

SAMA® PORTABLE POWER STATIONS

High-Capacity LiFePO4 Energy Storage & Emergency Power Solutions

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Brand & Technical Overview

The **SAMA® AF-P180** is a high-performance portable power station engineered by **Golan Sa Ma Group Ltd.** to provide reliable, clean energy for emergency backup, field operations, outdoor recreational use, and commercial off-grid applications. Fully compliant with Israeli market standards (SI 32 / Type H grounded sockets), it merges safe LiFePO4 battery chemistry with high-wattage AC output and versatile DC/USB charging capabilities.

1,024 Wh

BATTERY CAPACITY

1,800 W

AC OUTPUT RATING

3,000+

LIFEPO4 CYCLES

SI 32

TYPE H STANDARD

Key Technical Features & Architecture

BATTERY ARCHITECTURE & LONGEVITY

1. EV-Grade LiFePO4 Battery Chemistry

Built using advanced Lithium Iron Phosphate (LiFePO4) cell chemistry, the SAMA AF-P180 offers superior thermal stability, enhanced safety against puncture or overheating, and extraordinary cycle life compared to traditional lithium-ion alternatives.

- **Extended Lifespan:** Retains 80%+ original capacity after 3,000+ full charge/discharge cycles (10+ years of regular use).
- **Advanced BMS Guard:** Multi-layer Battery Management System (BMS) with over-voltage, under-voltage, short-circuit, over-current, and extreme temperature protection.
- **Thermal Stability:** Safe operation under elevated ambient temperatures without thermal runaway risks.

OUTPUT POWER & ISRAELI COMPLIANCE

2. High AC Output with Native Israeli SI 32 Sockets

Designed specifically for local infrastructure, the AF-P180 features direct-fit Israeli SI 32 (Type H) grounded AC sockets, eliminating dangerous adapters for heavy appliances and precision electronics.

- **Pure Sine Wave Output:** 1,800W continuous output (3,000W surge/peak power) delivering clean, stable power identical to grid power.
- **Type H Sockets:** Dual custom Israeli SI 32 grounded AC outlets for seamless plug-and-play operation.
- **Multi-Device Powering:** Capable of running power tools, medical CPAP devices, pellet stove igniters, refrigerators, and heavy outdoor equipment.

CHARGING FLEXIBILITY & SOLAR MPPT

3. Ultra-Fast AC Mains & Solar Photovoltaic Recharging

Offers versatile high-speed recharging avenues to ensure zero downtime during extended power outages or remote field missions.

- **Fast AC Wall Charging:** Internal bi-directional inverter allows rapid 0% to 80% charge in under 1 hour from standard wall sockets.
- **Integrated MPPT Solar Controller:** High-efficiency Maximum Power Point Tracking (MPPT) solar input supporting up to 500W PV solar panels.
- **12V Car Auxiliary Charging:** Recharges directly from 12V/24V vehicle cigarette lighter ports during transport.

AF-P180 Technical Specifications Matrix

Model Name	SAMA® AF-P180 Portable Power Station
Storage Capacity	1,024 Wh (320,000 mAh / 3.2V equivalent)
Battery Cell Type	Lithium Iron Phosphate (LiFePO4)
AC Output Rating	1,800W Continuous 3,000W Peak Surge (Pure Sine Wave, 230V / 50Hz)
AC Outlets	2x Custom Israeli SI 32 (Type H) Grounded Outlets
USB Ports	2x USB-A (18W QC 3.0) 2x USB-C Power Delivery (PD 100W Fast-Charge)
DC Outlets	1x 12V/10A Car Auxiliary Port 2x DC5521 (12V/3A) Ports
Solar Charging Input	11V–60V, Max 500W (Built-in MPPT Controller)
AC Input Recharging	Max 1,000W (0-100% in ~1.2 Hours)
UPS Functionality	Automated Emergency Uninterruptible Power Supply (<20ms switchover)
Aesthetic Variants	Matte Black & Sand Almond Powder-Coated Finishes

Application Matrix

Use Case	Target Appliance	Estimated Operating Time
Home Emergency Backup	Full-Size Refrigerator (120W) / Lights	8 – 12 Hours Continuous
Biomass Heating Backup	SAMA Pellet Stove Ignition & Fan (80W)	12 – 15 Hours Continuous Operation
Mobile Office / Field Work	Laptop (60W) + Mobile Devices	15+ Full Recharges / 20+ Hours
Outdoor Camping / Braai	Electric Grill (1500W) / Mini Fridge	1.0 – 1.5 Hours Continuous Heavy Load

Golan Sa Ma Group Ltd. — Distribution & Wholesale Inquiries

Corporate Entity: Golan Sa Ma Group Ltd.
Managing Director: Rafik Ayoub
Primary Port of Entry: Haifa Port, Israel

Product Line: SAMA® Portable Energy Storage Systems
Compliance Standard: Israeli Standard SI 32 / CE / RoHS
Distribution: Wholesale Containers & Regional Commercial Delivery