



MPC Inverter System

18 kVA - 48 VDC - 120/240/208 VAC

Telecom

Datacom

Mass Transit

Oil & Gas

Utilities



MPC Inverter System

Product Description

The MPC is a readymade inverter package designed to provide a pure sine wave AC supply as a complement to any existing DC power solution.

Compact, friendly plug & play installation, self-standing open relay rack ideal for low MTTR applications in power room. It can be used either to piggyback DC power sources or as fully integrated AC power center with built-in in and out protections. Thanks to TSI specifics it provides outstanding power conditioning and high-end availability.

Applications

Convenient for any Mission Critical Applications. A must when any glitch matters.

The solution to power up demanding AC loads at low OPEX from a combination of AC and DC sources present on site.

It reveals its full worth in harsh electrical environments and for long autonomy requirements. It handles any type of AC load including laser printers, compressors and induction motors.

Typical applications include aggregation network infrastructure components (MGW, RNC, SSP, PTP-RL, IP/Router...); HVAC equipments, small datacenter...

Product Features

- Permanent AC to AC double conversion
- Great disturbance rejection rate
- Redundant AC & DC input sources
- Source change over not visible by the load
- Highly efficient energy conversion
- Preserve battery life expectancy
- Compact footprint
- Offers space for AC distribution or integration with 3rd party equipment
- Operates until 65°C/149°F
- Can be provided with 120 VAC, 120/240 VAC and 120/208 VAC system configurations

General Specifications

Applicable standards	IEC 61000-4 / FCC part 15 / cULus 1778 Listed / RoHS
MTBF (Each module)	240,000 hours
Efficiency (Typical)	Enhanced Power Conversion / On Line: 95% / 91%
Dielectric strength DC/AC	4,300VDC
True redundant systems - compliant	3 disconnection levels on AC out and DC in power ports 4 disconnection levels on AC in port
Vibration	GR63 office vibration 0-100Hz-0.1 g / transport vibration 5-100Hz-0.5g 100-500Hz-1.5g / Drop test
Altitude above sea	<1,500m no derating / >1,500m – 0.8 % derating per 100m
Ambient / Storage temperature	-40 – 70°C (-40 – 158°F)
Operating temperature (Ambient & measured at air inlet)	-20 – 40°C (-4 – 104°F) for rated power (7) 40 – 65°C with 2%/°C derating (1), 104 – 149°F with 1%/° F derating (1)
Relative humidity	95%, non-condensing
Op. environment / Ingress protection	Free from dust and corrosive materials / NEMA 1
Material (Casing)	Coated steel-ALU ZINC

DC Input Specifications	
Nominal voltage (DC) / Voltage range	48V / (40 – 58V)
Voltage Ripple	<2mV Psopho
Input Voltage Boundaries	40 – 57V user selectable
DC Input Protections	1 60A MCB per module

AC Input Specifications	
Voltage range (AC) (Full power rating)	104 – 140VAC
Brownout range and behavior	80 – 104VAC use DC source contribution if need be (can be disabled)
Conformity range before transfer to DC	Adjustable from 80 – 138VAC
Power factor	>99%
Frequency range (selectable) / Synchronization range	50 – 60Hz / range 47 – 53Hz / 57 – 63Hz

