



Storage Systems

BATTERY INVERTER PBI 50K / 90K



- **ON-Grid Variant** – 50kVA and 90kVA
- **ON/OFF-Grid Variant** – 90kVA ON-Grid / 75kVA Backup without additional transformer*
 - **120% Backup overload capability**
 - **Phase unbalance up to 20kVA (without transformer)**
 - **Diode load (up to 1kW)**

*Only in combination with the Pramac Smart Transfer Switch (PSTS)



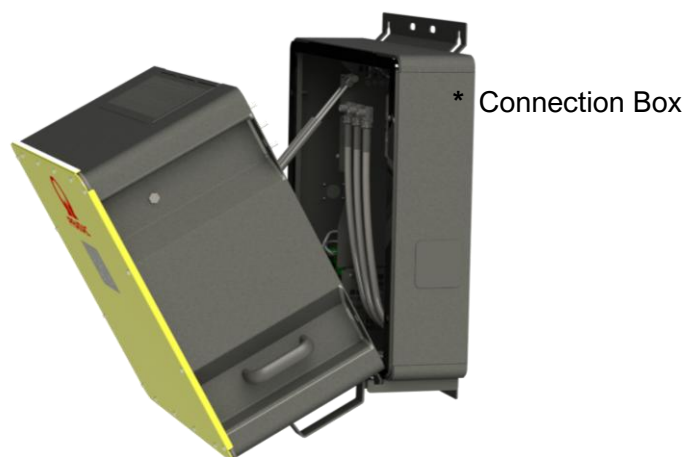
- **Commercial and Industrial Buildings** – Peak shaving, Self-consumption, Time of Use, Energy Trading, Multi- Use, Backup-Mode
- **Buffer storage for EV fast charging** – Increasing the usable output
- **Agricultural buildings** – Use of PV electricity after end of subsidy
- **Urban storage or new 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
- **Retrofitting of existing Pramac systems possible**



TECHNICAL DATA BATTERY INVERTER



TECHNICAL DATA		PBI 50K / 90K ON-Grid	PBI 90K-BU ON/OFF-Grid
Art. No.		422P050 / 422P090	423P090
Optional for installation*		Connection Box 50K / 90K (940P300.100)	Connection Box 90K (940P300.200)
DC Data			
DC operational range min. – max. (V)		620 – 1000	
DC voltage range at nominal power (V)		650 – 900	
Nominal voltage DC (V)		720	
Max. operational current DC (A)		85 / 155	155
DC connection PowerUnit - ConnectionBox		1 Plus, 1 Minus: Connector with Button Activated Coupling	
AC Data – ON-Grid			
Apparent power (kVA)		50 / 90	90
AC Rated voltage AC, Uac (V)		400	
AC operational range min. – max. (V)		180 – 528	
AC grid connection / Grid types		3P, PE / TT, TN-C	3P, N, PE / TT, TN-C-S
Nominal power factor / Range		1 / 0i ... 0c	
Rated frequency / Frequency Range (Hz)		50 / 45 ... 65	
Max. AC current, I _{max} (A)		73 / 130	130
Max. THD (%)		< 3	
Max. efficiency (%)		98,4	
Initial short circuit current (Ik)		73 / 130	130
AC Data – Backup Mode**			
Apparent power (kVA)		-	75
AC Rated voltage AC, Uac (V)		-	400
Max. peak current (A)		-	185
Overload capability(%)		-	120

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	PBI 50K / 90K ON-Grid	PBI 90K-BU ON/OFF-Grid
Art. No.	422P050 / 422P090	423P090
Ambient Conditions		
Cooling	Smart active cooling	
Max. working temperature for nominal power (°C)	45	
Working temperature range (°C)	-25 to +60	
Rel. Air humidity (%)	0 – 100	
Max. elevation (m above sea level)	3000	
Noise level (dBA)	< 70	
Environment classification (IEC 60721-3-4)	4K4H	
Type of protection	IP65	
Installation type	indoor / outdoor, vertical / flat	
Safety and Protection Functions		
Grid monitoring (acc. DIN VDE V 0126-1-1)	Voltage, Frequency, Passive and Active Anti-Islanding	
Grid separation	Gate Block / redundant Grid Relays	
Overvoltage category (IEC 60664-1)	DC: II / AC: III	
DC-precharge	integrated	
General Data		
Topology	Transformerless	
DC pole grounding	not allowed	
Interfaces	2 × Ethernet (Daisy-Chain), Bluetooth® BLE, 1 × Remote Off Signal	
Communication Protocols	Sunspec / MESA (Modbus TCP)	
Dimensions W × H × D (mm)	673 × 626 × 321	
Weight (kg)	69	73
Certificates		
EU Directive	2014/30/EU / 2014/35/EU / 2011/65/EU / 2015/863/EU	
Product safety	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	
Environment	IEC 60068-2-2 / -2-78 / -2-6 / -2-27	
Grid Codes	DIN VDE V 0126-1-1 / VDE AR-N 4105:2018 / VDE AR-N 4110:2023 / TOR Stromerzeugungsanlagen Typ A/B / C10/11 / G99 / CEI 0-16, CEI 0-21 / NTS 631, UNE 217002 / EN 50549-1/-2 / AS 4777.2 / Eirgrid	

All certificates are available at www.pramac.com

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