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DATASHEET

LIMITLESS 18K

18K-2P-LV

HYBRID INVERTER - RESIDENTIAL NORTH AMERICA

The Most Powerful Residential Solar Hybrid Inverter on the Market

Built for high-demand homes, the **Limitless 18K Hybrid Inverter** delivers premium resilient backup power and advanced energy management in a single, powerful platform. With **18kW of continuous output and 36kW surge capability**, it easily starts large loads such as HVAC systems, well pumps, and motors. Designed for flexibility and maximum solar utilization, the Premium 18K supports both **DC and AC solar coupling**, making it ideal for new installations as well as retrofit systems. With **200A grid passthrough**, integrated **Smart Load control**, and **generator input** supported through the multifunction GEN port, the Premium 18K provides a reliable foundation for whole-home energy independence without requiring additional PCS components.

Energy Management
Multi-Season Time-of-Use
Zero Meter
Self-Consumption

Backup Resilience
5ms Transfer Time
Auto Generator Start
Smart AC Load Control

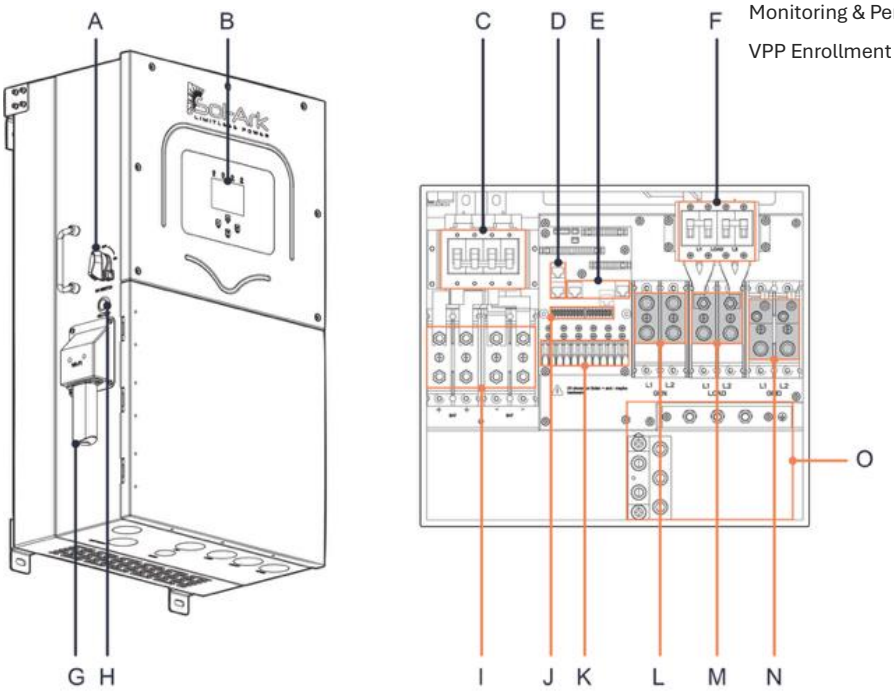
U.S. Company - Non-FEOC
Manufacturing & Inventory
Firmware and Data Hosting
7-Days-a-Week Support

Grid Interaction
NEM - Grid Sell
Peak Shaving
VPP Ready

New Installs or Retrofits
AC and DC Solar Coupling
All-in-One PCS platform – No MID

Battery Choice
Multiple UL 9540 Certifications

MySolArk V2 Monitoring App
Monitoring & Performance Insights
VPP Enrollment & Participation



Component	Description	Component	Description	Component	Description
A	PV DC Disconnect	F	(200A) LOAD breaker	K	3x MPPT inputs
B	LCD Touch Screen	G	4G / Wi-Fi / BT / Ethernet Dongle	L	(150A) GEN terminal
C	2x (250A) BATTERY breaker[4]	H	ON / OFF Button	M	(200A) LOAD terminal
D	Parallel RJ45 ports	I	BATTERY terminal	N	(200A) GRID terminal
E	BMS RJ45 ports (RS485 / CAN)	J	Input pinouts for sensors & accessories	O	Ground / Neutral Busbars

