



**MAPLE LEAF**  
*power systems*

## **Maple Leaf 6500EX-48** **Off Grid-Inverter** **500 VDC**

The Maple Leaf 6500EX-48 offers a hassle-free kickstart for your upcoming off-grid ventures. Featuring the exclusive all-in-one, CSA-certified inverter, this device serves as the central hub for all your off-grid requirements. Just connect your inputs, batteries, and even optional AC sources like the grid or a generator, and you're all set to embark on your off-grid journey!

With built-in features like a WIFI transmitter for remote monitoring, timer control for AC output and charging, and a genset starter dry contact, the Maple Leaf Inverter offers convenience and control.

It also includes a robust MPPT solar charger and utility battery charger, providing you with comprehensive programming options and adjustable charging voltage.

However, it's important to note that this inverter is designed for indoor installation only and offers a wide AC input range for bypass, making it an excellent choice for various setups. Plus, it includes free monitoring software, making it a complete and user-friendly package for your power management needs.



### **Caution**

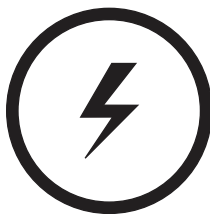
**Electric shock hazard.**  
**Do not connect in reverse or short circuit.**  
**Do not expose to excessive heat.**  
**Do not disassemble.**  
**Do not impact & crush.**

**Risque de choc électrique.**  
**Ne vous connectez pas en marche**  
**arrière ou en court-circuit.**  
**Ne pas exposer à une chaleur excessive.**  
**Ne pas démonter.**  
**N'avez pas d'impact et écraser.**

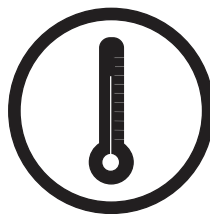
# Maple Leaf Off-Grid Inverter

The Maple Leaf Inverter is a cutting-edge power solution that ticks all the right boxes when it comes to compliance and features. With UL1741 and CSA 22.2 under TUV certifications, this inverter ensures top-notch quality and safety, making it a reliable choice for your power needs.

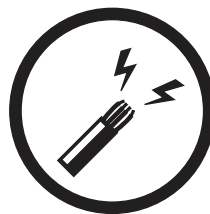
What sets the Maple Leaf Inverter apart is its versatility and customization options. It boasts a high PV input capacity of up to 500V VDC and can deliver a pure sine wave output of up to 6.5KW at 48V, offering a steady and efficient power supply at 120V. Whether you require a single-phase, split-phase, or 3-phase setup, this inverter supports parallel operation of up to 6 units, making it adaptable to a variety of applications.



**Over-Voltage  
Protection**



**Temperature  
Protection**



**Over-Current  
Protection**



**Short-circuit  
Protection**

**Meets Canadian code requirements for Safety and Warranty  
UL1741 compliance TUV certified CSA 22.2 compliance cTUVus**

 [www.MapleLeafPowerSystems.com](http://www.MapleLeafPowerSystems.com)

