



EV DC Fast Chargers



Neale Gray
Milbay Australia

Milbay Electric Vehicle DC Fast Chargers

Milbay Australia DC Fast chargers provide a user friendly and safe process to fast charge electric vehicles. Users simply choose the charging protocol compatible to the vehicle via the touch panel user interface and then attach the appropriate charge port connector to the electric vehicle.



Milbay MB-DCF20P Portable EV Charge station



Touch panel user interface charge mode selection screen.

Milbay DC Fast Chargers deliver a fast, secure and proven EV charging process. The charge station user interface displays battery charging status and the charging cycle is managed automatically by the Milbay DC fast charge station automatically or can be terminated at any time via the charger user interface.

Milbay DC Fast Charger models deliver power output from 10kWh to 100kWh. Milbay can provide an EV charge solution that is tailored to the EV owner's requirements. Milbay DC Fast charger customers include home users, commercial businesses, fleet operators, EV service centres and EV Charge station operators.

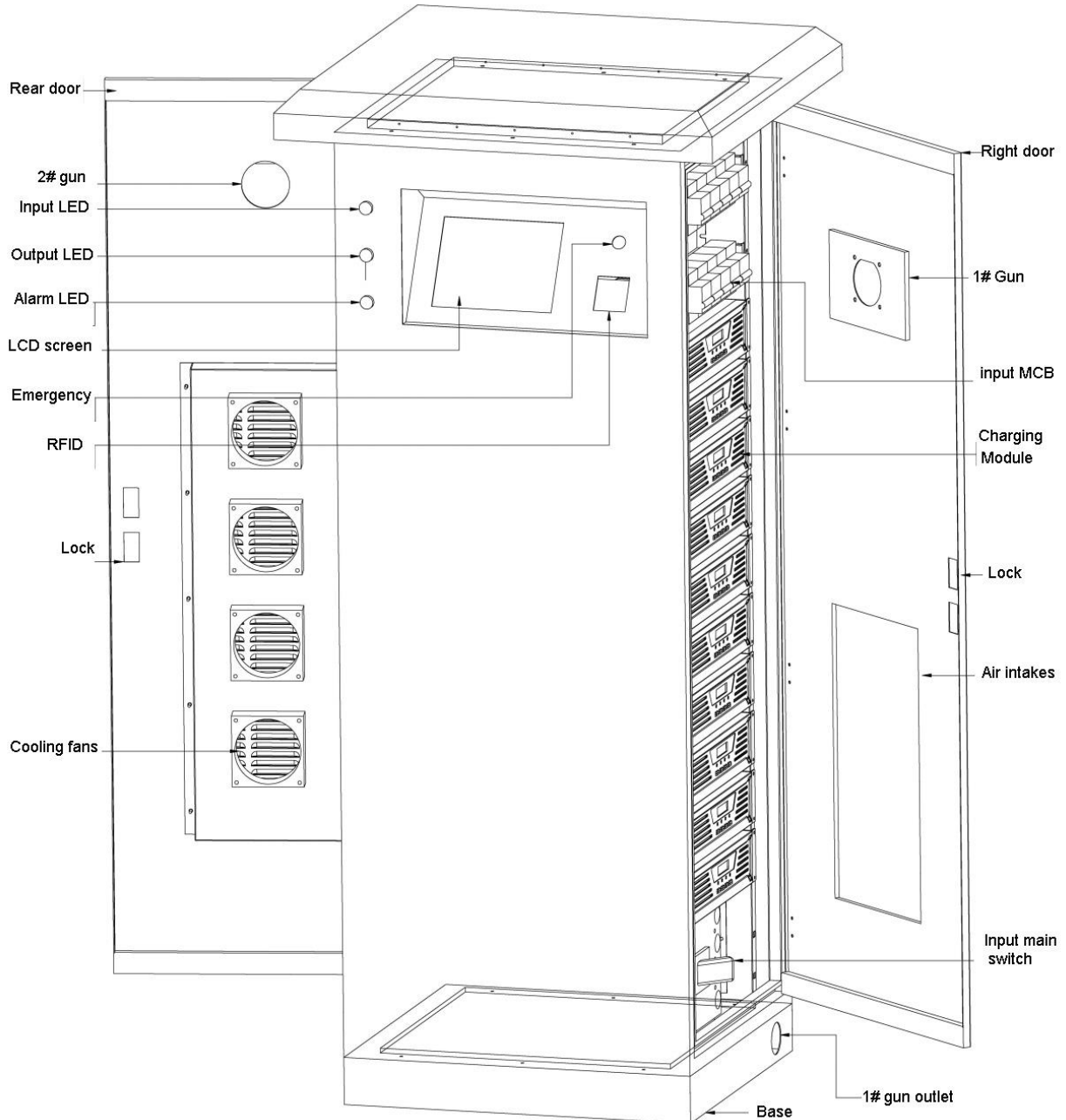
Model	DC Charger Description	Single Phase	3 Phase	Portable	Wall Mount	Free Standing	Upgrade output power	OCPP
MB-DCF10	10kWh Dual protocol	✓	✓		✓			
MB-DCF10P	10kWh Dual protocol	✓	✓	✓				
MB-DCF20	10kWh Dual protocol	✓	✓		✓			✓
MB-DCF20P	10kWh Dual protocol	✓	✓	✓				
MB-DC40100	Upgradable 30kWh to 100kW Dual protocol		✓			✓	✓	✓

Milbay EV DC Fast Charger model range

Milbay MB-DCF20 and MB-DCF40100 models offer OCPP (Open Charge Point Protocol) to allow EV Charge station managers to seamlessly integrate Milbay DC Fast Chargers into their existing or new EV charging infrastructure.

