PM3000 Power Module

MOOV[base]

High efficiency modular charging for forklift applications

Designed for installation in charging cabinets where each module delivers up to 3.2 kW or 70 A. The module is controlled by a system controller via CAN bus and is capable of charging a wide range of battery types.

Battery Charging

Industrial

DELTA

Features

Proven Safety and Reliability

- Millions of successful charge cycles completed
- Advanced safety design and error detection safeguard the user, battery and charger
- Galvanized steel enclosure and user-serviceable fan for use in tough industrial environments

Scalable Modular Design

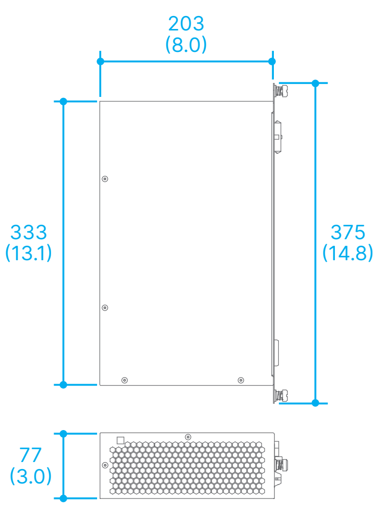
- Connect in parallel to achieve desired charge current
- Redundant operation
- Modules can be controlled individually and turned off when not required, allowing for higher efficiency

Simple Integration

- CAN bus allows easy control by a system controller
- Transmission of status, error and warning information
- All required mating connectors are standard and readily available

Global Compatibility

- 400, 480 and 600 V_{AC} versions allow connection to worldwide three-phase supplies
- Safety and EMC approvals for North America, Europe and Australia
- Efficiency exceeds CEC requirements



Dimensions in mm (inches)

Specifications

Part Number	3000 W		
AC Input	US Model	EU Model	Canada Model
AC Input Rated Voltage	480 V_{AC} 3PH+E	400 V_{AC} 3PH+E	600 V_{AC} 3PH+E
AC Input Voltage Range	432 to 528 V_{AC}	352 to 440 V_{AC}	540 to 660 V_{AC}
AC Input Frequency	50 / 60 Hz (47 to 63 Hz)		
Maximum AC Input Current	5 A	6 A	4 A
Power Factor (100% Load)	0.94		
Efficiency (100% Load)	≥ 92.5% (≥ 91% for 24 V variant)		
DC Output	24 V Model	48 V Model	80 V Model
DC Output Voltage Range	5 to 35 V_{DC}	8 to 70 V_{DC}	15 to 120 V_{DC}
DC Output Voltage Accuracy	± 0.5%		
Maximum Charge Current	70.0 A	64.0 A	40.0 A
Load Current Accuracy	± 2%		
Maximum Output Power	2100 W	3000 W	3200 W
Environmental Conditions			
Operating Temperature	-10 °C to +50 °C (+14 °F to +122 °F)		
Storage Temperature	-40 °C to +85 °C (-40 °F to +185 °F)		
Relative Humidity	15% to 85%, non-condensing		
Maximum Operating Altitude	3000 m (9842.52 ft)		
Mechanical Design			
Dimensions (L x W x H)	333 x 203 x 77 mm (13.1 x 8.0 x 3.0 in) 375 mm (14.8 in) including front panel		
Weight	4.2 kg (9.3 lb)		
Cooling	Forced air. Internal DC fan		
LED Indicators	Yes		
Communication Connector	TE Micro-match for CAN bus		
AC Input Connector	TE Mate-n-lok 5-pin		
DC Output Connector	Molex Extreme Guardian 2-pin		
DC Output Protection and Reliability			
Over Voltage Protection	Yes		
Over Current Protection	Yes		
Short Circuit Protection	Yes		
Over Temperature Protection	Yes		
Reverse Protection	Yes		
Output Fuse	Yes		
Spark Suppression [1]	Yes		
Approvals			
Safety	UL1564 / CSA C22.2 107.2-01, IEC 60950-1, IEC 62368-1		
Safety Marks	cCSAus CE RCM		
Protection Class	1		
EMC Emissions	FCC Part 15 Subpart B, EN 61000-6-4 (EN 55011/32) [2]		
EMC Immunity	EN 61000-6-2		

Notes: A supply is provided to power system components (7.5 V +0/-2:0 - 500 mA).
Modules in parallel multiply current but limited to 1.0 A.
An isolated CAN bus supply is provided to power system CAN bus components (7.5 V +2.5/-1.5;0 - 100 mA)
1) In the event of hot disconnect
2) With additional external flitering

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More information

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