

# **Victron Energy B.V.**

Almere Haven

The quality management system of **Victron Energy B.V.** and the application thereof complies with the requirements as stipulated in the standard:

**NEN-EN-ISO 9001:2015**

Evaluation of the quality management system took place in accordance with TÜV Nederland's certification regulations for the field of application:

**Development, delivery and repair of chargers, inverters, converters,  
and electrical devices.**

This certification is subject to annual evaluation by TÜV Nederland.

Registration number: 24574/2.2  
Start date certificate: 16-07-2018  
Certificate valid until: 06-07-2021  
Date of first certificate: 06-07-2015  
Date audit: 05-04-2018  
Previous certificate valid until: 06-07-2018

Managing Director  
Mr. E.W.A.C. Franken





# Certificate of Conformity

Certificate: 16906-1S

Master Contract: LC 1231751

Project: 16906

Date Issued: May 03, 2018

Certification System Type 3  
(ISO / IEC Guide 67)

***The products listed below are eligible to bear the LabTest Certification Mark with adjacent indicators 'C' and 'US', and the subject area as shown below.***



Issued by:

Certification Manager

## PRODUCTS

- Component type Photovoltaic Battery Charge Controller

- Models:

BlueSolar MPPT100|50; BlueSolar MPPT150|35; SmartSolar MPPT100|50; SmartSolar MPPT150|35; BlueSolar MPPT100|15; BlueSolar MPPT100|30; SmartSolar MPPT100|15; SmartSolar MPPT100|20; SmartSolar MPPT100|20\_48V; SmartSolar MPPT100|30; BlueSolar MPPT75|10; BlueSolar MPPT75|15; SmartSolar MPPT75|10; SmartSolar MPPT75|15; BlueSolar MPPT150|45-tr; BlueSolar MPPT150|45-MC4; BlueSolar MPPT150|60-tr; BlueSolar MPPT150|60-MC4; BlueSolar MPPT150|70-tr; BlueSolar MPPT150|70-MC4; SmartSolar MPPT150|85-tr; SmartSolar MPPT150|85-MC4; SmartSolar MPPT150|100-tr; SmartSolar MPPT150|100-MC4

- Ratings:

Model Number	Max input voltage	Battery Voltage (V)	Max Power@ Batt 12V (W)	Max Power@ Batt 24V (W)	Max Power@ Batt 36V (W)	Max Power@ Batt 48V (W)	Rated charge current (A)
BlueSolar MPPT75 10	75	12; 24	145	290	--	--	10
SmartSolar MPPT75 10	75	12; 24	145	290	--	--	10
BlueSolar MPPT75 15	75	12; 24	220	440	--	--	15
SmartSolar MPPT75 15	75	12; 24	220	440	--	--	15
BlueSolar MPPT100 15	100	12; 24	220	440	--	--	15
SmartSolar MPPT100 15	100	12; 24	220	440	--	--	15
SmartSolar MPPT100 20	100	12; 24	290	580	--	--	20

SmartSolar MPPT100 20_48V	100	12; 24; 36; 48	290	580	870	1160	20
BlueSolar MPPT100 30	100	12; 24	440	880	--	--	30
SmartSolar MPPT100 30	100	12; 24	440	880	--	--	30
BlueSolar MPPT100 50	100	12; 24	700	1400	--	--	50
SmartSolar MPPT100 50	100	12; 24	700	1400	--	--	50
BlueSolar MPPT150 35	150	12; 24; 36; 48	500	1000	1500	2000	35
SmartSolar MPPT150 35	150	12; 24; 36; 48	500	1000	1500	2000	35
BlueSolar MPPT 150/45-Tr	150	12; 24; 36; 48	650	1300	1950	2600	45
BlueSolar MPPT 150/45-MC4	150	12; 24; 36; 48	650	1300	1950	2600	45
BlueSolar MPPT 150/60-Tr	150	12; 24; 36; 48	860	1720	2580	3440	60
BlueSolar MPPT 150/60-MC4	150	12; 24; 36; 48	860	1720	2580	3440	60
BlueSolar MPPT 150/70-Tr	150	12; 24; 36; 48	1000	2000	3000	4000	70
BlueSolar MPPT 150/70-MC4	150	12; 24; 36; 48	1000	2000	3000	4000	70
SmartSolar MPPT 150 85 – Tr	150	12; 24; 36; 48	1200	2400	3600	4900	85
SmartSolar MPPT 150 85 – MC4	150	12; 24; 36; 48	1200	2400	3600	4900	85
SmartSolar MPPT 150 100 – Tr	150	12; 24; 36; 48	1450	2900	4350	5800	100
SmartSolar MPPT 150 100 - MC4	150	12; 24; 36; 48	1450	2900	4350	5800	100

