



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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