

# MPC MILITARY FIELD-GRADE

## Military Power Conditioners



*Sealed Weather-Proof Construction*

# SynQor<sup>®</sup>

# MPC MILITARY FIELD-GRADE



## Military Field-Grade Power Conditioner (MPC)

SynQor's Military Field-Grade Power Conditioner units are designed for the extreme environmental and demanding electrical conditions of Military/Aerospace applications. SynQor's MPC incorporates field proven high efficiency designs and rugged packaging technologies. This MPC will accept a wide range of input voltage and frequency values while delivering a well conditioned AC output to the load. It is designed and manufactured in SynQor's USA facilities to comply with a wide range of military standards. Options include two DC outputs, a DC input rated for military 28 VDC sources, and an electronic breaker on the AC output to permit fault-tolerant parallel operation for higher power and/or N+M redundant systems.

### MPC PRODUCT FEATURES

- ◆ Sealed, weather-proof, shock-proof construction
- ◆ 1250 W (1500 VA) output power
- ◆ Full power operation: -40 °C to +55 °C
- ◆ Universal AC input: 80-265 VAC; 47-65 Hz (see options)
- ◆ Power factor correction at AC input
- ◆ Dual input (AC and optional DC)
- ◆ True on-line double conversion
- ◆ Pure sinusoidal AC output voltage
- ◆ Handles 0.0 - 1.0 power factor loads and non-linear loads
- ◆ Up to 3 units can be combined for higher power, voltage or a 3-Phase AC output
- ◆ Up to 32 units can be combined to form a higher power fault-tolerant, glitch-free system, perhaps with N+M redundancy, by ordering with the "AC Output Electronic Breaker" option and the appropriate configuration cable
- ◆ User I/O, Ethernet and Configuration signal ports

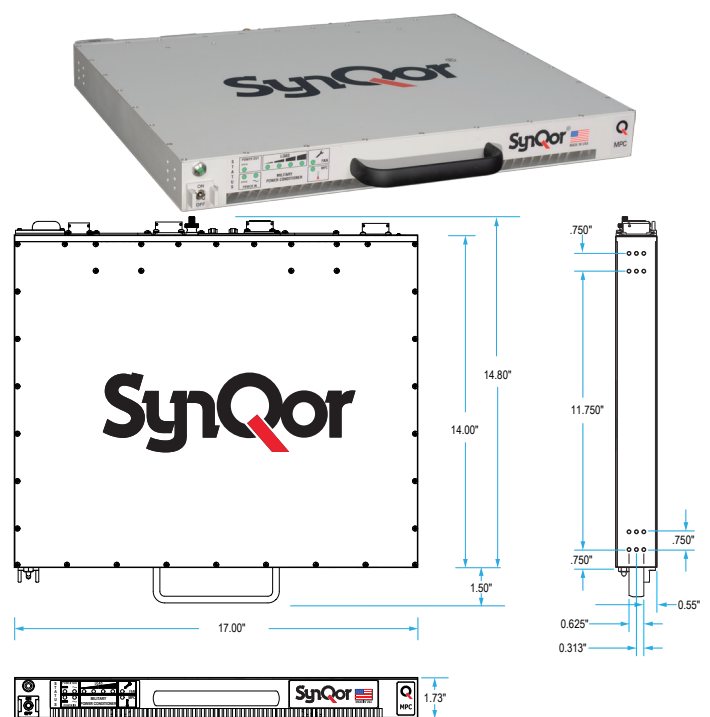
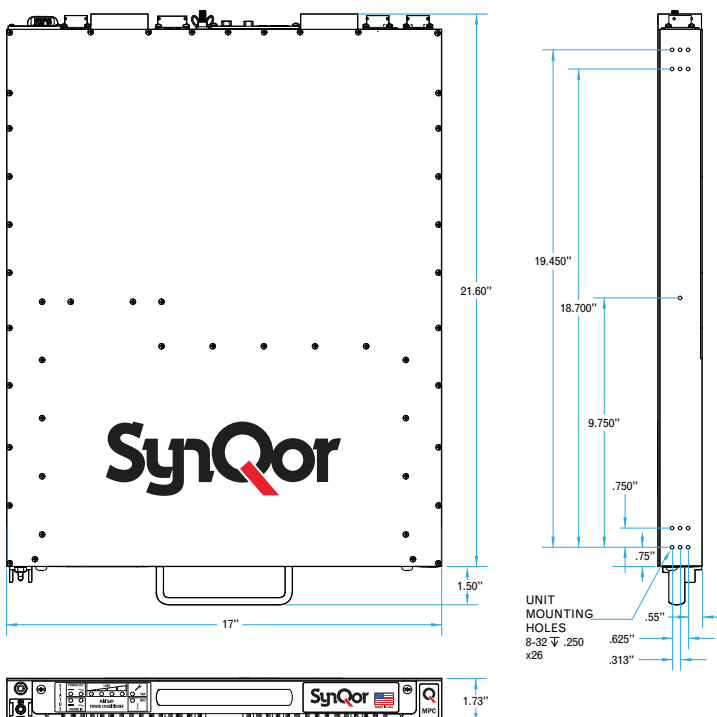
### OPTIONS