Model: 18K-2P-LV

Specification	Unit	Rating	Specification	Unit	Rating
PV (DC)			**Battery (DC)**		
Max. STC Rated PV Power	W	32,400	Compatible Technology		Lead-acid[3] or Lithium
Max. Usable Combined MPPT PV Power	W	28,800	Nominal DC Voltage	V	48
Rated MPPT Operating Voltage Range	V	150 - 425	Operating Voltage Range	V	43 – 59
Start-Up Voltage	V	125	Number of Inputs[4]		2
Max. Input Voltage[1]	V	500	Terminal Current Rating	A	255
Max. Operating PV Input Current	A	36 (per MPPT)	Max. Charge / Discharge Current	A	350 / 350
Max. Input Short Circuit Current	A	54 (per MPPT)	BMS Communication		CANbus / RS485 / MODBUS RTU
Number of MPPT / Strings per MPPT		3/2	Charge Controller Type		3-Stage with Equalization[3] / CC/CV - BMS Controlled
Grid (AC)			**Backup – Off-Grid (AC)**		
Nominal Voltage (L-N/L-L)	V	120/240, 120/208	Rated Voltage (L-N, L-L)	V	120/240 120/208
Nominal Frequency	Hz	50 / 60	Rated Frequency	Hz	50 / 60
Nominal Voltage Range	V	185 - 275	Max. Continuous Power	W	18,000 15,600
Nominal Frequency Range	Hz	55 - 65	Peak Surge Power (10s)	W	36,000 31,200
Max. Passthrough Current (Grid to Load)	A	200	Backup Transfer Time	ms	5
Max. Input Short Circuit Current (100ms)	A	150	Max. Load Imbalance Ratio	%	50
Nominal Real Power (240V)	W	18,000	THDv	%	1.7
Max. Output Current, Batteries + PV	A	75			
THDi	%	2.8			
Power Factor Adjustment Range	+/-	0.9			
Efficiency			**GEN Port (AC)[2]**		
CEC	%	97.0	Max. AC Coupled PV Power (240V)	W	28,800 24,960
Max	%	97.6	Max. Generator Power (240V)	W	28,800 24,960
Grid to Battery - Charge	%	92.4	Max. Current	A	120
Mechanical and Environment			**Protection - Integrated**		
Dimensions, H x W x D	mm (in)	863 x 494 x 306 (34 x 19.4 x 12)	PV DC Disconnect Switch — NEC 240.15		PV Arc Fault Detection — NEC 690.11
Weight	kg (lbs.)	62.14 (137)	Ground Fault Detection — NEC 690.5		PV Input Lightning Protection
Ambient Temperature / De-rated	°C (°F)	-40 to +60 (-40 to 140) / 45+ (113+)	PV Rapid Shutdown — NEC 690.12		PV String Input Reverse Polarity Protection
Operating Altitude	m (ft)	> 3000 (9843)	Surge Protection - DC Type II / AC Type III		
Idle Consumption - No Load	W	110	General		
Noise (@ 25°C / 77°F)	dB	< 50	Warranty Years		10
Humidity non-condensing	%	0 – 100	Parallel Units		12
Mounting (hanging bracket included)		Wall	Automatic Generator Start (AGS)		2-Wire Start - Integrated
Enclosure Rating		IP65 / NEMA 3R	Communication		4G / WIFI / Bluetooth / LAN
Cooling		Intelligent Fan	Monitoring Platform		MySolArk Mobile and Web Apps
Display		LCD	Options		
			Optional Accessories		4G Activation Plan, Revenue Grade Meter, Wireless CT

Compliance and Certification	
Safety Certification	UL1741 CRD-Multimode, UL1741 3rd SB, UL1741 CRD-PCS[5], UL1699B PVDC AFCI, UL1998, CSA C22.2 No. 107
Interconnection Compliance	IEEE1547- 2018 and interoperability using IEEE2030.5, Hawaiian Electric SRD V2.0
EMC	FCC Part 15 Class B
Listings	CEC, SGIP

[1] The highest input voltage is based on the open-circuit voltage of the array at the minimum design temperature (See Installation Manual for more details).

[2] Bidirectional AC port for AC fuel generator input, AC coupled PV input or AC load (EV Charger etc.)

[3] Lead-acid charge settings limited to: Capacity AH, Absorption V, Float V, (Equalization: V + Time).

[4] Utilization of only a single battery input will derate inverter and charger output.

[5] UL1741-CRD-PCS Open Loop Response Time (OLRT): Less than 10 seconds, per CA Rule 21.

Note: Early production models were equipped with 200A breakers. Both configurations remain fully compliant with UL certification and applicable regulatory requirements.

