



# CERTIFICATE

**Applicant:** Victron Energy B.V.  
De Paal 35  
1351 JG Almere  
The Netherlands

**Product:** Battery Storage System with an integrated inverter with integrated automatic disconnection device between a generator and the public low-voltage grid

**Model:** Easysolar-II 48/3000/35-32 MPPT 250/70GX  
Easysolar-II 24/3000/70-32 MPPT 250/70GX  
Easysolar-II 48/5000/70-50 MPPT 250/100GX

**Intended use:**

Photovoltaic inverter in accordance with EN 50549-1 with single-phase parallel coupling to the distribution network. The automatic disconnection device is an integral part of the aforementioned inverter.

**Applied standards and guidelines:**

**SOP-9-1\_14 GCC Certification Program, 11/20**

Based on:

**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**

Default interface protection settings:

| Parameter                               | Trip value [ $U_n$ or Hz] |     |          |     | Trip time [s]      |     |                                 |     |
|---|---------------------------|-----|----------|-----|--------------------|-----|---------------------------------|-----|
|   | Setting                   |     | Measured |     | Time delay Setting |     | Measured operate + opening time |     |
|   | L-N                       | L-L | L-N      | L-L | L-N                | L-L | L-N                             | L-L |
| Overvoltage threshold stage 2 [59>>]    | 1,20                      | -   | 278,3    | -   | 0,5                | -   | 0,589                           | -   |
| Overvoltage threshold stage 1 [59>]     | 1,15                      | -   | 266,8    | -   | 0,5                | -   | 0,588                           | -   |
| Overvoltage 10 min mean protection *    | 1,10                      | -   | 253      | -   | 0,0                | -   | 499                             | -   |
| Undervoltage threshold stage 1 [27<]    | 0,85                      | -   | 193,2    | -   | 0,5                | -   | 0,529                           | -   |
| Undervoltage threshold stage 2 [27<<]   | 0,85                      | -   | 192,5    | -   | 0,5                | -   | 0,548                           | -   |
| Overfrequency threshold stage 2 [81>>]  | 51,50                     | -   | 51,55    | -   | 0,2                | -   | 0,660                           | -   |
| Overfrequency threshold stage 1 [81>]   | 51,00                     | -   | 51,05    | -   | 1,0                | -   | 1,054                           | -   |
| Underfrequency threshold stage 1 [81<]  | 48,00                     | -   | 47,96    | -   | 1,0                | -   | 0,471                           | -   |
| Underfrequency threshold stage 2 [81<<] | 47,50                     | -   | 47,45    | -   | 0,2                | -   | 0,580                           | -   |

Note:

\* tripping time for the voltage step from  $1,00U_n$  to  $1,12U_n$

The safety concept of an aforementioned representative products corresponds at the time of issue of this certificate to the valid safety specifications for the specified use in accordance with regulations.

**Limitation:**

- Voltage related active power reduction is not implemented
- UVRT capability is not implemented.
- The undervoltage threshold stage 1 [27<] and undervoltage threshold stage 2 [27<<] are adjustable between  $0,78U_n$  and  $1,00U_n$  with  $0,0025U_n$  steps.

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- Digitally signed | see <http://ca.kiwa-deutschland.de> for more details -

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