

BSO MAX 90/188



FEATURES:

- All-in-one battery storage systems for outdoor use
- Pure ON-Grid solution in a IP54 Outdoor cabinet
- Easy & Quick installation - components pre-installed
- High safety standard - smoke-/ heat-sensors, Aerosol extinguishing system, water pipe connector
- Heating & cooling included
- Side-by-side installation for modular expansion without losing much space
- Redundant air conditioning units for optimal cooling and heating
- Battery inverter and energy management system (EMS) perfectly harmonised by in-house development
- High accessibility for user-friendly maintenance (max. once a year)
- Easy installation via crane eyes and forklift pockets for full flexibility
- 10-year performance warranty with a wide temperature range

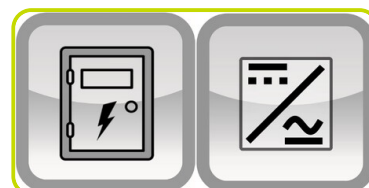
General technical data

Rated apparent power	kVA	90
Rated voltage	Vac	400
Frequency	Hz	50
Maximum AC current	A	130
Battery cell	Type	Li-Ion (LFP) Prismatic
Total capacity	kWh	188
Rated net capacity (95%DoD)	kWh	179



Inverter

Quantity	n.	1
Rated apparent power	kVA	90
Maximum AC current	A	130
Power factor / Range		1 / 0i ... 0c
Peak current (Ip)	A	320
Initial short circuit current (Ik'')	A	130



Battery

Quantity of module	n.	12
Module capacity	kWh	15.68
Rated Voltage	V	768
Max. C-rate		0.5C
Battery cell	Type	Li-Ion (LFP) Prismatic
Cycles @ 95% DoD 65% SoH	n.	7300

Technical data - Energy Management System

Voltage supply	VDC	24
RJ45 dedicated MAC addresses for OT/IT use	n.	2
Encrypted MQTTS communication		✓
Digital cloud twin		✓
2-factor authentication		✓
Communication Interface Ethernet (Modbus TCP/IP / local and cloud-to-cloud REST API)		✓

• Possible Applications

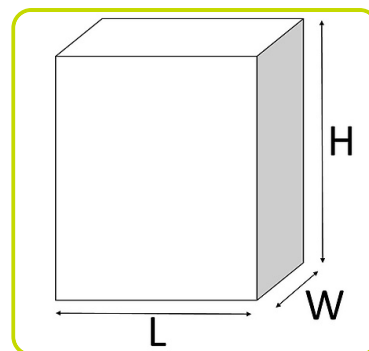
Self-consumption optimization (SCO)	✓
Peak shaving (PS)	✓
Time-based charging/discharging (ToU)	✓
Combined operation (multi-use e.g. PS and SCO)	✓
Energy trading	✓
Simple management of charging stations	✓
Load management and prioritisation for charging points	✓
Integration of Plant controllers	✓

Installation data

Cooling capacity (Battery room)	kW	2x1.5
Heating capacity (Battery room)	kW	2x1
Forced air cooling (Inverter room)		✓
AC-Grid connection	3P, N, PE / TT, TN-C-S	
Communication Interfaces RJ45 (Ethernet)		✓
Dimensions	(L/W/H) mm	1300×1354×2387
Max. permissible installation height	m	3000
Corrosion resistance		C3H
Weight	kg	2600
Protection rating	IP	54
Operating temperature range	°C	-20-50
Product warranty	Years	5
Performance warranty	Years	10

Safety devices

Permanent monitoring of the battery cells	✓
Temperature and smoke sensor	✓
Pressure relief flap	✓
Aerosol Generator	✓



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Certificates / Approvals

Battery System

Modul:

UN38.3 / UL 9540A

Battery System: CE / UKCA / UN 38.3 / UN 3481 / IEC 62619 / UL 1973 / UL 9540A / VDE 2510-50 / IEC 61000-6-2 / IEC 61000-6-4

Battery Inverter

EU- Directives:

2014/30/EU / 2014/35/EU / 2011/65/EU / 2015/863/EU

Safety Battery Inverter:

IEC 62109-1 / IEC 62109-2 / IEC 62477-1 / IEC 61439-1 / IEC 61439-2

EMC:

EN 61000-6-2 / EN 61000-6-4 / EN 61000-3-12 / EN 61000-3-11

Grid codes:

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

For other grid codes please contact your local sales representative



Optional features

Optional Energy Meter Ethernet •

Optional Energy Meter RS485 •

Extension Kit 188 without Rack •



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