Product Certificate Number	**20618-4-CER**
Applicant	ABB Power Grids Belgium n.v. – Power Quality Products Allée Centrale, 10 – Z.I. Jumet B-6040 Charleroi, Belgium
Series	PQstorl Series
Models	PQstorl-M PQstorl-WM PQstorl-C
Type of generating unit	Battery Energy Storage Inverter
Technical Data	See page 2
Software version	v0.1-Rev10, / DSP V56.1 rev 34 µP: v1.0 – Rev07, / DSP v56.1 Rev 27 µP: v1.0 – Rev03, / DSP v56.1 Rev 18 and DSP: v56.1 Rev 19
Network connection code	**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 with Cz, NO, SWE, CH and DK deviations. **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 with Cz, NO, SWE, CH and DK deviations.

Having assessed the report numbers: 20387-1-TR, 20461-TR and 20618-4-TR performed by CERE (Accredited Laboratory Nº 5314.01) 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 with Cz, NO, SWE, CH and DK deviations.
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 with Cz, NO, SWE, CH and DK deviations.

This certification is according the CERE internal process PET-CERE-09 Rev 27 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 CERE.
- Audit of quality system according ISO 9001 with certificate number: BE05/051523 issued by a certification body accredited according EN ISO/IEC 17021.
- Inspection of the manufacturing process.

This certificate cancels and supersedes the certificate number 20461-1-CER issued on March 06, 2020

Madrid, August 05, 2020. This certificate is valid until August 05, 2023.

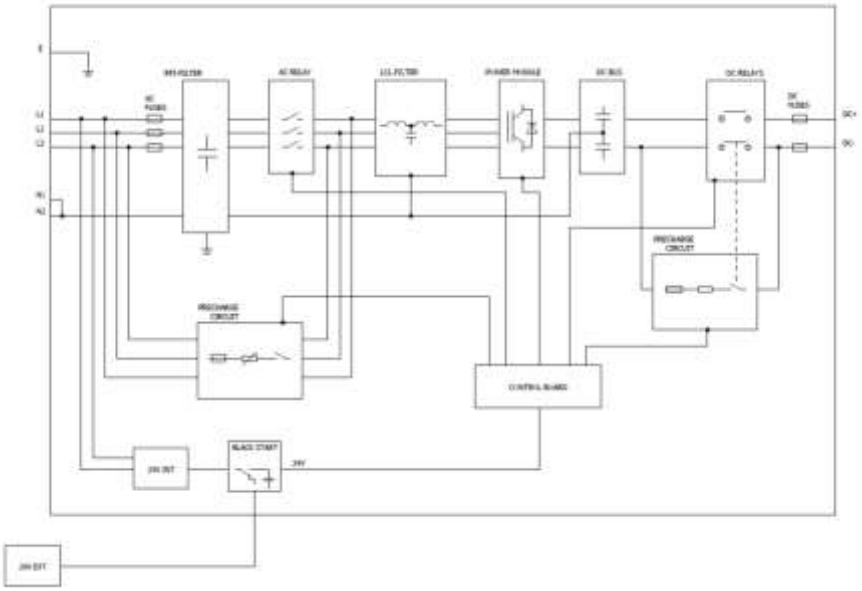
Miguel Martínez Lavin
Certification Manager

Technical data

PQstorl:

Specification	PQstorl - M	PQstorl - WM	PQstorl - C
	Module	Wall-mounted	Standalone cabi-net
Electrical characteristics			
Connection method	3-wires		
Network voltage (+/-10%)	208 - 415 V		
Network frequency (+/-5%)	50		
Rated power (at 400 V)	30 kW		
Line current rating per base unit (A)	40 A		Full cubicle: 40 A… 600 A
Inverter technology	Three level inverter		
Modularity	Up to 16 modules can be combined. Different module ratings are allowed		
Equipment losses	<2% of the equipment power typically		
Inverter characteristics			
DC voltage (min)	620 V for 3W application (note 1) Note 1: Limited High voltage ride through support at lower DC voltage		
DC voltage (max)	830 V (890 V with reduced power)		
Response time	<1 network cycle		
Programming/ communication			
Wi-Fi communication	Webserver on smatphone or computer for sinple diagnostics and parameters setup		
USB	With dedicated opcional software (servicing / programaming)		
HMI	7-inch color TFT screen (800 x 480 pixels) 198 x 141 x 40 mm IP65 front side / IP20 backside CAN 2B (internal) - RJ12 Ethernet (Modbus TCP) - RJ45) USB 2.0		
Digital I/O on HMI	2 insulated digital input - +24 V (AC or DC) 6 digital NO output - 250 Vac/ 5A (one common polatity), dry contacts		

Electrical Diagram of PQstorl



The sample selected to test was representative of the production.	s.a ABB Power Grids Belgium n.v. – Power Quality Products Allée Centrale 10 – Z.I. Jumet. 6040, Charleroi, Hainut, Belgium
The sample was selected in:	ABB Power Grids Belgium n.v. CC8701-BEPGJ c/o ABB Business Services Gmbh Kallstadter Str. 1 / 68129 Mannheim, Germany.
Sample Report Number:	20461-TM/
The inspection of manufacturing process was performed in: On December 12, 2019	s.a ABB Power Grids Belgium n.v. – Power Quality Products Allée Centrale 10 – Z.I. Jumet. 6040, Charleroi, Hainut, Belgium
Inspection Report Number:	20303-19-1-IF

RECORD OF CHANGES

Revision	Modification / Changes	Date
0	Initial version/ Certification update 20461-1-CER	05/08/2020