Product Certificate Number	**240317-CER**			
Applicant	Pramac Storage Systems GmbH Marktstraße 185 D-72793, Pfullingen, Germany			
Series	PBI (Pramac Battery Inverter)			
Models	PBI 50K (420P050) PBI 88K (420P088)	PBI 50K-PC (421P050) PBI 88K-PC (421P100)	PBI 50K (422P050) PBI 90K (422P090)	PBI 90K-BU (423P090)
Type of generating unit	Battery Inverter			
Technical Data	See pages 2 and 3			
Software versions (*)	Models 420PXXX and 421PXXX Models 422PXXX and 423PXXX		310-01-yy-xx 012-00-yy-xx	
Hardware version (*)	Models 420PXXX ÄI03 Models 421PXXX ÄI04 Models 422PXXX ÄI00 Models 423PXXX ÄI00			
Network connection codes	**EN 50549-1:2019** Requirements for generating plants to be connected in parallel with distribution networks – Part 1: Connection to a LV distribution network – Generating plants up to and including Type B. **EN 50549-2:2019** Requirements for generating plants to be connected in parallel with distribution networks – Part 2: Connection to a MV distribution network – Generating plants up to and including Type B.			

Having assessed the report number: 230384-1-TR-M1 and 240317-TR performed by UL Solutions (Accredited Laboratory Nº 1376 / LE2560) based on the requirements of the EN ISO/IEC 17025: 2017. The above-mentioned generating unit complies with the requirements of the:

EN 50549-1:2019 Requirements for generating plants to be connected in parallel with distribution networks – Part 1: Connection to a LV distribution network – Generating plants up to and including Type B.
EN 50549-2:2019 Requirements for generating plants to be connected in parallel with distribution networks – Part 2: Connection to a MV distribution network – Generating plants up to and including Type B.

This certification is according the CERE internal process PET-CERE-30 Rev 12, that defines the certification scheme, based on the requirements of the EN ISO/IEC 17065:2012. For this certification process the conformity assessment activities were based on:

- Testing of production samples selected by Certification Entity for Renewable Energies, S.L.
- Audit of quality system according ISO 9001 with certificate number: 707129833 issued by a certification body accredited according EN ISO/IEC 17021.

This certificate updates and cancels certificate Nº230384-CER issued the February 27, 2024.

(*) see Note 1 and 2 in Technical data.

Madrid, December 13, 2024. This certificate is valid until December 12, 2029.

Miguel Martínez Lavín
Certification Director

Technical data

	PBI 50K / PBI 50K-PC	PBI 88K / PBI 88K-PC
Art. no. Standard	420P050	420P088
Art. no. DC precharge integrated	421P050	421P100
AC SIDE		
Apparent power	50 kVA	88 kVA
Rated AC voltage 3-phase (Uac)	400 V	
AC voltage range	180 – 528 V	
Rated frequency / Frequency range	50 Hz	
AC grid connection	3 phases, PE	
Max. AC current (Imax)	128 A	
DC SIDE		
DC-voltage range at nominal power	650 – 900 V	
DC-voltage range maximum	620 - 1000 V	
Nominal voltage DC (Un)	720 V	
Maximum DC-current (Imax)	155 A	
SOFTWARE AND HARDWARE VERSION		
Software version (1)	310-01-yy-xx	
Hardware version (2)	ÄI03 / ÄI04	

Note:

(1) Designations for the software version nomenclature: 310 – zz – yy – xx

- 310: firmware of inverter types 420Pxxx, 421Pxxx
- 01: main features, for this certification set as 01.
- yy: minor, counter for added features (specific country presetting, new minor functions).
- xx: counter for bugfixes.

Changes in counters “yy” and “xx” do not affect the present certification.

(2) Models 420Pxxx, that do not have the DC precharge integrated have a hardware version ÄI03. Models 421Pxxx, that have the DC precharge integrated (-PC) have a hardware version ÄI04.

	PBI 50K	PBI 90K	PBI 90K-BU
Art. no.	422P050	422P090	423P090
AC SIDE			
Apparent power	50 kVA	90 kVA	
Rated AC voltage 3-phase (Uac)	400 V		
AC voltage range	180 – 528 V		
Rated frequency / Frequency range	50 Hz		
AC grid connection	3 phases, PE		3 phases, N, PE
Max. AC current (Imax)	130 A		
DC SIDE			
DC-voltage range at nominal power	650 – 900 V		
DC-voltage range maximum	620 – 1000 V		
Nominal voltage DC (Un)	720 V		
Maximum DC-current (Imax)	155 A		
SOFTWARE AND HARDWARE VERSION			
Software version (1)	012-00-yy-xx		
Hardware version (2)(3)	ÄI00		ÄI00

Note:

