

● YOUR
● SMART
● ENERGY



Stax - M29.9/M50

COMMERCIAL SERIES

POWER

29.9 / 50 kW

CAPACITY

60.25- 216.9 kWh



- **Quick Installation:**
No battery rack or wiring needed — Plug and Play Solution.
- **Reliable Operation:**
AlphaESS BypassTech ensures continuity by isolating faults.
- **Maximize Battery Life:**
AI-driven diagnostics & calibration for SOC Consistency.
- **Easy Expansion:**
Plug-and-play batteries for seamless scaling.
- **200% PV input to boost profits**
- **IP66 for tough outdoor environments**
- **Heating Module integrated for low-temperature environments**

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Stax - M29.9/M50

Model	Stax - M29.9	Stax - M50
System Specifications		
Nominal Output Power	29.9 kW	50 kW
System Capacity	60.25 - 216.9 kWh	
Ingress Protection	IP66	
Battery Chemistry	LFP (LiFePO ₄)	
Warranty	10 Years Warranty	
PV Side		
Max. Input Power	59.8 kW	100 kW
Start-up Voltage	180 V	
MPPT Voltage Range	150 ~ 850 V	
Number of MPPTs	3	4
Number of strings per MPPT	2	
Max. Input Current	42 A * 3	42 A * 4
Max. Short-circuit Current	60 A * 3	60 A * 4
AC Data (Grid)		
Nominal Output Power	29.9 kW	50 kW
Max. Output Apparent Power	29.9 kVA	50 kVA
Nominal Grid Voltage	3 / N / PE, 230 V / 400 V	
Nominal Grid Frequency	50 Hz / 60 Hz	
Max. Output Current	43.2 A	72.2 A
Power Factor	> 0.99 (0.8 leading - 0.8 lagging)	
Max. THD of Current	< 3%	
AC Data (Backup)		
Nominal Output Power	29.9 kW	50 kW
Max. Output Power	105% continuously ; 150% for 10s ; 160% for 2s	
Back-up Swtich Time	< 10ms	
Nominal Output Frequency	3 / N / PE, 230 V / 400 V	
Max. Output Current	43.2 A	72.2 A
Max. THD of Voltage	< 2%	
AC Data (Generator)		
Max. Input Power	29.9 kW	50 kW
Nominal Input Voltage	3 / N / PE, 230 V / 400 V	
Nominal Input Frequency	50 Hz / 60 Hz	
Nominal Input Current	43.2 A	72.2 A
Efficiency		
Max. Efficiency	97.7%	
European Efficiency	97.4%	
Battery Charging/Discharge Efficiency	98.5% / 97.5%	
General Parameters		
Dimensions (W x D x H)	530 x 290 x 880 mm	
Weight	76 kg	
Operating Temperature Range	-25 ~ 60 °C	
Operating Humidity Range	0 - 100%	
Noise Emission	62 dB	
Corrosion Protection Class	C4	
Arc-Fault Circuit Interrupter (AFCI)	YES	
Compliance	IEC 62109, IEC61000, VDE 4105, VDE 4110, TOR-R25, G99 G100, EN50549-1&-10, C10 / 11, NC RFG	
Battery Technical Specifications		
Module Model	M38314-S	
Module Capacity	12.05 kWh	
Depth of Discharge (DoD)	95% on grid ; 90% off grid	
Nominal Voltage	38.4 V	
Max. Charging / Discharging Current	157A (0.5 C)*	
Operating Temperature Range	-20 °C ~ 50 °C	
Cycle Life	8000 @ EOL 70% **	
Number of Battery Module	5 - 18 ***	
Dimensions (W x D x H)	550 x 615 x 250 mm	
Weight	90 kg	
Compliance	IEC 62619, IEC 62040, IEC 61000-6-1 / -2 / -3 / -4, UL9540A	

* Max. charge/discharge current derating may occur with changes in temperature and SoC.

** Under specific test conditions.

*** Max. 12 battery modules per column, up to 2 columns.

**** To ensure optimal charging and discharging power, for M29.9, a minimum of 6 battery units is recommended; for M50, a minimum of 9 battery units is recommended.