- ◆ DC input (28Vnom) for dual source
- ◆ Wide-range AC input frequency: 47Hz to 800Hz
- ◆ 115Vrms or 230Vrms AC output
- ◆ 50Hz, 60Hz, or 400Hz output
- ◆ DC1: Auxiliary isolated DC output (up to 500W)
- ◆ DC2: High power DC output parallelable for higher power (up to 1250W)
- ◆ Shipboard version with floating neutral wire
- ◆ N + 1 Redundancy

### SPECIFICATION COMPLIANCE

#### MPC units are designed to meet:

- ◆ MIL-STD-461F - Electromagnetic Interference
- ◆ MIL-STD-704F - Aircraft Electrical Power
- ◆ MIL-STD-810G - Environmental Engineering
- ◆ MIL-STD-1275D - Vehicle Electrical Power
- ◆ Mil-STD-1399-300B - Interface Shipboard



# Military Field-Grade Power Conditioner (MPC)

Base Models			
Model Number	Power	Height (W x D x H)	Weight
<b>MPC-1500-1U</b>	1250 W/1500 VA	1U (17.00" x 21.60" x 1.73")	24 lbs.
<b>MPC-1500-1S</b>	1250 W/1500 VA	1U (17.00" x 14.80" x 1.73")	22 lbs.
<b>MPC-3000-2U</b>	2500 W/3000 VA	2U (17.00" x 22.22" x 3.40")	49 lbs.

Base Models	Options						
	AC Input Freq	AC Output Voltage	AC Output Neutral Wire	AC Output Set Point Freq	DC Input / DC2 Output	DC1 Output	Additional Options
MPC-1500-1U- MPC-1500-1S- MPC-3000-2U-	L W	1 2	G F R	5 6 4	S D M P R V W Y	00 12 15 24 28 40 50	-E 00 CE

Options	
AC Input Frequency	L 47- 65 Hz W 47-800 Hz
AC Output Voltage	1 115 Vrms 2 230 Vrms
AC Output Neutral Wire	G Grounded F Floating* R AC Output Electronic Breaker*
AC Output Set Point Frequency	5 50 Hz 6 60 Hz 4 400 Hz
DC Input / DC2 Output	S Not Installed D DC Input M DC2 Out 24 VDC with Droop Share P DC2 Out 24 VDC No Share (MPC-1500) R DC2 Out 28 VDC with Droop Share V DC2 Out 28 VDC No Share (MPC-1500) W DC2 Out 50 VDC No Share (MPC-1500) Y DC2 Out 50 VDC with Droop Share
DC1 Output	00 None 12 12 V 15 15 V 24 24 V 28 28 V 40 40 V 50 50 V
Additional Options	-E Ethernet/SNMP with Configuration Loading 00 No CE Marking CE CE Marking

Not all combinations make valid part numbers, please contact SynQor for availability. See the Product Summary web page for more options.

\*Notes:

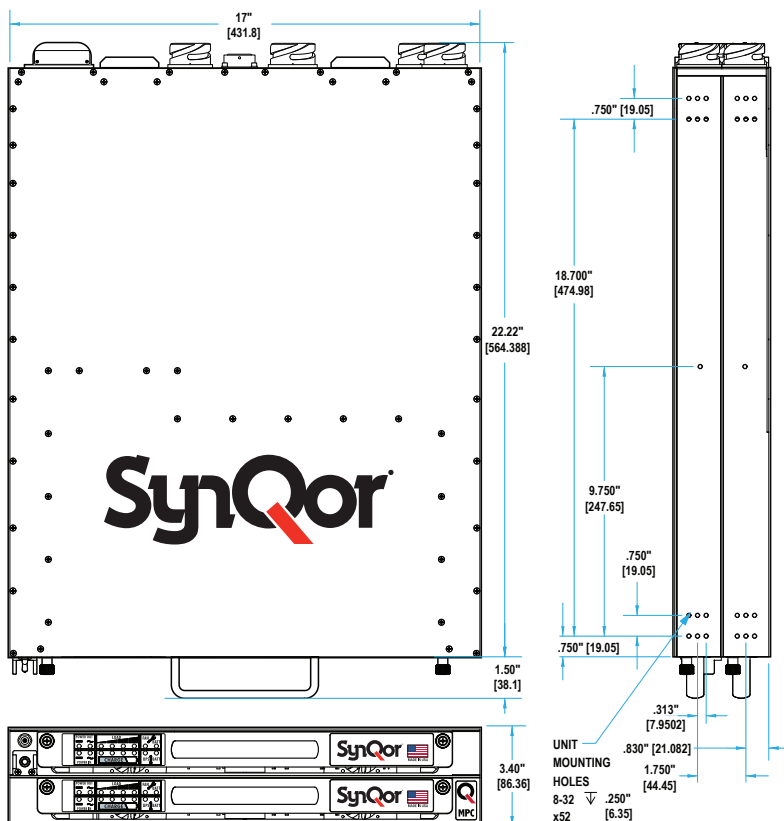
Order "F: Floating" option when configuring the AC output for multi-unit combinations of up to 3 units.

Order "R: AC Output Electronic Breaker" option for fault-tolerant, glitch-free parallel systems of up to 32 units with N+M redundancy. The AC output neutral wire will not be connected to the chassis.

### Examples:

MPC-1500-1U-L1G6D28-E00, MPC-1500-1U-L2G5S00-E00

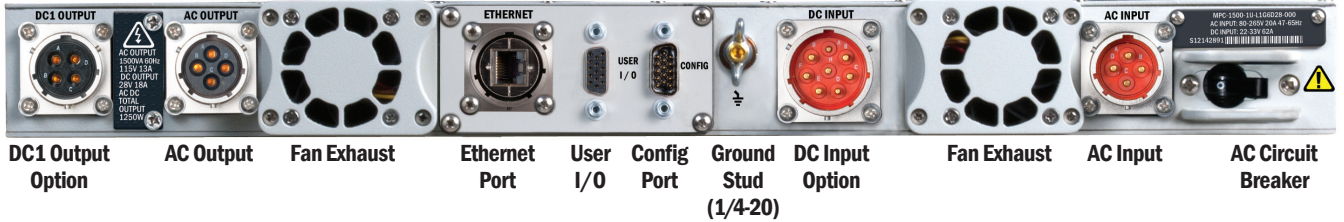
MPC-3000-2U-L2G5S00-ECE (230 V output with CE marking)



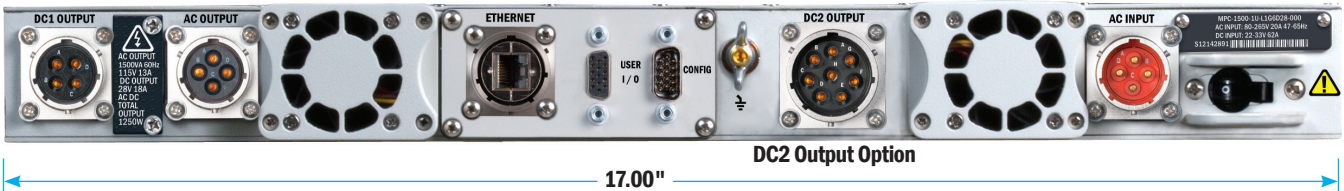
## MPC-1500-1U & MPC-1500-1S



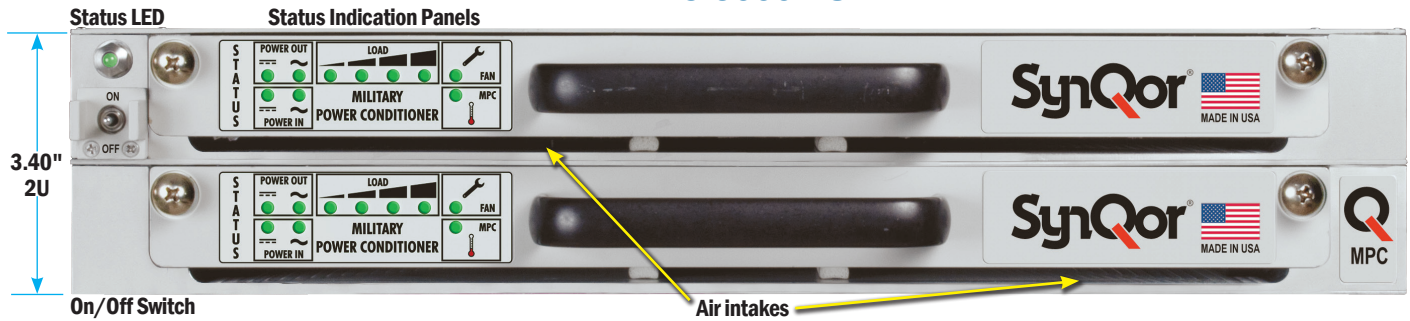
### MPC-1500-1U & MPC-1500-1S with DC Input/DC1 Output Options