(1) Designations for the software version nomenclature: 012 – 00 – yy – xx

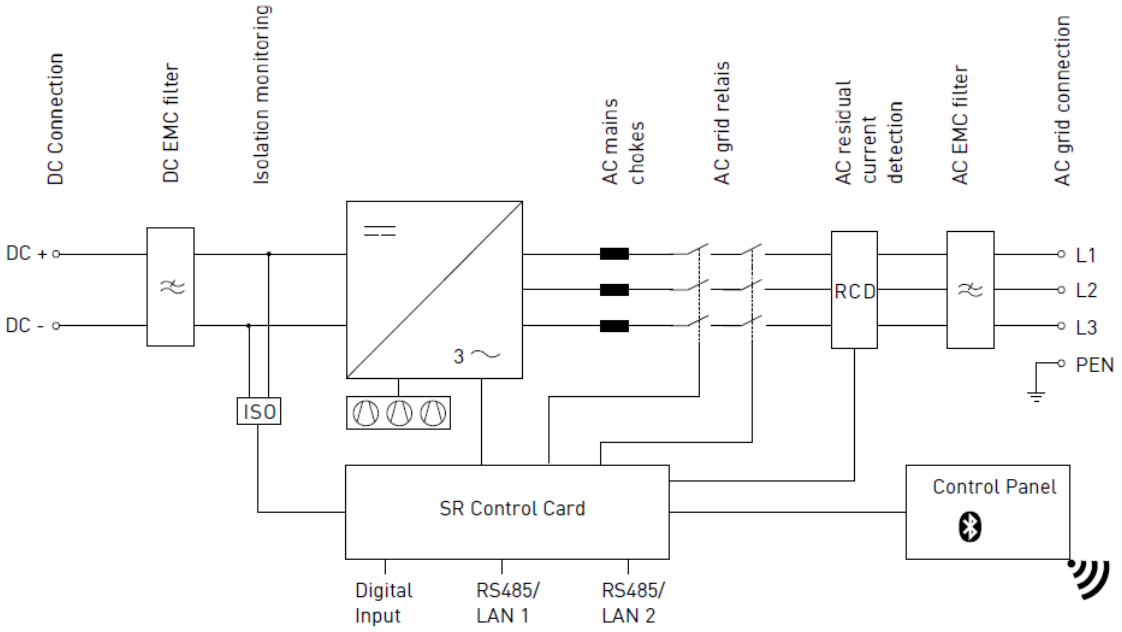
- 012: firmware of inverter types 422Pxxx and 423P090
- 00: main features, for this certification set as 00
- yy: minor, counter for added features (specific country presetting, new minor functions).
- xx: counter for bugfixes.

Changes in counters “yy” and “xx” do not affect the present certification.

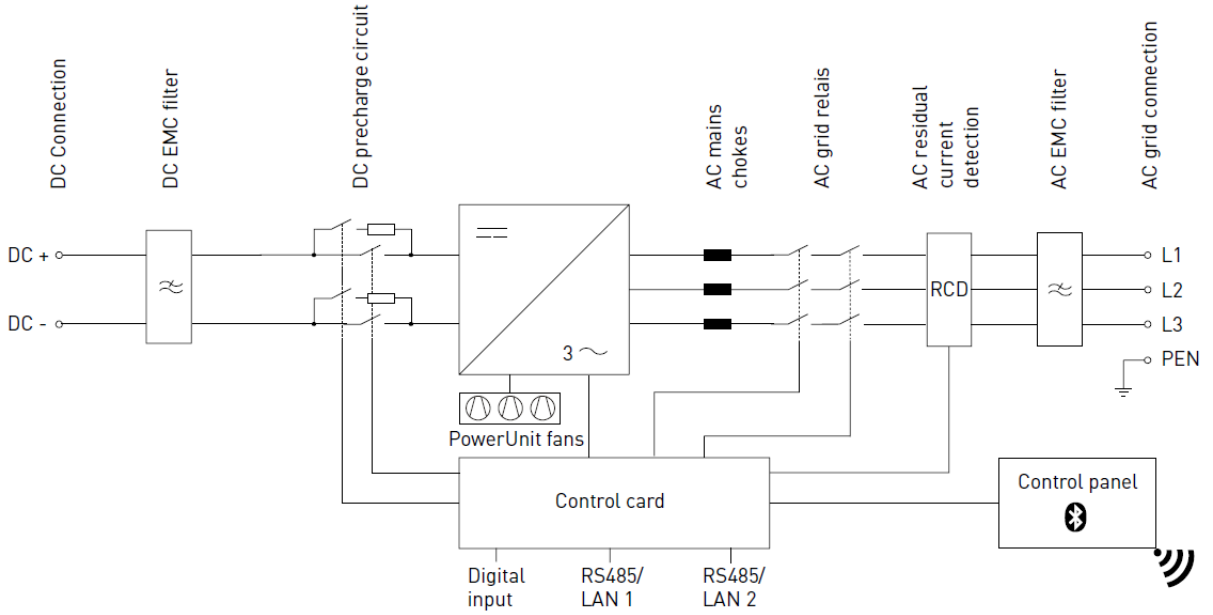
(2) Although the hardware version counter is the same, the hardware is different as can be seen in the electrical diagrams of page 5 in this certificate.

(3) All models 422PXXX and 423PXXX have the DC precharge integrated.

