

Motech PVMate 6500U / 7500U Single-Phase Grid-Tied PV Inverter with Transformer

MOTECH

YOUR BEST PARTNER FOR PV INVERTERS

More Energy	Motech PVMate inverters offer high CEC efficiency in its class, 96%. Maximum efficiency is 96.7%.
Flexibility in Grid Connection	Wide PV input MPPT tracking voltage range enables flexibility in modules selection and sizing of PV system.
	208 V, 240 V and 277 V compatible.
	Motech PVMate 6500U/7500U support the connection of the DC wires for negative and positive ground arrays.
Ease of Installation & Low Cost	Integrated DC/AC disconnect switch that eliminates the needs for external DC/AC disconnects.
	NEMA 3R enclosure makes this product suitble for residential or light commercial applications.
Ease of Serviceability	In the highly unlikely event that the inverter needs to be serviced, the independently inverter enclosure can easily be detached from the DC wiring box, and the wiring box can remain intact on the wall.
	Important system performance parameters are shown on a user-friendly LCD display.
Built-in Communication	Built-in RS232 and RS485. No added-on card is required.
Certified	Certified for UL1741/IEEE1547
Warranty	10 years standard warranty
Free Software	Free PC software for system troubleshooting and remote monitoring.

Good efficiency
Motech PVMate 6500U/7500U transformer photovoltaic inverter offer high CEC efficiency of 96%.

Wide application
The MPP tracking voltage for PVMate 6500U/7500U is from 230 V to 500 V. Motech PVMate inverters enable flexibility in module selection and sizing of PV system.

Greater flexibility
The MPP tracking voltage for PVMate 6500U / 7500U is from 230V to 500V. Motech PVMate inverters enable flexibility in module selection and sizing of PV system.

User friendly placement of heat sink
The heat sink could get hot when operate at full rated power. Hence, the heat sink is located on the back of the inverter in order to prevent accidental injuries of skin such as burns and cuts from the contact with the heat sink.

Support 3 standard grid voltages
Motech PVMate 6500U/7500U support all 3 different grid voltages in the North America, including 208 V, 240 V and 277 V.





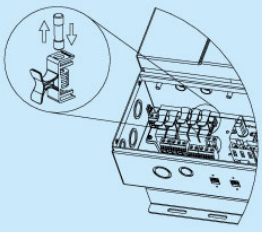
Trouble free replacement of cooling fans
The built-in cooling fans are designed so that they could be easily replaced.

Easy system monitoring
Every inverter from Motech comes standard with 16x2 LCD display and a monitoring software.

Standard 10-year warranty
At Motech, we have been designing and manufacturing high quality power electronics equipment for over 28 years. The production facilities are ISO 9001 and ISO14001 certified.

Ease of Installation & Lower Cost
Integrated DC/AC disconnect switch that eliminates the need for external DC/AC disconnects. The built-in DC/AC disconnect lower the total cost of PV system.





Easily replaceable PV string fuses
Each Motech PVMate inverter has four fused string inputs. Simply open the wiring box and replace the fuses as shown on the diagram on the left.

Support positive ground and negative ground modules
Motech PVMate 6500U/7500U support both negative and positive ground modules with different wirings.

No Hassle-built-in communication
PVMate inverter comes with RS232 and RS485 communication ports. One port for the PC connection, and one port for parallel connection to another PVMate inverter.

Better performance at high temperature
Motech PVMate 6500U / 7500U could operate without derating at full rated power up to 122˚F

