



Storage Systems

BATTERY STORAGE OUTDOOR BSO MAX-Series



- **All-in-one battery storage system in a IP54 outdoor cabinet**
- **On-Grid 90kVA / 75kVA backup power (120% overload)**
- **Side-by-side installation for modular expansion**
- **Easy & quick installation** – components pre-installed
- **High safety standard** – smoke/heat-sensors, Aerosol exting. system, water pipe connector
- **Redundant air conditioning units for optimum cooling and heating**



- **Commercial and Industrial Buildings** – Peak shaving, Time of Use, Smart Self-consumption, Multi-Use, Load management, Energy Trading, Microgrid
- **Buffer storage for EV fast charging** – Increasing the usable output
- **Agricultural buildings** – Use of PV electricity after end of subsidies
- **Urban storage or new buildings** – Reducing the load on the transformer



- **Pramac Storage Systems** – leading supplier of power electronics
- **Proven technology** – For a wide range of battery applications
- **Strong team** – With a global partner
- **Reliable energy storage solutions** – Indoor / Outdoor / Container



BATTERY STORAGE OUTDOOR BSO MAX



TECHNICAL DATA	BSO MAX 90/188 ZB900T4A000	BSO MAX PRO 90/188 ZB900T4A020
Rated apparent Power (kVA)	90	90 (On-Grid) / 75 (Backup)
Rated Capacity (kWh)	188	
Max. C-Rate	0,5C	
Celltype	Li-Ion (LFP) Prismatic	
Cycles	7.300 @ 95% DoD 65% SoH	
AC Grid connection	3P, N, PE / TT / TN-C-S / TN-C	
Rated voltage (Vac)	400	
Rated frequency (Hz)	50	
THDi (%)	< 3%	
Max. AC current (A)	130	
Nominal power factor / Range	1 / 0i...0c	
Max. peak current (A)	-	185
Max. permissible phase unbalance (kVA)	-	20
SAFETY DEVICES		
Active device	Permanent monitoring of the Battery cells	
	Smoke-sensor	
	Heat-sensor	
	Fire extinguisher Aerosol	
Passive device	Pressure relief valves	
	Water pipe connector Storz 52-C	

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GENERAL DATA	BSO MAX 90/188 ZB900T4A000	BSO MAX PRO 90/188 ZB900T4A020
Dimensions (L×W×H, mm)	1.300×1.354×2.387	
Cooling system	Air cooling/heating on battery side Active ventilation on inverter side	
Cooling Power / Heating Power (kW)	2×1,5 / 2×1	
Insulation	Rock wool	
Weight System (t)	2,6	
Noise Emission @1m (dB(A))	< 69	
RTE (%)	~ 89,1	
Protection type	IP54	
Anti-Corrosion	C3H	
Humidity, RH	4 ... 100 %	
Working temp. range (°C)	-20 to +50	
Max. permissible installation height (m)	3.000	
Interfaces	RJ45 (Ethernet)	
Warranty	5 years product & 10 years performance warranty	
Certification Battery	CE / UKCA / UN 38.3 / UN 3481 / IEC 62619 / IEC 63056 / UL 1973 / UL 9540A / VDE 2510-50 / IEC 61000-6-2 / IEC 61000-6-4	
Certification Inverter	IEC 62109-1 / IEC 62109-2 / IEC 62477-1	
EU-Directives	2014/30/EU / 2014/35/EU / 2011/65/EU / 2015/863/EU	
Grid connection conditions	DIN VDE V 0126-1-1 / VDE AR-N 4105:2018 / VDE AR-N 4110:2023 / C10/C11 / G99/1-9 / TOR Stromerzeugungsanlagen Typ A/B / CEI 0-16, CEI 0-21 / EN 50549-1/-2 / AS4777.2 / NTS 631, UNE 27002 / Eiregrid	

BSO MAX **PRO** requires accessory product ZG311T00000

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PRAMAC ENERGY MANAGEMENT SYSTEM

Functionalities

 Monitoring – visualization of energy flows & 24/7 historical data	 Local & Cloud access	 Operations management	 Self-consumption optimization
 Peak shaving	 Time-of-Use	 Multi-Use	 Smart-Self Consumption
 Load management for charging infrastructure	 External control	 PV grid feed-in limitation	 Remote PV integration

Interfaces

 Modbus TCP	 REST lokal	 REST Cloud
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Supported Third-Party Devices

Charging stations	Energy meter / Data logger
EnerCharge Alpitronic Mennekes Wallbox ABL Cubos i-charging	Janitza Acrel Siemens Carlo Gavazzi / SMA SolarLog SunGrow

ACCESSORIES TECHNICAL DATA	PRAMAC SMART TRANSFER SWITCH (PSTS) ZG311T00000
Rated current @400 V (A)	315
Number of poles	4-pole (L1, L2, L3, N)
Short-time current withstand capability (kA)	25
Terminal bolt size	M10×30
Protection class	I
Overvoltage category	III
Mounting / Assembly	Floor or wall (Indoor)
Perm. rel. humidity (%)	5-95, non-condensing
Dimensions (W×H×D, mm)	600 × 1100 × 400
Working temperature (°C)	0 to +35
Weight (kg)	80