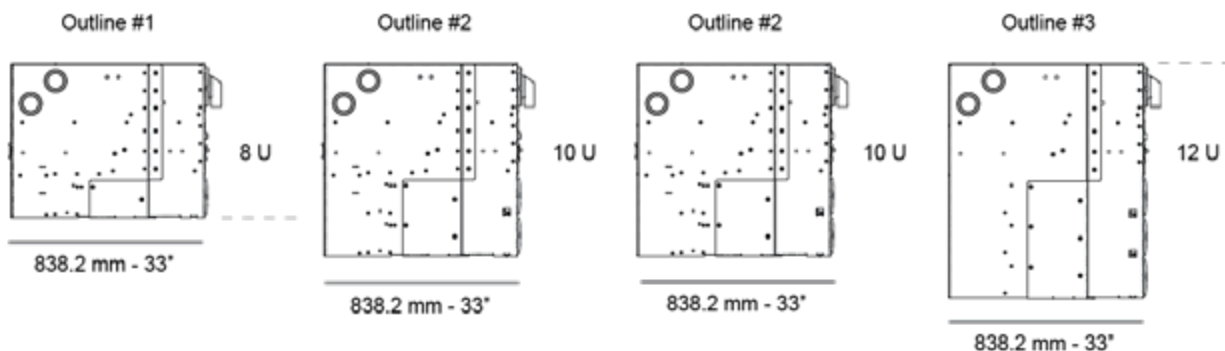
AC Output Specifications	
Admissible load power factor	Full VA power rating from 0 inductive to 0 capacitive Limited to W power rating from Pf 0,8 to 1
Frequency / Frequency accuracy	50 – 60Hz / 0.03%
Total harmonic distortion (resistive load)	<1.5%
Load impact recovery time	0.4ms
Turn on delay	30s
Short duration overload capacity	150% - 15s
Long duration overload capacity	110% permanent
Crest factor at nominal power with short circuit management and protection	3.1
Short circuit clear up capacity (3)	10 x In for 20ms
Short circuit clear up capacity when AC is not present	1.5 x In for 15s

Energy Source Changeover	
Total transient voltage duration (max) (as seen from the load)	0 s (and no glitch)
Maintenance bypass (MBP)	No

Signaling & Supervision	
Display	LED w/module status and power bargraph or optional 7" touch-screen + CANDIS Display (2)
Alarms output / supervision	3 Dry Contacts (Maj, Min, User adj)
Remote monitoring	TCP-IP with SNMP V1
Remote on / off	via T2S controller

	MPC-1-6-xx-04	MPC-1-12-xx-08	MPC-2-12-xx-08	MPC-3-18-xx-12
General				
Nominal voltage (AC) input & output	120VAC L-N	120VAC L-N	120VAC L-N 240VAC L-L	120VAC L-N 208VAC L-L
Nominal output power (VA) / (W) (when fully populated)	6kVA / 4.8kW	12kVA / 9.6kW	12kVA / 9.6kW	18kVA / 14.4kW
AC Output Connections				
AC output connection / protection (6)	Terminal block 70A Branch Circuit Protection	Terminal block 100A Supplementary Protection	Terminal block 70A 2pole Branch Circuit Protection	Terminal block 70A 3pole Branch Circuit Protection
Nominal AC output current (protected against reverse current)	50A	100A	50A per phase	50A per phase
Short circuit current after clear up capacity	75A	150A	75A per phase	75A per phase
DC Input Connections				
DC input connection (6)(8)	Copper plate featured to receive double lug cable shoe Common feed or one feed per row of modules			
Nominal DC current (at floating voltage and 1200 W per module output)				
Common feed	99A	198A	198A	296A
Two feed	N/A	99A per feed	99A per feed	N/A
Three feed	N/A	N/A	N/A	99A per feed
Internal DC input protections	100A (No1 per row of module)	2 x 100A (No1 per row of module)	2 x 100A (No1 per row of module)	3 x 100A (No1 per row of module)
AC Input Connections				
AC input connection / protection (6)	Terminal block / 70A Supplementary Protection	Terminal block / 2 x 70A Supplementary Protection	Terminal block / 2 x 70A Supplementary Protection	Terminal block / 3 x 70A Supplementary Protection
Nominal AC input current (5) (at 120 VAC and 2000 W per module output)	50A	85A	50A per phase	50A per phase
Selectable Options				
Embedded manual bypass				
7 inch touchscreen				

- (1) Operation beyond 40°C (104°F) and derating are not UL certified
- (2) Specific execution can be provided on request
- (3) While the boost function is enabled and AC source present
- (5) Inverter module current consumption only. Use output current for circuit sizing while MBP is present
- (6) Refer to specific document for NEC compliance for external protections and cable sizing
- (7) Internal temperature management and switch off
- (8) DC cable size not NEC compliant for infrastructure connection. Used for system internal wiring only.



Ordering Information

Model No.	Description
MPC Inverter System	18kVA Modular Inverter System