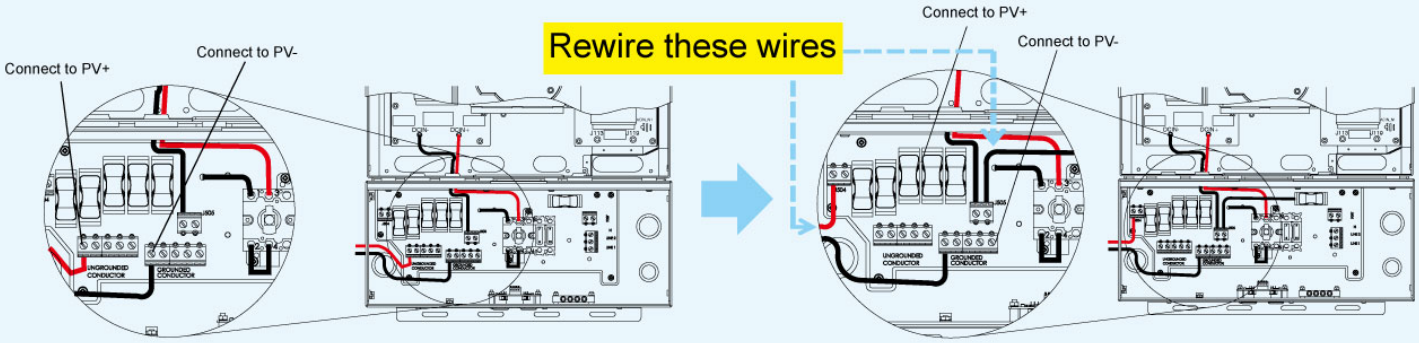
UL certified
Motech PVMate 6500U/ 7500U are certified for the UL1741/IEEE1547

◎ Specifications are subject to change without notice.

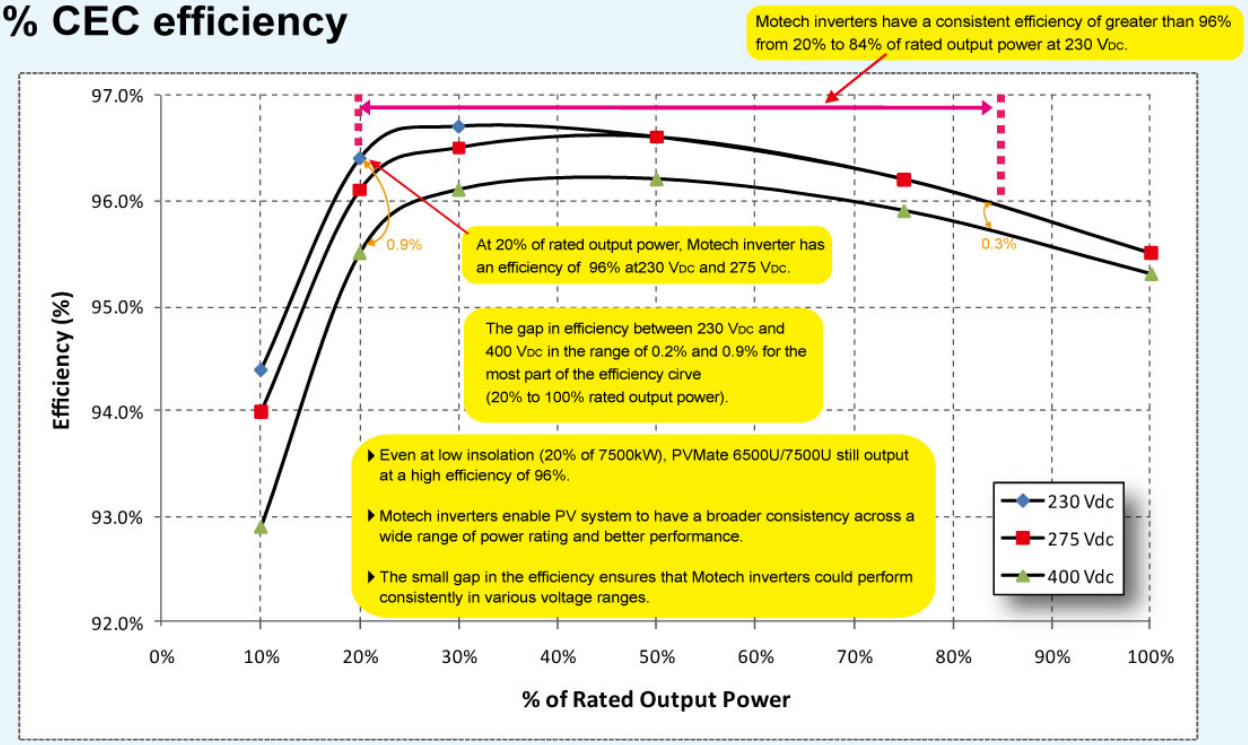
The contents technically correct at time of going to print. Motech reserves the right to make modifications. (2013/5)

Flexible installation options

Installer can choose to connect PV arrays to PVMate inverter through the built-in internal DC fuses, if no external DC fuses existed (Fig.1).
If external combiner box with DC fuses existed, then installers can bypass the built-in internal DC fuses, and the installer is required to rewire only single wire (Fig.2).



