

# THE POWER-BLOX 200 SERIES

The Power-Blox 200 series, the first product that was developed based on our swarm technology, is a revolutionary modular energy system producing alternating current from 200W up to the Kilowatt range, which serves as a "portable socket" to off-grid energy demands. Its modularity allows it to produce and easily scale electricity.

The system is Plug & Power and requires no configuration, specific know-how or maintenance. It consists of intelligent energy cubes with an integrated battery (available as lead or lithium-ion version). Each cube provides 200 Watt of alternating current and can be powered by an optionally provided solar unit or from any external source (such as solar, wind, hydrothermal, biomass, or a generator etc) to supply a household or small commercial business with electricity. Power-Blox acts as universal energy interface and can be combined with various external energy sources or storage devices.



- ✓ 230V AC / 200W true sinus inverter
- ✓ 100 Ah solar battery
- ✓ 200W solar module + 10m cable included
- ✓ MPP solar charger
- ✓ Swarm- / mini-grid enabled



- ✓ 4 x stacking sockets
- ✓ Integrated stacking cable
- ✓ Grid / generator connector
- ✓ 12V DC / 3A (cigarette lighter socket)
- ✓ 2 x USB output


## NEARLY UNLIMITED SCALABILITY

The nearly endless scalability of the Power-Blox system represents a breakthrough in energy technology. It allows scalable growth based on increasing energy requirements, without the need of modifying/replacing existing installations.



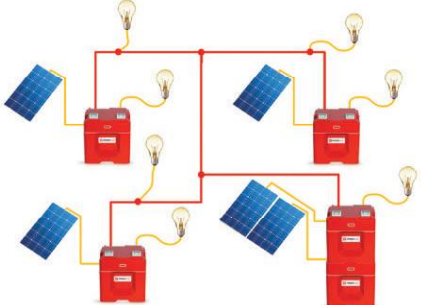
**STANDALONE POWER-BLOX**

Instant plug & power. Directly supplies 230V AC.



**STACKING POWER-BLOX**

Get more energy and power. Expand by stacking units.



**BUILD A SWARM GRID**

More units increase the stability and power of the grid. Every consumer in the system can use the full power of all units.

## TECHNICAL DATA

INVERTER	PBX-200 Pb	PBX-200 Li
Rated grid voltage	230 V	
Rated frequency	50 Hz	
Harmonic distortion	<4%	
Continuous power at 25	200 W	
Power for 5 sec. at 25	230 W	
Power for 3 sec. at 25	370 W	
Maximum load	Up to short-circuit	
Cosφ	0.1 to 1	
<b>Grid / generator input</b>		
Input voltage	230 V ±15%	
Frequency range	47 - 64 Hz	
Grid charger current	5 A	
Charging characteristics	IUoU <sup>1</sup>	Li BMS <sup>1</sup>
Resettable fuse	10 A	
<b>Transfer connectors</b>		
Transfer voltage	230 V ±15%	
Frequency range	47 - 64 Hz	
Resettable fuse	10 A	
<b>Solar input</b>		
Solar charger type	MPP <sup>2</sup>	
Input voltage range	30 - 45 V	
PV current	8 A	
Maximum PV power	250 W	
Recommended PV power	200 W	
Charging characteristics	IUoU, temperature regulated	Li BMS <sup>1</sup> , temperature regulated
<b>Battery</b>		
Included batteries	2 x Hoppecke sun power VR M 12 V 58	2 x Li-Ion batteries 12 V 50 AH
Battery technology	Lead acid / AGM <sup>3</sup>	Lithium / LiFePO <sub>4</sub> <sup>4</sup>
Internal battery voltage	24 V	
Cycle stability	2500 cycles	5000 cycles
Expected lifetime	3 - 5 years	> 10 years
<b>DC Output</b>		
Cigarette lighter socket	12 V, 3 A	
USB socket	2 x 5 V, 2 A	
<b>Connectors</b>		
Solar	Neutrik powerCON TRUE1 inlet / clamps	
Transfer / Stacking	Neutrik powerCON inlet / clamps	
Transfer cable	1.3m cable with Neutrik powerCON plug	
Grid / generator	Grid socket C14, 10A / clamps	
Clamps	Tool-less Phoenix clamps. 0.2 - 6mm <sup>2</sup>	
<b>Swarm connection</b>		
Stacking possibility	Via attached cable	
Connecting towers	Via attached cable	
Maximum tower height	3 units	
Maximum stacking / transfer power	10 units / 2.3 kW	
Maximum swarm-grid size	Infinite, tested up to 20 units	
<b>Certificates</b>		
EMC (Electro Magnetic Compatibility)	IEC/EN55022, IEC/EN61000	
Safety	EC/EN62109-1, IEC62109-2	
<b>Environmental conditions</b>		
Protection index	IP 20	
Relative humidity in operation	95% without condensation	
Operating temperature range	-10 to 45°C <sup>5</sup>	-20 to 60°C
Ventilation	Passive, no active ventilators	
Warranty	2 years	5 years
<b>General data</b>		
Weight	52 kg (114.6 lb)	27 kg (59.5 lb)
Dimensions (W / H / D)	400mm / 443mm / 400mm	

### Your Contact:

<sup>1</sup> IUoU = Multiple charge process for optimal battery charging  
 BMS = Battery Management System

<sup>2</sup> MPP = Maximum PowerPoint Tracker for upto 30% higher solar yield

<sup>3</sup> AGM = Absorbent Glass Mat, electrolyte is bonded in a nonwoven of glass fibers

<sup>4</sup> LiFePO<sub>4</sub> = Lithium iron phosphate

<sup>5</sup> If the operating temperature is above 30°C, the batteries age considerably faster