● Features

- Using charging module, built-in module with CPU intelligent management, with manual / automatic dual control function;
- Using intelligent module, consisting of a distributed control system. A single module failure does not affect system operation;
- Charging module uses ZVZCS, three-phase PFC, three-level soft-switching technology, efficiency up to 95%;
- Charging module has a sleep function. According to the load current, the clients can automatically select the number of modules to make efficient operation;
- Charging module uses a unique full isolation dust structure, built-in cooling fan with intelligent speed control. It can automatically adjust the fan speed according to the load to extend the life of the fan;
- Acceptable remote tripping command to achieve emergency shutdown;
- Charging module with PFC, the power factor 0.99, and THD <5%.



Milbay MB-DCF40100 EV DC Fast Charge station description



The feature of a DC quick charger connector for EV

1. Excellent Operability

Charging is performed by only inserting a plug into a vehicle-side inlet. After charging is completed, push a button and withdraw the plug.

2. User-friendly Design

This connector is designed to operate viscerally by having handle shape.

3. Safety Design

The connector has automated triple safety lock system which prevents the disconnection of connector from vehicle-side inlet accidentally during charging.

4. A Wide Range of Operation Temperature

SET-EVD-C1 can be used under a wide range of environmental temperature from -30°C to 50°C.

5. High Flexibility and Durability


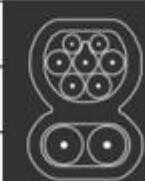
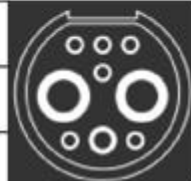
Easy-bend and tough rubber is used for the cable.

Name of part



- 1.Plug
- 2.Latch(For locking)
- 3.LED lamp
- 4.Release Button
- 5.Cable Rubber sheath
- 6.Connector main body
- 7.Grip Integrated with main body

Specification

Item	CHAdemo		CCS		GB/T	
Rated voltage	1000VDC		1000VDC		1000VDC	
Rated current	125A		200A		63A-250A	



Milbay EV Charging module

● EV charging module Introduction

Milbay Australia provides state-of-the-art electronic modules for integration into DC fast charging stations. Each module is CHAdeMO, CCS and GB/T compliant and can be stacked in a resilient configuration.

● Features

- Module with full resonance, double soft-switching principles of design, efficiency > 96%;
- Module with full isolation design. Module control part is fully isolated with the input and output of the main circuit. When some external factors will produce high voltage of module input or output part, internal module control circuit will not damage;
- PCB with epoxy coating should be dampproof and dustproof;
- Multiple anti-reverse-current protection design to prevent the intrusion of various fault current phenomenon;
- Input uses three-phase four-wire, three-phase equilibrium;
- SCM module built by CAN \ RS485 port communication. Monitoring system can monitor the module and operating condition;
- With LCD display, real-time display module output voltage, current, easy operation and monitoring;
- Regulators, current limiting function. It can be charged the battery groups and carried the load with the set voltage and current. When the output current is greater than the current limit, module automatically works on steady flow operation; when the output current is less than the current limit, it works on voltage regulator condition;
- Output voltage and current regulation. It can adjust the output voltage and the maximum current limit via background monitoring;
- Work in parallel. The same model module can work in parallel and share current. If one module failed, it will not affect the whole system operation;
- Hot-swap. You can either plug in any one module to make access to or remove it from the system without affecting the normal operation;
- LCD shows module parameters, and Status Indicator;
- Protection and alarm: input, short-circuit, over temperature, over voltage, and alarm indication.





Technical specification MB-DCF40100

AC Input	Line Voltage (VAC)	380
	Voltage Type	AC three-phase five-wire
	Frequency (HZ)	45~55
	Power Factor	0.99
	Current THD value	≤5%
	Input undervoltage protection value (V)	323±5V
DC Output	Nominal output voltage (V)	400/700
	Output Current (A)	0~200A
	Regulation accuracy	≤0.5%
	steady current accuracy	≤1%
	Ripple Peak factor	≤0.5%
	The output voltage range (V)	350~750V
	Short circuit current (A)	≤30A
	Output Power	0~100kW
Mechanical indicators	packaging	Wooden packing
	Dimensions (W×H×D)	2260×600×600
	System Weight	<200Kg
	protection grade	IP54
Operating Temperature	-25℃ to +50℃	
Protective Function	Short circuit protection/ Over temperature protection / Over-voltage / Under-voltage protection/ Communication failure	
BMS Communication	CAN2.0 CHAdeMO GB/T PLC (SAE Combo)	
Cooling	Forced Ventilation	
Display	LED: 7 inch Touch Screen	
	LCD: 3 Color LED lights - status indicator	
User Recognition	RFID card	
DC Plugs	CHAdeMO/CCS/GB/T	



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EV Charging Station

- 1.AC input:single phase 220V/three phase 380V
- 2,DC output:450V/750V
- 3,Output power:20KW-100KW



Wall Mount suitable for Nissan Leaf and others
Charge 40 Amp / 20 kW



20kW Portable DC Fast Charger



CHAdemo and CCS in one charger
Can charge Nissan Leaf and BMW 3i



New Design

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