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DATASHEET

All-In-One Max

Commercial Energy Storage System



125 kW	257 kWh	<20 ms	IP55
Power rating	Storage capacity	Off-grid switching	Cabinet, outdoor

All-In-One Max

Commercial Energy Storage System

125 kW inverter, 257 kWh $LiFePO_4$ storage, BMS, fire suppression and thermal management in one cabinet.

Product highlights

High energy performance

- 48 A inputs with 6 MPPTs for optimised PV yield
- 300 A charge/discharge for high-power cycling
- 100% three-phase unbalance for diverse loads
- 165 kVA backup peak for 10 s surge support

Flexible power architecture

- Dual independent battery ports
- Half-wave load support for industrial applications
- Off-grid operation and off-grid paralleling; grid connection pending CEC listing
- Diesel generator compatibility for weak-grid sites

Robust safety & durability

- Four-level fire protection with multi-sensor detection
- Combustible gas, smoke & temperature detection with active exhaust
- IP66 inverter and IP55 cabinet for outdoor resilience
- C4/C5 anti-corrosion for challenging environments

Intelligent control & O&M

- Built-in EMS with load forecasting and ToU scheduling
- Dynamic pricing for automated energy optimisation
- < 20 ms seamless off-grid switching
- Remote monitoring and firmware updates

System Model	AIO-MAX-125-257
Rated AC Output Power [kW]	125.0
Battery Energy [kWh]	257.2
Usable Battery Energy [kWh]	231.48
Operating Temperature Range [°C]	−20 to 50
Relative Humidity [%]	5–95 (non-condensing)
Max. Operation Altitude [m]	3000
Cooling (Battery Cabinet)	Air-conditioner with 5 kW cooling and 3.7 kW heating
Noise Level [dB]	≤ 70
Display	LED & OLED
Communication	CAN, RS485

Hybrid Inverter Model	M2HT-125K-300
PV Input	
Max. PV Array Power [kWp]	250
Max. PV Input Voltage * [V]	1000*
Rated PV Input Voltage [V]	620
Start-up Voltage [V]	135
MPPT Operating Voltage Range * [V]	160–950
No. of MPP Trackers	6
No. of Strings per MPPT	3
Max. Input Current per MPPT [A]	48 × 6
Max. Short-circuit Current per MPPT [A]	60 × 6

Hybrid Inverter Model	M2HT-125K-300
Battery Side	
Battery Voltage Range [V]	300–950
No. of Battery Inputs	1 or 2
Max. Charge/Discharge Current [A]	300 or 150 × 2
Max. Charge/Discharge Power [kW]	125/125
Grid Side (On-Grid)	
Rated Output Power [kW]	125.0
Max. Output Apparent Power [kVA]	125.0
Rated AC Voltage [V]	3L/N/PE; 220/380 V; 230/400 V; 240/415 V
Rated AC Frequency [Hz]	50/60
Rated Output Current [A]	189.4/181.2/173.6
Power Factor	0.8 leading ... 0.8 lagging
THDi (@Rated Power)	< 3%
Max. Input Apparent Power ** [kVA]	207
Max. AC Input Current [A]	300
Back-up Side (Off-Grid)	
Rated Output Power [kW]	125.0
Peak Output Apparent Power [kVA]	165 @ 10 s
Rated Output Voltage [V]	3L/N/PE; 220/380 V; 230/400 V; 240/415 V
Rated Output Frequency [Hz]	50/60
Rated Output Current [A]	189.4/181.2/173.6
On/Off-grid Switching Time	< 20 ms
THDv (@Linear Load)	< 3%
Efficiency	
MPPT Efficiency	99.90%
Max. Efficiency	98.00%
European Efficiency	97.80%
Inverter General Data	
Dimensions [W × H × D mm]	1232 × 932 × 356
Weight [kg]	164
Ingress Protection	IP66
Anti-corrosion Grade	C4

Battery Cabinet Model	E2BR-S257K-C
Battery Type	$LiFePO_4$ / 314 Ah
Battery Module Quantity	16 Packs (E2BR-B16K, 16.08 kWh, 1P16S, 51.2 V)
Depth of Discharge	90%
Rated Voltage [V]	819.2
Operating Voltage Range [V]	716.8–921.6
Recommended Charge/Discharge Current [A]	157
Cycle Life	8000 ***
Dimensions [W × H × D mm]	1100 × 2393 × 1300
Weight [kg]	2500
Ingress Protection	IP55
Anti-corrosion Grade	C4 / C5 (Optional)

* Max. PV input voltage is 950 V — the inverter stops operating between 950 V and 1000 V and will be damaged above 1000 V.
** Max. input apparent power = maximum grid import to supply backup loads and charge the battery.
*** Cycle life: 25 ± 1 °C, 0.5P charge/discharge rate, SOH = 70%, per battery cell manufacturer's data.

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