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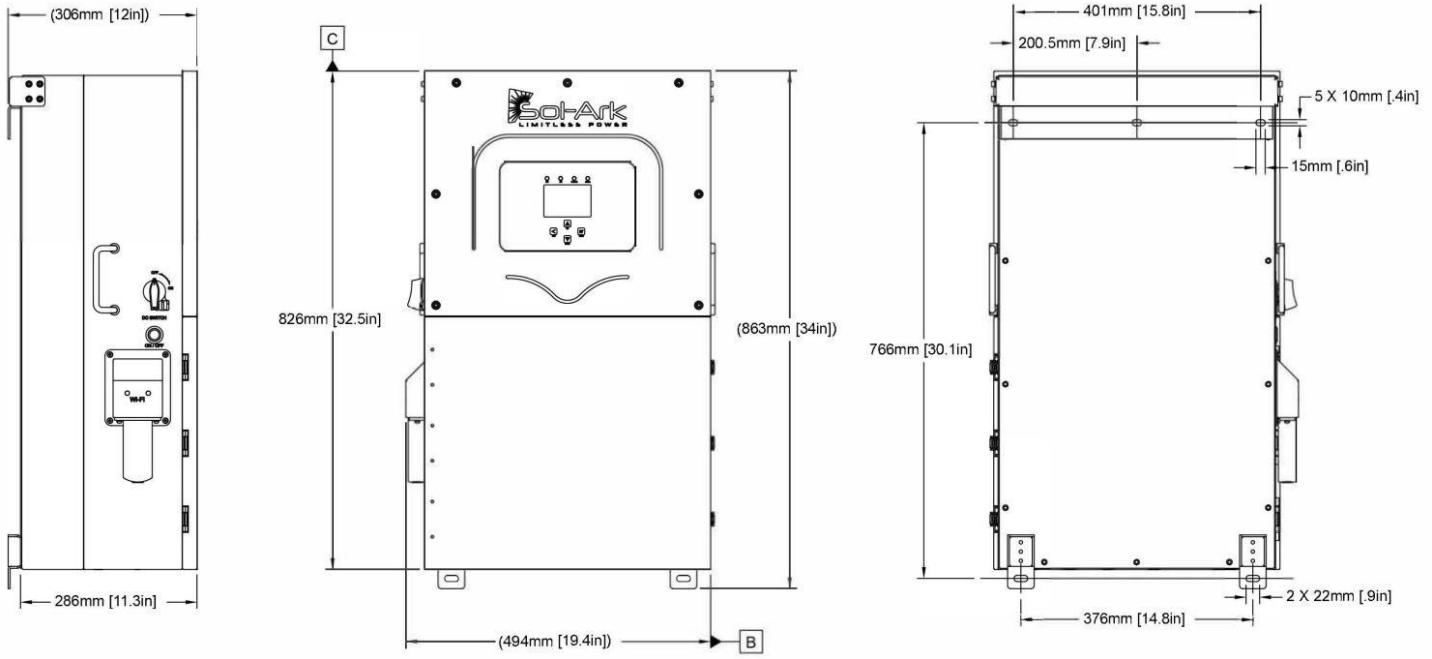
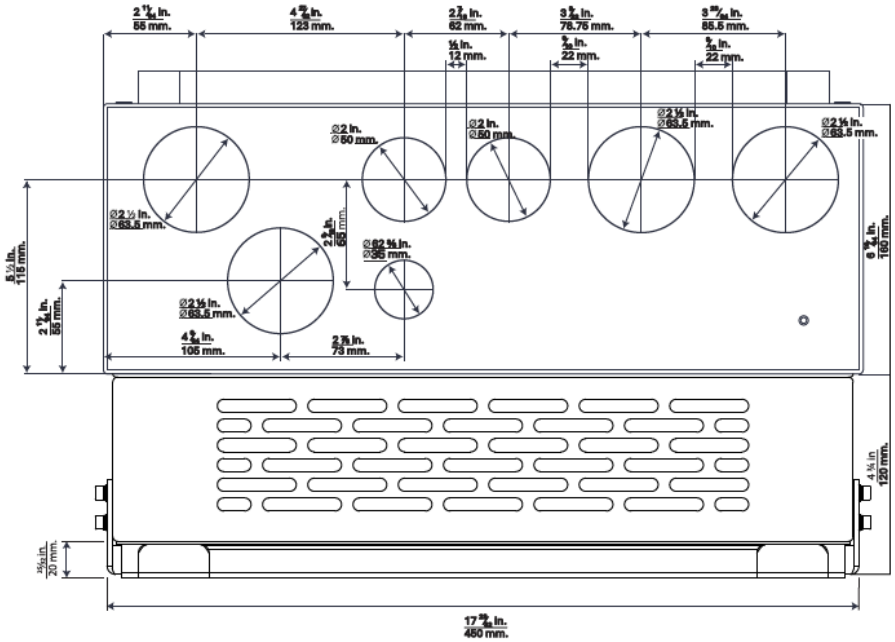


Knockout View from Bottom of Inverter



Cover thickness: 15/16in [0.937in] or 23.8mm.