

# BSI PRO 90/109



## FEATURES:

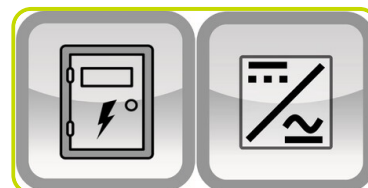
- Preconfigured battery storage kit for indoor use - ON/OFF-Grid capable
- ON-Grid 90kVA / 75kVA backup power (120% Overload)
- Battery inverter and energy management system (EMS) perfectly harmonised by in-house development
- Modular battery and combiner racks for simple capacity expansion
- Comprehensive EMS with peak shaving, self-consumption optimisation, time-of-use and much more integrated into the system at the factory
- Maximum security with state-of-the-art software architecture (GDPR-compliant)
- High accessibility for user-friendly maintenance (max. once a year)
- 10-year performance warranty with a wide temperature range

### General technical data

Rated apparent power ON-Grid	kVA	90
Rated apparent power Backup	kVA	75
Rated voltage	Vac	400
Frequency	Hz	50
Maximum AC current	A	130
Battery cell	Type	Li-Ion (LFP) Pouch
Total capacity	kWh	109
Rated net capacity (90%DoD)	kWh	98

### Inverter

Quantity	n.	1
Rated apparent power ON-Grid	kVA	90
Rated apparent power Backup	kVA	75
Max. permissible phase unbalance	kVA	20
Maximum AC current	A	130
Max. peak current	A	185
Switchover time	s	<5
Power factor / Range		1 / 0i ... 0c
Peak current (Ip)	A	320
Initial short circuit current (Ik'')	A	130



## Battery

Quantity of module	n.	23
Module capacity	kWh	4.74
Rated Voltage	V	736
Max. C-rate		1C
Battery cell	Type	Li-Ion (LFP) Pouch
Cycles @ 90% 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

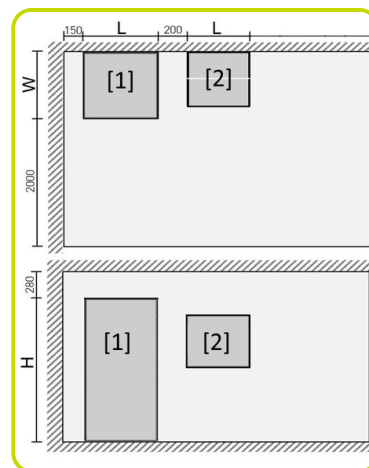
Self-consumption optimization (SCO)	✓
Peak shaving (PS)	✓
Time-based charging/discharging (ToU)	✓
Combined operation (multi-use e.g. PS and SCO)	✓
Energy trading	✓
Simple management of charging stations	✓
Load management and prioritisation for charging points	✓
Integration of Plant controllers	✓

## Installation data

AC-Grid connection	3P, N, PE / TT, TN-C-S	
AC-Auxiliary grid connection	1P, N, PE / TN-C-S	
Communication Interfaces RJ45 (Ethernet)	✓	
[1] Battery Rack	(L/W/H) mm	815x696x2130
CombinerRack	(L/W/H) mm	800x800x2200
[2] Inverter	(L/W/H) mm	673x626x621
Weight Battery Rack	kg	1250
Weight ConnectionBox	kg	25
Weight Inverter	kg	71
Protection rating Battery Rack	IP	20
Protection rating Inverter	IP	65
Max. permissible installation height	m	2000
Operating temperature range	°C	10-40
Product warranty	Years	5
Performance warranty	Years	10

### Safety devices

Permanent monitoring of the battery cells	✓
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## Certificates / Approvals

### Battery Rack

#### Modul:

UN38.3 / UL 9540A

#### Rack:

CE / IEC 62619 / IEC 63056 / UL 1973 / VDE 2510-50 / EN 61000-6-2 / EN 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



### Smart Transfer Switch (PSTS)

- Pre-installed transfer switch including changeover switch and monitoring devices.
- Transfer controller (PTC) for direct communication with the EMS.
- Easy integration into existing Pramac systems.

Rated operating current @ 400 V	A	315
Number of poles		4 (L1, L2, L3, N)
Short-time current withstand capability	kA	25
Terminal bolt size		M10x30
Protection class		I
Overvoltage category		III
Mounting / Assembly		Floor or Wall / Indoor
Perm. rel. humidity (%)	%	5-95, non-condensing
Operating temperature range	°C	0~+35
Dimensions (L/H/W)	mm	600 × 1100 × 400
Weight	kg	80

### Optional features

- Optional Router
- Optional Energy Meter Ethernet
- Optional Energy Meter RS485
- CombinerRack Single / Dual
- Extension Kit 109
- Upgrade Kit CombinerRack



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