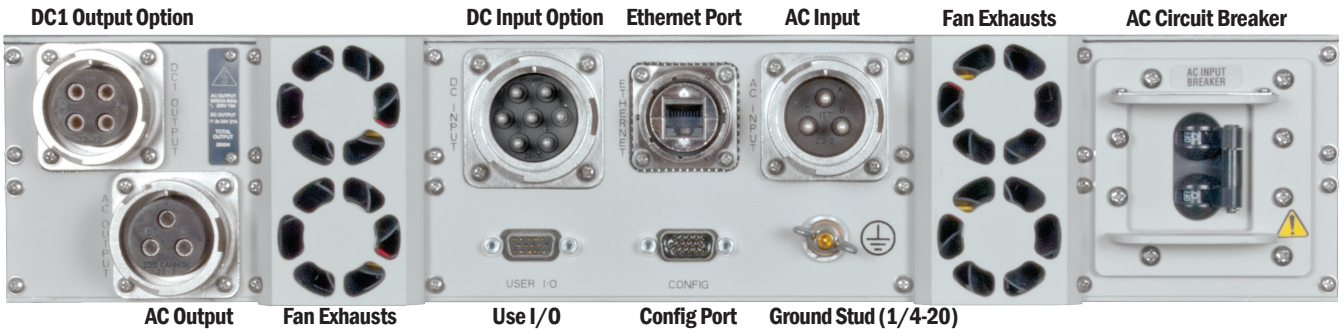
### MPC-1500-1U & MPC-1500-1S with DC1 Output/DC2 Output Options



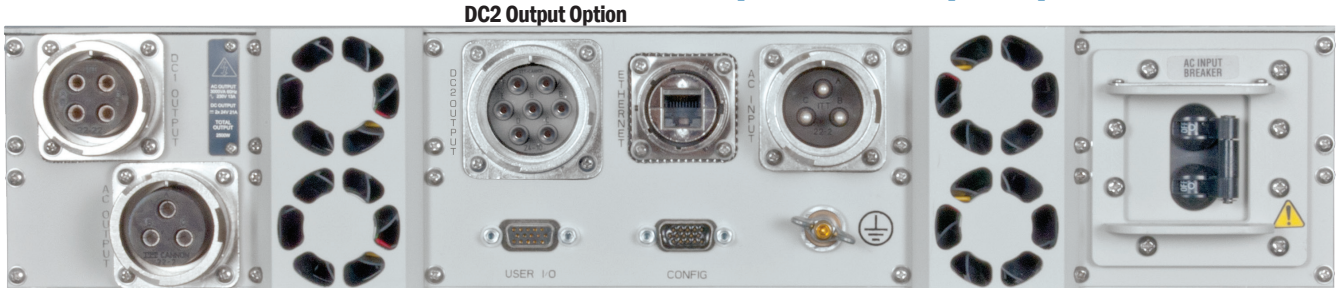
## MPC-3000-2U



### MPC-3000-2U Units with DC Input /DC1 Output Options



### MPC-3000-2U Units with DC1 Output /DC2 Output Options



# MPC MILITARY FIELD-GRADE



## DC Output Only Military Field-Grade Power Conditioner (MPC-1250)

SynQor's Military Field-Grade Power Conditioner units are designed for the extreme environmental and demanding electrical conditions of Military/Aerospace applications. SynQor's MPC incorporates field proven high efficiency designs and rugged packaging technologies. This MPC will accept a wide range of input voltage and frequency values while delivering a well conditioned DC output to the load. It is designed to comply with a wide range of military standards.

