Cold Start @ 700Vdc)
	Leakage Current	<3.5mA @ 700Vdc
Protection	Input UVP/ OVP & (OCP)	400Vdc / 900Vdc (50V hys.) (50A 700Vdc Fuse 14x51mm)
	Output OVP (OCP)	550V (2x40A 700Vdc Fuse 14x51mm)
	Output RCP	Reverse Current Protection by 1200V Internal Diode
	Over Temperature	70°C at main Heatsink. Output Power derating at >50 °C temperature
Control	Control	CAN-bus with hardware Interlock (Charge Enable) (CANopen protocol / 500kbps)
	Auxiliary supply (Input)	9V – 30V 100mA max. (for Control side circuits)
General	Charge Interface	CHAdeMO & CCS compatible
	Isolation	4kV Input – Output / 2kV PE – Input & PE-Output / 4kV Output – Controls
	Cooling	Air cooled.
	IP protection class	IP20
	Working (Storage) Temp. & Humid.	-20 .. 50°C (-20 .. 70°C) / 20 .. 90% Non Condensing
	Dimension & Weight	Approx. 500x300x140mm / 20kg
	Lifetime (MTBF)	>100.000 hours @ 25 °C (Designed to meet <0.1% / Year)
Safety & EMC(4) CE	Safety	EN60950
	Emission (Industrial)	EN55011, class A (optional B)
	Immunity (Industrial)	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11.

1. All parameters NOT specially mentioned are measured at 700Vdc input, rated load and 20°C ambient temperature.
2. Ripple & noise are measured at 20MHz bandwidth by using a standard probe.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The Charger Module is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
5. Derating may be needed under low input voltage and higher ambient temperature.
6.

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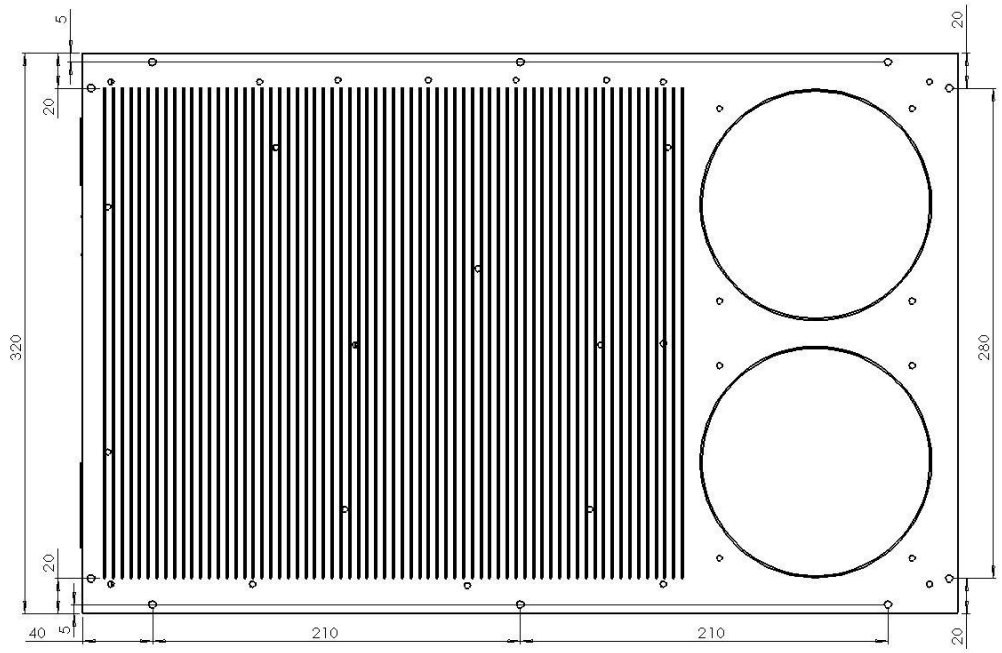
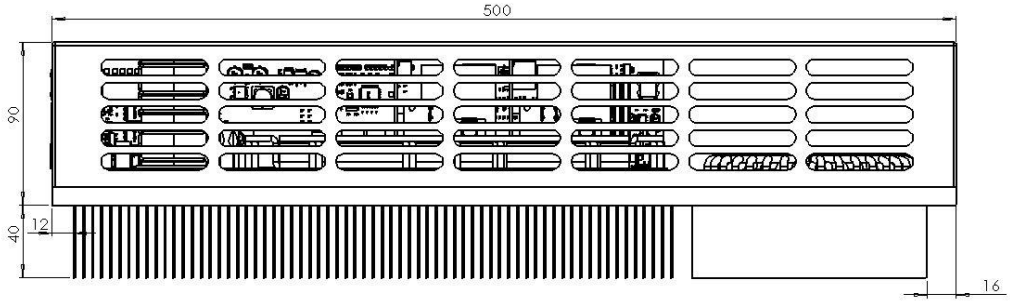
Mechanical Dimensions

Bottom View

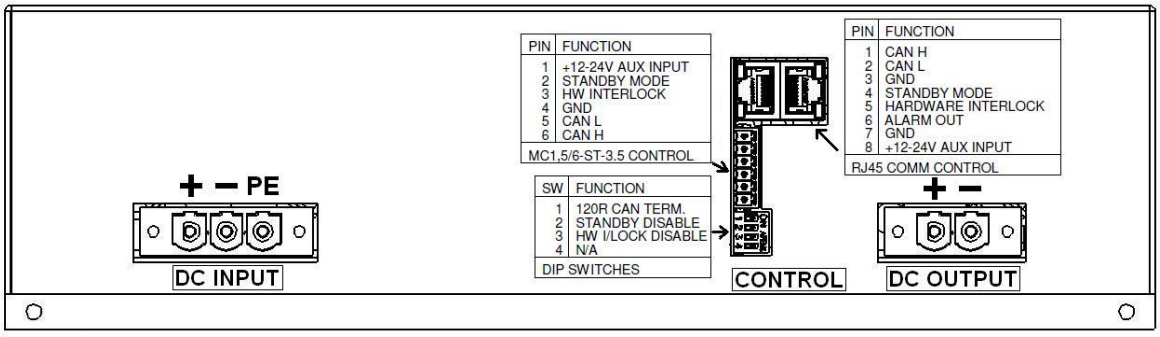


Side View



Electrical Connections

Front View



#) Pin 6 : Optional Alarm pull down (open collector, 24V /5mA max.) (Default : OVP function)

Control Connections

DC Input Connector : Phoenix Contact POWER COMBICON PC16 / 3 way : 1967469
10-16mm² / 5-7 AWG (43Amax.)

DC Output Connector : Phoenix Contact POWER COMBICON PC16 / 2 way : 1967456
10-16mm² / 5-7 AWG (64Amax.)

Control Connector : Phoenix Contact MC1,5/6-ST-3,5 or RJ45 Ethernet Cable.

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