### **APPLICABLE REQUIREMENTS & SUBJECT AREA**

- CAN/CSA C22.2 No. 107.1-16
- UL 1741: 2016

### **CONDITIONS OF ACCEPTABILITY**

- These devices are built-in type components, where the final acceptance is dependent upon their installation and use in complete equipment submitted to LabTest Certification Inc.
- There is no isolation between input and output and no isolation between communication ports and display.
- These units are suitable for factory wiring only.
- The product was evaluated for a maximum ambient of 40°C with derating to 60°C possible.
- End installation shall comply with applicable parts of NEC, CE Code, Building Codes and requirements from authority holding jurisdictions.
- All units are potted for functional reasons.
- A protective electrical and fire enclosure shall be provided in the end product.
- A suitably rated external disconnect and overcurrent protection shall be provided in the end application.
- Maximum PV open circuit voltage: 150V.
- The units were evaluated for indoor use, Pollution Degree 3, Overvoltage Category: III
- The acceptability of the bonding of the unit to the protective grounding shall be evaluated in the end product.

The 'C' and 'US' indicators adjacent to the LabTest Certification Mark shall signify that the product has been evaluated by an accredited laboratory to the applicable CSA and UL Standards respectively. The subject area shall be displayed with the LabTest Certification Mark to identify the Standard Number, and Revision Level.

## ***Declaration of Conformity***

**Antragsteller:** **Victron Energy B.V.**  
**Applicant:** De Paal 35; 1351 JG Almere Haven  
Netherlands

**Produkttyp:** Solar Charger  
**Product type:**

**Modell:** BlueSolar MPPT 75|15  
**Model:** (SCC010015050R)

BlueSolar MPPT 75|10  
(SCC010010050R)

SmartSolar MPPT 75|15  
(SCC075015060R)

SmartSolar MPPT 75|10  
(SCC075010060R)

See page 2

**Rating:**

*A representative test sample of above stated model passed the tests according to:*

**Standard:** IEC 62109-1:2010  
EN 62109-1:2010

**Report no:** 15PP045-01\_2

**Certificate no:** 15-116-01

**Date of issue:** 2018-02-08



Raphael Rader



## ***Technical Data***

Model /Type reference	BlueSolar MPPT 75 10	BlueSolar MPPT 75 15
Max. input voltage:	75Vdc	75Vdc
Battery voltage (autoselect)	12Vdc/24Vdc	12Vdc/24Vdc
Max. PV Power 12Vdc	145W	220W
Max. PV Power 24Vdc	290W	440W
Rated charge current	10A	15A
Model /Type reference	SmartSolar MPPT 75 10	SmartSolar MPPT 75 15
Max. input voltage:	75Vdc	75Vdc
Battery voltage (autoselect)	12Vdc/24Vdc	12Vdc/24Vdc
Max. PV Power 12Vdc	145W	220W
Max. PV Power 24Vdc	290W	440W
Rated charge current	10A	15A

## ***Declaration of Conformity***

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

**Product type:** Solar Charger

**Model:** BlueSolar MPPT 100|15  
BlueSolar MPPT 100|30  
SmartSolar MPPT 100|15  
SmartSolar MPPT 100|30  
SmartSolar MPPT 100|20  
SmartSolar MPPT 100|20\_48V

**Rating:** See Page 2

*A representative test sample of above stated model passed the tests according to:*

**Standard:** IEC 62109-1:2010  
EN 62109-1:2010

**Report no:** 15PP038-01\_3

**Certificate no:** 15-108-02

**Date of issue:** 2018-05-04

*Raphael Rader*

- Digitally signed | see <http://ca.primara.net> for more details -

Raphael Rader



## Technical Data

<b>Model /Type reference</b>	<b>BlueSolar MPPT 100   15</b>	<b>BlueSolar MPPT 100   30</b>
Max. input voltage:	100Vdc	100Vdc
Battery voltage (autoselect)	12Vdc/24Vdc	12Vdc/24Vdc
Max. PV Power 12Vdc	220W	440W
Max. PV Power 24Vdc	440W	880W
Rated charge current:	15A	30A
<b>SmartSolar MPPT 100   15</b>	<b>SmartSolar MPPT 100   20</b>	<b>SmartSolar MPPT 100   30</b>
100Vdc	100Vdc	100Vdc
12Vdc/24Vdc	12Vdc/24Vdc	12Vdc/24Vdc
220W	290W	440W
440W	580W	880W
15A	20A	30A
<b>Model /Type reference</b>	<b>SmartSolar MPPT 100   40_48V</b>	
Max. input voltage:	100Vdc	
Battery voltage (autoselect)	12Vdc/24Vdc/36Vdc/48Vdc	
Max. PV Power 12Vdc	290W	
Max. PV Power 24Vdc	580W	
Max. PV Power 36Vdc	870W	
Max. PV Power 48Vdc	1160W	
Rated charge current:	20A	