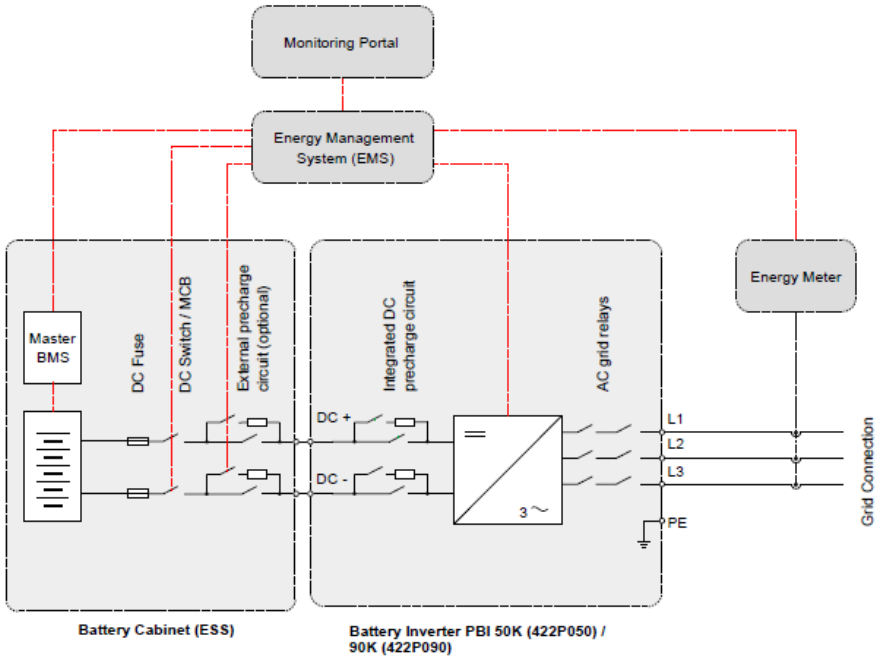
Electrical Diagram of models PBI 50K (420P050) and PBI 88K (420P088):



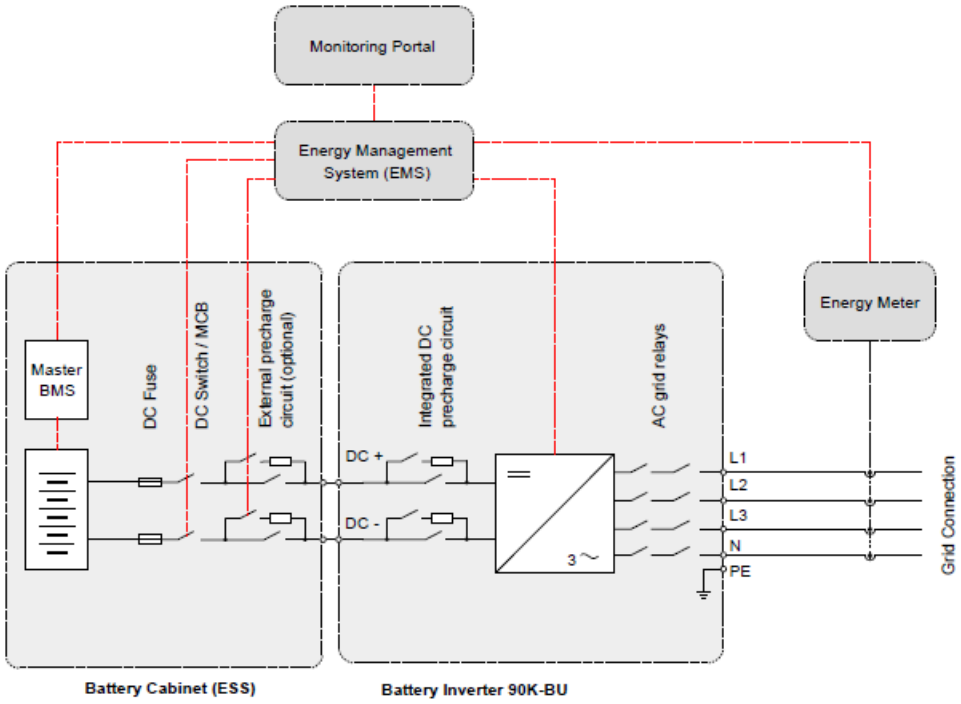
Electrical Diagram of models PBI-50K-PC (421P050) and PBI 88K-PC (421P100):



Electrical Diagram of models PBI 50K (422P050) and PBI 90K (422P090):



Electrical Diagram of models PBI 90K-BU (423P090)



The sample selected to test was representative of the production.
The sample was selected in: REFU Hungary Kft.
2030 Erd - Turul Straße 10 - Hungary

Sample Report Number: 230384-TM
240317-TM

RECORD OF CHANGES

Revision	Reason of the modification	Modification	Date
0	Initial version / Update of certificate 230384-CER	Inclusion of new variant models, new test report, and new firmware and hardware versions added. Also, update of the existing hardware versions.	13/12/2024