



S/N: 2025-0950

Certificate of Equipment

No.: ICR Polska/NC_RfG/3/2025/D

Name and address of Applicant Advant sp. z o.o.
Herosa 14, 80-299 Gdańsk, Poland

Name and address of manufacturer: Advant sp. z o.o.
Herosa 14, 80-299 Gdańsk, Poland

Product name: PPC (Power Plant Controller)

Product types: PV Supernode

Power-generating module: type A, type B, type C, type D

The detailed data on the hardware and software of equipment are presented in Annex 1.

Product trademark:   PV Supernode

This document confirms that the product sample meets the requirements of the following:

- COMMISSION REGULATION (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (O.J. UE L 112/1 of 27.4.2016).
- General Application Requirements resulting from the Commission Regulation (EU) 2016/631 of 14 April 2016 establishing the network code on the requirements for connecting generators - approved by the Decision of the President of the Energy Regulatory Office (URE) DRE.WOSE.7128.550.2.2018.ZJ of 2 January 2019.
- Conditions and procedures for the use of certificates in the process of connecting power generation modules to power grids (PTPiREE v.1.3 of 2024.10.01).

The certification process has been carried out in accordance with program PC-P-07-10 (1a acc. EN ISO/IEC 17067:2013). Evaluation has been carried out in accordance with test report(s):

Test report(s): OG/118/25

Reference standard(s): VDE-AR-N 4110:2018-11
VDE-AR-N 4120:2018-11
EN 50549-1:2019+AC:2019 [idt PN-EN 50549-1:2019-02+AC:2019-05]
EN 50549-10:2022 [idt PN-EN 50549-10:2023-02]

Tests conducted by: Institute of Power Engineering, Gdańsk Branch, under the supervision of ICR Polska Co., Ltd. on June 24, 2025.

Certificate issue date: 19.09.2025

Initial issue date: 04.07.2025

Expiration date: 03.07.2030

Remarks

1. The responsibility for maintaining the certificate rests with the Applicant.
2. The certificate remains valid as long as the conditions set out in the Annex 1 are met.
3. Any changes to the design or software of the certified equipment must be assessed and approved by the Certification Body.

document status can be checked: <https://cert.icrpolska.com/>



AC 197

Director: Rafał Kalinowski

Warsaw, 19.09.2025



Edition: 2.0.0.A of 02.01.2023

ICR Polska Co. Ltd.
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Certificate of Equipment

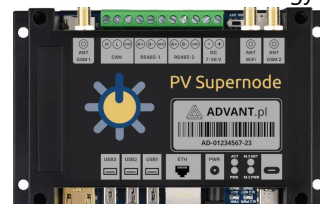
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Annex 1 to certificate No.: ICR Polska/NC_RfG/3/2025/D

[1] Description of equipment:

The PPC type Supernode PV is an element of the equipment of photovoltaic installations. It performs the following functions:

- Active limitation of active energy export to the grid – ‘zero export’ function or another set threshold of the energy value taken from or returned to the power grid;
- Reactive power compensation using inverters, in accordance with their technical capabilities;
- Sitelogger – implementation of operations related to monitoring the operation of inverters and controlling their operation, in the scope of generated active and reactive power.



[1][a] Version of hardware:

4

[1][b] Software:

1.4.5

The device software allows you to select a defined set of protection settings and criteria, as well as configuration parameters for the control characteristics, as specified in the Polish Setpoint Bank for Type A and B Power Generation Modules.

The set of settings is factory-predefined by the manufacturer and can also be entered by uploading dedicated definition files:

for Type A Power Generation Modules: SetPointsBank_type_A.xml

for Type B Power Generation Modules: SetPointsBank_type_B.xml

[2] Technical parameters:

- 2 x RS485 connector built into the device's motherboard
- Possibility of adding three more RS485 connectors using USB adapters
- 7-36V DC power supply
- 1 Gbps Ethernet connector and WiFi connectivity (optional)
- Possibility of expanding with a second Ethernet connector using a USB adapter
- LTE Cat-1 modem (optional)
- Real-time clock (RTC) with battery backup
- 3 x USB 2.0 connector
- USB Type-C connector - backup power, service connector
- Size 145 x 90 x 40 mm, DIN rail mounting
- Operating temperature from -10°C to 50°C

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[3] Detailed parameters according to NC RfG and GAR (WOS) requirements:

Parameter	NC RfG	GAR (WOS)	Type				Result
			A	B	C	D	
Frequency range	13.1 a)	13.1 a), i	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pass
Ability to withstand rate of change of frequency (RoCoF) df/dt	13.1 b)	13.1 b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pass
Remote cessation of active power generation	13.6	13.6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A	Pass
Remote control of active power	14.2	14.2 b)	N/A	<input checked="" type="checkbox"/>	N/A	N/A	Pass
Power generating module operating mode in which the generated active power decreases in response to an increase in system frequency above a specified value (LFSM-O)	13.2 (*)	13.2 a), b), f)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pass
Power generating module operating mode in which the generated active power increases as the system frequency drops below a specified value (LFSM-U)	15.2 c)	15.2 c), i	N/A	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pass
Ability to withstand voltage dips for connections below 110 kV	14.3	14.3 a), i, b)	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pass
Ability to withstand voltage dips for connections above 110 kV	16.3	16.3 a), i, c)	N/A	N/A	N/A	<input checked="" type="checkbox"/>	Pass
Introducing fast fault current, symmetrical and asymmetrical disturbances	20.2 b), c) 21.3 e)	20.2 b), c) 21.3 e)	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pass
Disturbance-free active power recovery	20.3	20.3 a)	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pass

[4] Specific conditions / additional information:

The PPC type Supernode PV communicates with devices using the Modbus RTU protocol via the RS485 port.

The PPC type Supernode PV provides full data encryption.

The PPC type Supernode PV enables cooperation with energy storage devices.

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