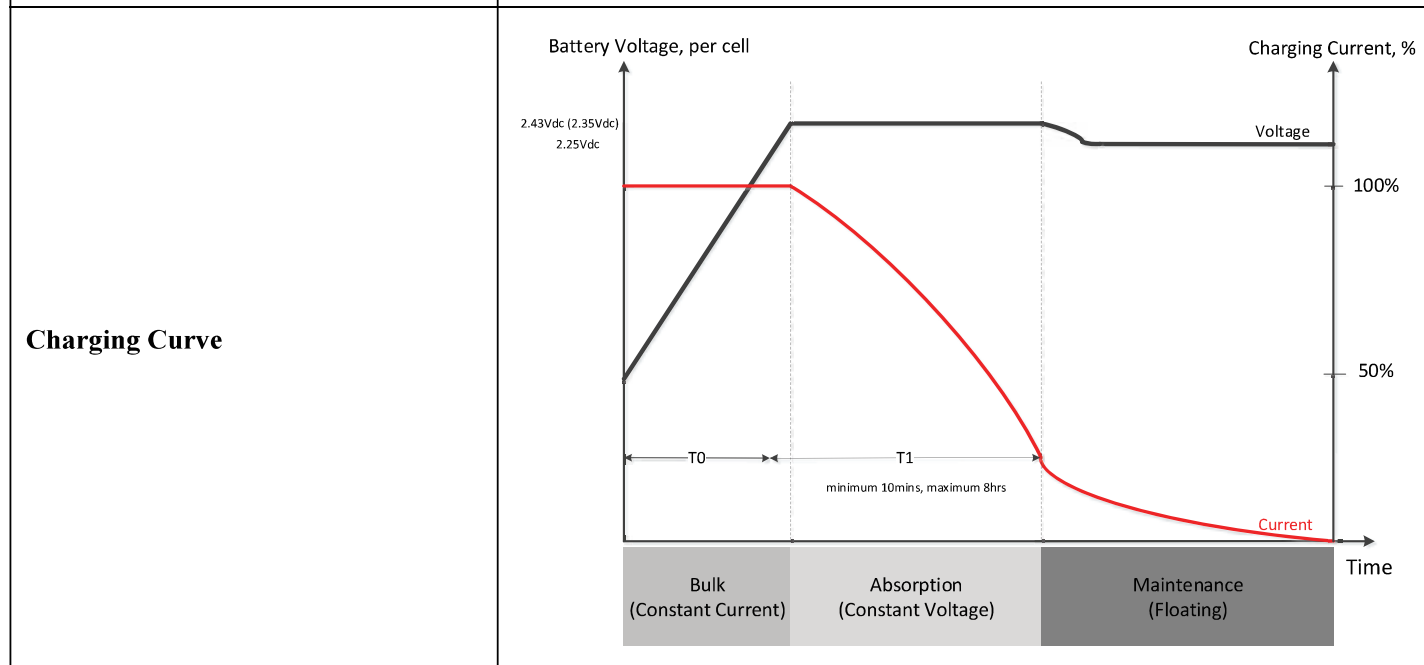
# TECH & SPECS

## Inverter Mode Specifications

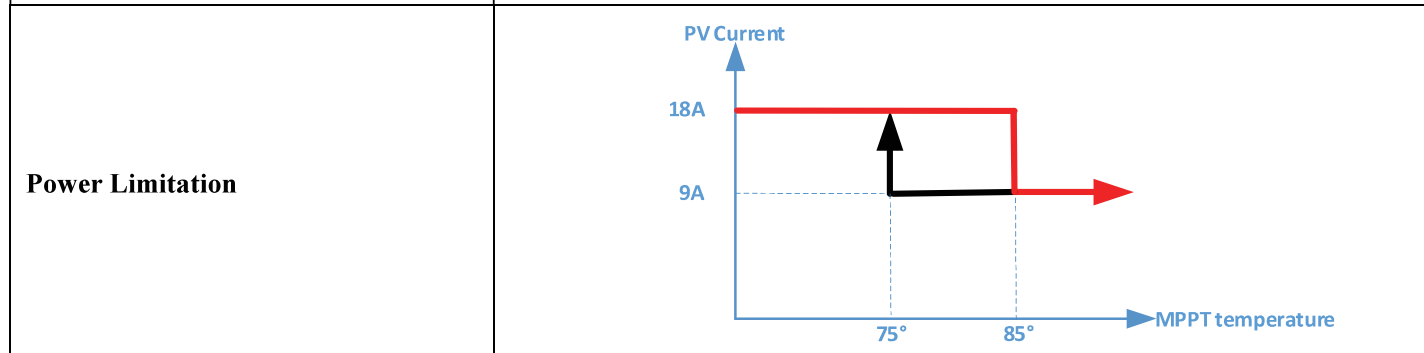
MODEL	6.5KW
Rated Output Power	6500W
Output Voltage Waveform	Pure Sine Wave
Output Voltage Regulation	120Vac±5%
Output Frequency	60Hz or 50Hz
Peak Efficiency	91%
Overload Protection	100ms@≥205% load;5s@≥150% load; 10s@110%~150% load
Surge Capacity	2* rated power for 5 seconds
<b>Optional 12V DC Output</b>	
DC Output	12 VDC ± 7%, 100W
High DC Cut-off Voltage	63Vdc
Low DC Cut-off Voltage	44Vdc
Nominal DC Input Voltage	48Vdc
Cold Start Voltage	46.0Vdc
Low DC Warning Voltage	
@ load < 20%	46.0Vdc
@ 20% ≤ load < 50%	42.8Vdc
@ load ≥ 50%	40.4Vdc
Low DC Warning Return Voltage	
@ load < 20%	48.0Vdc
@ 20% ≤ load < 50%	44.8Vdc
@ load ≥ 50%	42.4Vdc
Low DC Cut-off Voltage	
@ load < 20%	44.0Vdc
@ 20% ≤ load < 50%	40.8Vdc
@ load ≥ 50%	38.4Vdc
High DC Recovery Voltage	61Vdc
High DC Cut-off Voltage	63Vdc
DC Voltage Accuracy	+/-0.3V@ no load
THDV	<5% for linear load,<10% for non-linear load @ nominal voltage
DC Offset	≤ 100mV