APPROVALS®

## Certificate of Suitability

**Certificate No.:** SAA152177

**Certificate Holder:** Victron Energy B.V.

**Class Description:** Non-Declared  
**Product Description:** Solar Battery Charger (Built-in component)  
**Brand Name:** Victron  
**Model No.:** MPPT75|10  
**Markings:** Max Input Voltage: 75Vdc

**Standard:** IEC 62109-1 Ed. 1.0  
**Conditions:** Battery voltage (autoselect): 12 / 24Vdc  
Max PV Power 12Vdc: 135W  
Max PV Power 24Vdc: 270W  
Rated charge current: 10A  
All models approved under this Certificate must comply with the Standard requirements of the end product when installed.

**Certification Mark:** SAA152177 or RCM

**Date First Registered:** 12 November 2015  
**Date of Expiry:** 12 November 2020

A handwritten signature in black ink, appearing to be 'D. J.', written over a horizontal line.

For and on Behalf of  
SAA Approvals Pty Ltd

SAA Approvals Pty Ltd certifies that the product nominated in this certificate complies with standard/s listed.

When using the RCM the requirements of all relevant parts of AS/NZS 4417 applicable to the article must be fulfilled.



Issued: 03-07-18 152177/1a  
Certificate Reissued





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## Certificate of Suitability

**\*Addendum\***

**Certificate No.:** SAA152177

**Date of Issue:** 12 November 2015

**Class Description:** Non-Declared  
**Product Description:** Solar Battery Charger (Built-in component)

**Additional Models**

MPPT75|15

**Description**

Similar to MPPT75|10 except rated:  
Max Input Voltage: 75Vdc  
Battery voltage (autoselect): 12 / 24Vdc  
Max PV Power 12Vdc: 200W  
Max PV Power 24Vdc: 400W  
Rated charge current: 15A

A handwritten signature in dark ink, appearing to be 'R', positioned above a horizontal line.

For and on Behalf of  
SAA Approvals Pty Ltd

SAA Approvals Pty Ltd as accredited by JAS-ANZ under ISO/IEC 17065 certifies in accordance with the SAA Approvals Electrical Product Safety Certification Scheme that the product nominated in this certificate complies with standard/s listed.

When using the RCM the requirements of all relevant parts of AS/NZS 4417 applicable to the article must be fulfilled.

JAS-ANZ



Issued: 12-11-15 152177/2



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# Certificate of Suitability

## \*Addendum\*

**Certificate No.:** SAA152177

**Date of Issue:** 25 January 2018

**Class Description:** Non-Declared  
**Product Description:** Solar Battery Charger (Built-in component)

Additional Models	Description
BlueSolar MPPT75 15	75Vdc Max Battery Voltage (auto select) 12/24Vdc Max. PV Power 12Vdc: 220W Max PV Power 24Vdc: 440W Charge Current: 15A
SmartSolar MPPT75 10	75Vdc Max Battery Voltage (auto select) 12/24Vdc Max. PV Power 12Vdc: 145W Max PV Power 24Vdc: 290W Charge Current: 10A
SmartSolar MPPT75 15	75Vdc Max Battery Voltage (auto select) 12/24Vdc Max. PV Power 12Vdc: 220W Max PV Power 24Vdc: 440W Charge Current: 15A

  
 For and on Behalf of  
 SAA Approvals Pty Ltd



SAA Approvals Pty Ltd certifies that the product nominated in this certificate complies with standard/s listed.

When using the RCM the requirements of all relevant parts of AS/NZS 4417 applicable to the article must be fulfilled.



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## Certificate of Suitability

**Certificate No.:** SAA152178

**Certificate Holder:** Victron Energy B.V.

**Class Description:** Non-Declared  
**Product Description:** Solar Battery Charger (Built-in component)  
**Brand Name:** Victron  
**Model No.:** MPPT100|15  
**Markings:** Max Input Voltage: 100Vdc  
Battery voltage (autoselect): 12 / 24Vdc  
Max PV Power 12Vdc: 200W  
Max PV Power 24Vdc: 400W  
Rated charge current: 15A

**Standard:** IEC 62109-1 Ed. 1.0  
**Conditions:** All models approved under this Certificate must comply with the Standard requirements of the end product when installed.

**Certification Mark:** SAA152178 or RCM

**Date First Registered:** 12 November 2015  
**Date of Expiry:** 12 November 2020

A handwritten signature in black ink, appearing to be 'DK', is written over a horizontal line.

