

BSI 90/109



FEATURES:

- Preconfigured battery storage kit for indoor use
- Battery inverter and energy management system (EMS) perfectly harmonised by in-house development
- Modular battery and combiner racks for simple capacity and power 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

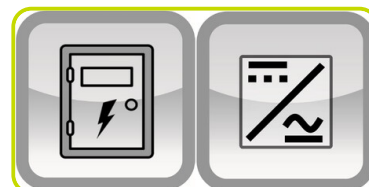
General technical data

Rated apparent power	kVA	90
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	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



ETOP
creat să reziste

Republica Moldova, MD-2023
mun. Chişinău, str. Uzinelor 90
+ /373/ 67 707 707
office@etop.md
www.etop.md

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

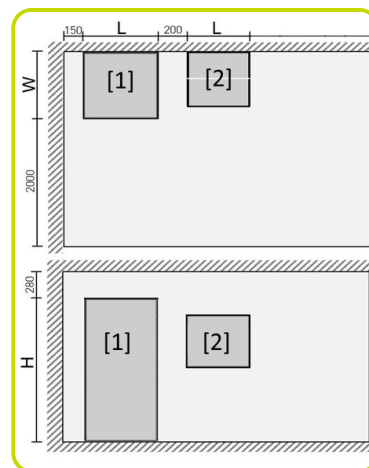
Self-consumption optimization (SCO)	✓
Peak shaving (PS)	✓
Time-based charging/discharging (ToU)	✓
Combined operation (multi-use e.g. PS and SCO)	✓
Energy trading	✓
Simple management of charging stations	✓
Load management and prioritisation for charging points	✓
Integration of Plant controllers	✓

Installation data

AC-Grid connection	3P, PE / TT / TN-C	
Communication Interfaces RJ45 (Ethernet)	✓	
[1] Battery Rack	(L/W/H) mm	815x696x2130
[2] ConnectionBox	(L/W/H) mm	670x692x163
[2] Inverter	(L/W/H) mm	673x626x621
Weight Battery Rack	kg	1250
Weight ConnectionBox	kg	25
Weight Inverter	kg	69
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	✓
---	---



ETOP
creat să reziste

Republica Moldova, MD-2023
mun. Chişinău, str. Uzinelor 90
+ /373/ 67 707 707
office@etop.md
www.etop.md

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 62116 / IEC 61727 / 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 Stromezeugungsanlagen 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 Router | • |
| Optional Energy Meter Ethernet | • |
| Optional Energy Meter RS485 | • |
| CombinerRack Single / Dual | • |
| Extension Kit 109 | • |
| Upgrade Kit CombinerRack | • |



ETOP
creat să reziste

Republica Moldova, MD-2023
mun. Chişinău, str. Uzinelor 90
+ /373/ 67 707 707
office@etop.md
www.etop.md