

## Technical Specification

# MULTI POWER CONTROLLER

Model: MLT/PD-12000-36/48



### MLT DRIVES POWER CONTROLLERS

MLT Inverters are designed to be robust and tough both mechanically and electrically. The inverters have 150% overload capacity and wide operating temperature range designed for many harsh environments. These inverters are the perfect fit for low maintenance, off grid, remote installations and industrial power management.

MLT Drives pioneered the design and development of solar inverters to power remote communities and remote installations. Our products have been in use reliably for over 20 years already. The system architecture guarantees optimal efficiency, maximizes system reliability and results in extended equipment life.

### HYBRID SOLAR INVERTERS

MLT Drives hybrid inverters are the industry standard for applications involving the batteries. Our inverters can if required be managed remotely via a GSM, phone line connection or local area network.

### THEORY OF OPERATION

The single phase 12 KVA MPC system primarily ensures that quality power to the local site load is maintained at all times. The source of power will be from the batteries

Whilst the AC source is present, the load can be supplied with the combined rating of the AC source as well as that of the inverter rating. In such cases the total power available is the maximum settable load on the AC source and the inverter power rating (which is drawn from the batteries).

# Technical Specification

## SYSTEM FEATURES AND OPTIONS

- Capable of being integrated with renewable/distributed generation sources on both the AC and DC bus.
- Local LCD (liquid crystal display) and keypad for system control and monitoring instantaneous system data.
- Time and date stamped system event logs and fault logs available from local LCD.

## TYPICAL SYSTEM SPECIFICATIONS

OPERATING PARAMETERS	INFORMATION
Output Voltage	230 volts $\pm 1\%$ , single phase, 2 Wire output. Nominal voltage can be adjusted by $\pm 10\%$ via system settings
Output Frequency	50Hz $\pm 0.5\%$ during standalone inverter operation Inverter to follow grid/generator frequency up to $\pm 5$ Hz of the nominal output frequency during parallel operation
Continuous Rating	12kVA
Surge Rating	Up to 18KVA (150% of the continuous rating) for a maximum of 30 seconds. Up to 24kVA for 5 seconds.
Battery Voltage (nominal)	48 volts DC
Control Type	Voltage source, microprocessor assisted output regulation
Waveform	<b>DSP</b> generated PWM for low THD, sinewave output
Parallel Operation Power Control	Phase Controlled Pulse Width Modulation (PWM)
THD	Less than 4%
Efficiency	Up to 92%
No Load Power Consumption	86.4W (1.8A typical)
Internal Protection System (using electronic detection)	<ul style="list-style-type: none"> <li>• Inverter continuous overload protection</li> <li>• Inverter peak current (short circuit) protection</li> <li>• Heatsink over temperature protection</li> <li>• Over/under voltage AC voltage protection</li> <li>• Over/under frequency protection</li> <li>• Over/under battery voltage protection</li> </ul>
Alarm Signals	Via system fault relay (voltage free contact)
Front Panel Display (LCD)	16x2 LCD panel with membrane keypad displaying the following: <ul style="list-style-type: none"> <li>• AC Volts</li> <li>• AC Amps</li> <li>• Power Output</li> <li>• Battery Voltage</li> <li>• Heatsink Temperature</li> <li>• Change Battery Settings</li> <li>• Change Load Settings</li> </ul>
Front Panel Metering	<ul style="list-style-type: none"> <li>• AC Volts Meter</li> <li>• AC Amps Meter</li> </ul>
Front Panel Controls (via keypad)	<ul style="list-style-type: none"> <li>• On/Standby, Reset, Menu, Enter &amp; Up/Down Buttons</li> </ul>
Circuit Breakers	<ul style="list-style-type: none"> <li>• Battery Input Fuse Breakers</li> </ul>
RFI	Designed to minimise both conducted and radiated RFI emissions
Earthing Provisions	AC bypassing to earth on inverter and DC inputs (negative ground)

# Technical Specification

## ENVIRONMENTAL

Operating Temperature Range	-5 to 50 degrees Celsius
Humidity	0-90% non condensing
Enclosure	Rated for IP30 – not weatherproof

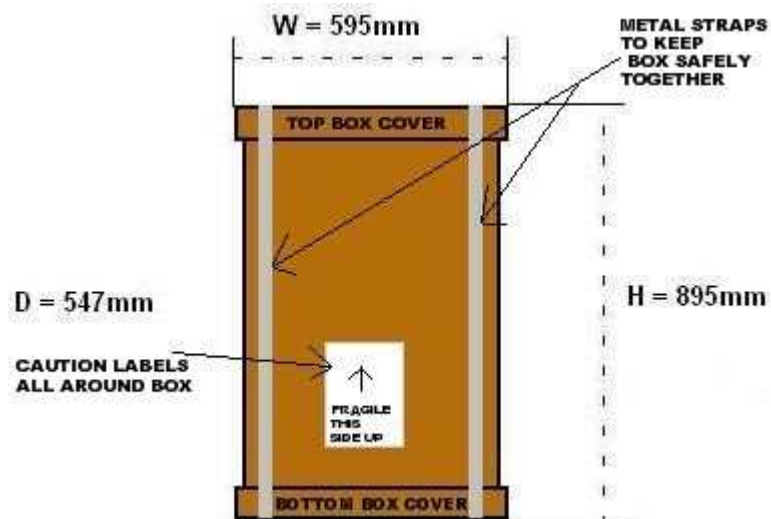
## ENCLOSURE

Dimensions	550(W) x 510 (D) x 930 (H)
Weight	140 kg

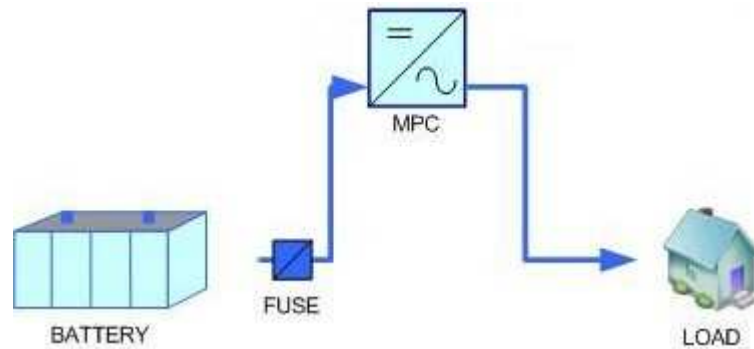
As MLT Drives is constantly improving its products, specifications are subject to change without notice.

## PACKAGING

All inverters are wrapped in air-o-thene foam and placed in a cardboard box wrapped with cling wrap.



## TYPICAL HARDWARE CONFIGURATION



MPC – Multi Power Controller - Standalone Inverter Module  
Battery Bank (48V, 400Ah minimum)

## CONNECTIONS

Load Output

Three core 16mm<sup>2</sup> isolated flex cable with bootlace ferrule screwed into terminal block on left side of inverter.

Battery DC

1.5m 100mm<sup>2</sup> isolated flex cable provided (positive and negative) with lugs (8mm hole)

Battery Temperature

3 pin mike plug NC520 (Use LM35 temperature sensor only)