# Charge Mode Specifications

<b>Utility Charging Mode</b>		
<b>MODEL</b>	<b>6.5KW</b>	
<b>Charging Current (UPS)</b> @ Nominal Input Voltage	120A	
<b>Bulk Charging Voltage</b>	<b>Flooded Battery</b>	58.4Vdc
	<b>AGM / Gel Battery</b>	56.4Vdc
<b>Floating Charging Voltage</b>	54Vdc	
<b>Overcharge Protection</b>	63Vdc	
<b>Charging Algorithm</b>	3-Step	



<b>Solar Input</b>	
<b>MODEL</b>	<b>6.5KW</b>
<b>Rated Power</b>	8000W
<b>Max. PV Array Open Circuit Voltage</b>	500Vdc
<b>PV Array MPPT Voltage Range</b>	90 -450 VOC
<b>Max. Input Current</b>	18A x 2
<b>Start-up Voltage</b>	80V +/- 5Vdc



# Line Mode Specifications

MODEL	6.5KW
<b>Input Voltage Waveform</b>	Sinusoidal (utility or generator)
<b>Nominal Input Voltage</b>	120Vac
<b>Low Loss Voltage</b>	90Vac±7V (UPS) 80Vac±7V (Appliances)
<b>Low Loss Return Voltage</b>	100Vac±7V (UPS); 90Vac±7V (Appliances)
<b>High Loss Voltage</b>	140Vac±7V
<b>High Loss Return Voltage</b>	135Vac±7V
<b>Max AC Input Voltage</b>	150Vac
<b>Max AC Input Current</b>	60A
<b>Nominal Input Frequency</b>	50Hz / 60Hz (Auto detection)
<b>Low Loss Frequency</b>	40±1Hz
<b>Low Loss Return Frequency</b>	42±1Hz
<b>High Loss Frequency</b>	65±1Hz
<b>High Loss Return Frequency</b>	63±1Hz
<b>Output Short Circuit Protection</b>	Line mode: Circuit Breaker (70A) Battery mode: Electronic Circuits
<b>Efficiency (Line Mode)</b>	>95% ( Rated R load, battery full charged )
<b>Transfer Time</b>	10ms typical (UPS); 20ms typical (Appliances)
<b>Power Limitation</b>	<p>The graph illustrates the power limitation of the device. The vertical axis represents Output Power, with two specific levels marked: 50% Power and Rated Power. The horizontal axis represents Input Voltage, with three key points marked: 80V, 110V, and 140V. The power capability starts at 50% of the rated power at 80V. Between 80V and 110V, the power capability increases linearly, reaching the full rated power at 110V. From 110V to 140V, the power capability remains constant at the rated power level. Beyond 140V, the power capability drops to zero.</p>

# General Specifications

<b>MODEL</b>	<b>6.5KW</b>
<b>Safety Certification</b>	UL
<b>Operating Temperature Range</b>	-10°C to 50°C
<b>Storage temperature</b>	-15°C~ 60°C
<b>Humidity</b>	5% to 95% Relative Humidity (Non-condensing)
<b>Dimension (D*W*H), mm</b>	147.4x 432.5 x 553.6
<b>Net Weight, kg</b>	18.4

Table 5 Parallel Specifications

<b>Max parallel numbers</b>	6
<b>Circulation Current under No Load Condition</b>	Max 2A
<b>Power Unbalance Ratio</b>	<5% @ 100% Load
<b>Parallel communication</b>	CAN
<b>Transfer time in parallel mode</b>	Max 50ms
<b>Parallel Kit</b>	YES

Note: Parallel feature will be disabled when only PV power is available.



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