### MPC PRODUCT FEATURES

- ◆ 1U Shallow rack mount unit (17.00"W x 14.80"D x 1.73"H)
- ◆ Sealed, weather-proof, shock-proof construction
- ◆ 1250 W output power
- ◆ Full power operation: -40 °C to +55 °C
- ◆ Universal AC input: 80-265 Vac; 47-65 Hz
- ◆ Power factor correction at AC input
- ◆ Dual input (AC and DC)
- ◆ True on-line double conversion
- ◆ Up to 32 units in parallel with N+M redundancy
- ◆ User I/O, Ethernet and Configuration signal ports
- ◆ Low weight: 22 lbs.

### OPTIONS

- ◆ Fully Regulated 24 V, 28 V, or 48 V DC output
- ◆ Constant Current overload protection suitable for lead-acid battery charging applications
- ◆ Wide-range AC input frequency: 47Hz to 800Hz

### SPECIFICATION COMPLIANCE

- MPC units are designed to meet:**
- ◆ MIL-STD-461F - Electromagnetic Interference
  - ◆ MIL-STD-704F - Aircraft Electrical Power
  - ◆ MIL-STD-810G - Environmental Engineering
  - ◆ MIL-STD-1275D - Vehicle Electrical Power
  - ◆ Mil-STD-1399-300B - Interface Shipboard

## DC Output Only Military Field-Grade Power Conditioner (MPC)

Base Model Number	Power	Height (W x D x H)	Weight
<b>MPC-1250-1S</b>	1250 W	1U (17.00" x 14.80" x 1.73")	22 lbs.

Base Models	Options					Options	
	AC Input Frequency	DC Regulation Type	DC Output Voltage	DC Input	Additional Options		Options
MPC-1250-1S-	L W	R	24	D00	-E	00 CE	L 47-65 Hz
		P	28				W 47-800 Hz
		C	48				R Fully Regulated Output
							P Parallelable Regulated Output
							C Constant Current Overload Protection
							24 24 V Output
							28 28 V Output*
							48 48 V Output
							D00 DC Input
							-E Ethernet/SNMP with Configuration Loading
							00 No CE Marking
							CE CE Marking

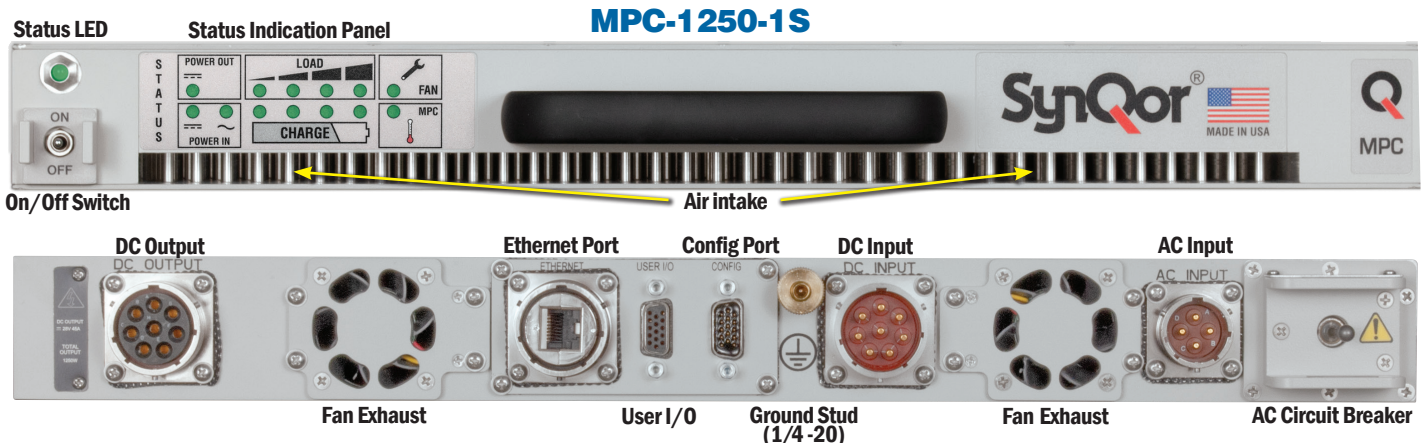
Not all combinations make valid part numbers, please contact SynQor for availability. See the Product Summary web page for more options.

\*Notes: Order "P: Parallelable" option to place multiple MPC units in parallel

\*Select 28V output option when ordering Constant Current regulation type

Examples: MPC-1250-1S-LR28D00-E00

MPC-1250-1S-LP28D00-ECE (Parallelable with CE marking)





# *Power Converters & Systems*



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