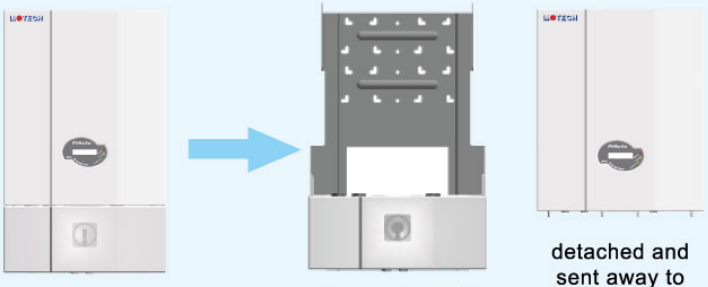
96% CEC efficiency



*Motech PVMate 6500U/7500U have 96% CEC efficiency according to CEC inverter list.

Ease of serviceability

In the highly unlikely event that the inverter needs to be serviced, the independently sealed inverter enclosure can easily be detached from the DC/AC wiring box.
The mounting bracket and the wiring box can remain intact on the wall.



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Motech PVMate 6500U / 7500U Specifications

Models						
	PVMate 6500U			PVMate 7500U		
Output Data (AC)						
Maximum output power	6500 W			7500 W		
Grid voltage, nominal	208 V	240 V	277 V	208 V	240 V	277 V
Grid voltage, operating range	184 - 228 V_{AC} (adjustable)*	212 - 264 V_{AC} (adjustable)*	244 - 304 V_{AC} (adjustable)*	184 - 228 V_{AC} (adjustable)*	212 - 264 V_{AC} (adjustable)*	244 - 304 V_{AC} (adjustable)*
Grid frequency, nominal	60 Hz					
Grid frequency, operating range	59.3 - 60.5 Hz (adjustable)*					
Maximum output current	31.3 A	27.1 A	23.5 A	36.1 A	31.3 A	27.1 A
Output over current protection	40 A	35 A	30 A	50 A	40 A	35 A
Maximum output fault current	55 A					
Maximum grid backfeed current	0 A					
Startup current	< 2 A					
Waveform	True sine					
Power factor	> 0.99					
Total harmonic distortion	< 3%					
DC component	< 0.5%					
Phase	Split Phase or Single phase					
Input Data (DC)						
Input voltage range	220 ~ 600 V_{DC}					
MPP voltage range	230 ~ 500 V_{DC}					
Maximum input voltage	600 V_{DC}					
PV start voltage (adjustable)	260 V_{DC} (adjustable)					
Maximum input current	35 A					
Maximum input short circuit	44 A					
Maximum number of fused inputs	5					
Number of MPPT	1					
Efficiency						
Maximum efficiency	96%	96.30%	96.70%	96.20%	96.50%	96.70%
CEC efficiency	95.50%	96%	96%	95.50%	96%	96%
Night-time tare loss	<0.5 W					
Environment						
Operating temperature range	–25 °C ... +65 °C (–13 °F ~ +149 °F)					
Maximum full power operating temperature without derating	55°C (131°F)			50°C (122°F)		
Relative humidity	Maximum 95%					
Mechanical						
Outdoor enclosure	NEMA 3R, Rainproof (IP54)					
Cooling	Controlled forced ventilation					
Input terminals	Accpet wire size of #10 to #6 AWG					
output terminals	Accpet wire size of #8 to #6 AWG					
Inverter weight	41 kg / 90 lb					
shipping weight	47 kg / 104 lb					
Dimensions (HxWxD)	732 x 438 x 208 mm (28.8 x 17.2 x 8.2")					
Shipping dimensions (HxWxD)	840 x 550 x 355 mm (33.1 x 21.65 x 13.98")					
Features						
Communications	RS232 and RS485					
Display	LED / LCD					
Certificates and approvals	CEC, UL1741, IEEE 1547, IEEE C62.41.2, IEEE C3790.1, FCC Part B					
Standard Warranty	5 years					
Optional Warranty	5-year Warranty Extension (10-year Coverage)					

* Factory settings can be adjusted with the approval of the utility. This unit is provided with adjustable trip limits and may be aggregated above 30kW on a single Point of Common Coupling.

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