For and on Behalf of  
SAA Approvals Pty Ltd

SAA Approvals Pty Ltd certifies that the product nominated in this certificate complies with standard/s listed.

When using the RCM the requirements of all relevant parts of AS/NZS 4417 applicable to the article must be fulfilled.



Issued: 03-07-18 152178/1a  
Certificate Reissued



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## Certificate of Suitability


**\*Addendum\***

**Certificate No.:** SAA152178

**Date of Issue:** 25 January 2018

**Class Description:** Non-Declared  
**Product Description:** Solar Battery Charger (Built-in component)

Additional Models	Description
BlueSolar MPPT100 30	100Vdc Max Battery Voltage (auto Select) 12/24Vdc Max PV Power 12Vdc: 440W Max PV Power 24Vdc: 880W Charging Current: 30A
SmartSolar MPPT100 15	100Vdc Max Battery Voltage (auto Select) 12/24Vdc Max PV Power 12Vdc: 220W Max PV Power 24Vdc: 440W Charging Current: 15A
SmartSolar MPPT100 20	100Vdc Max Battery Voltage (auto Select) 12/24Vdc Max PV Power 12Vdc: 290W Max PV Power 24Vdc: 580W Charging Current: 20A
SmartSolar MPPT100 30	100Vdc Max Battery Voltage (auto Select) 12/24Vdc Max PV Power 12Vdc: 440W Max PV Power 24Vdc: 880W Charging Current: 30A

  
For and on Behalf of  
SAA Approvals Pty Ltd

SAA Approvals Pty Ltd certifies that the product nominated in this certificate complies with standard/s listed.

When using the RCM the requirements of all relevant parts of AS/NZS 4417 applicable to the article must be fulfilled.



Issued: 03-07-18 152178/3a  
Certificate Reissued



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## Certificate of Suitability

**\*Addendum\***

**Certificate No.:** SAA152178

**Date of Issue:** 14 May 2018

**Class Description:** Non-Declared  
**Product Description:** Solar Battery Charger (Built-in component)

**Additional Models**

SmartSolar MPPT100|20\_48V

**Description**

100Vdc  
Max Battery Voltage (auto Select) 12/24/36/48Vdc  
Max PV Power 12Vdc: 290W  
Max PV Power 24Vdc: 580W  
Max PV Power 36Vdc: 870W  
Max PV Power 48Vdc: 1160W  
Charging Current: 20A

A handwritten signature in black ink, appearing to be 'D. K.', written over a horizontal line.

For and on Behalf of  
SAA Approvals Pty Ltd

SAA Approvals Pty Ltd certifies that the product nominated in this certificate complies with standard/s listed.

When using the RCM the requirements of all relevant parts of AS/NZS 4417 applicable to the article must be fulfilled.



Issued: 03-07-18 152178/4a  
Certificate Reissued

THE NETHERLANDS  
(N E D E R L A N D)

## COMMUNICATION

Concerning<sup>(1)</sup>:

- approval granted
- ~~approval extended~~
- ~~approval refused~~
- ~~approval withdrawn~~
- ~~production definitely discontinued~~

of a type of ~~electrical~~/electronic sub-assembly<sup>(1)</sup> with regard to Regulation number 10.**Approval number: E4\*10R05/01\*4363\*00 Cor.01**

1. Make (trade name of manufacturer) : Victron Energy B.V.
2. Type and general commercial description(s) : - SmartSolar MPPT ???/???
3. Means of identification of type, if marked on the ~~vehicle~~/component/  
separate technical unit<sup>(1)</sup> :
  - SmartSolar MPPT 75/10
  - SmartSolar MPPT 75/15
  - SmartSolar MPPT 100/15
  - SmartSolar MPPT 100/20
- 3.1. Location of that marking : Top Side of housing of Product
4. Category of vehicle : All
5. Name and address of manufacturer : Victron Energy B.V.  
De Paal 35  
1351 JG Almere  
The Netherlands
6. In the case of components and separate technical units, location and method of affixing of the approval mark : Screen printing on Top Side of housing of Product

Type-approval Department



**Approval number: E4\*10R05/01\*4363\*00 Cor.01**

7. Address(es) of assembly plant(s) :
8. Additional information (where applicable) : see Appendix below
9. Technical service responsible for carrying out the tests : TÜV Rheinland Nederland B.V.  
Eiberkamp 10  
9351 VT Leek  
The Netherlands
10. Date of test report : August 2, 2019
11. Number of test reports : 19050301.A01 / 19050301.A02
12. Remarks (if any) : see Appendix
13. Place : Zoetermeer
14. Date : 05 November 2019
15. Signature :

  
L. Vellekoop



16. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.
17. Reasons for extension : N/A

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<sup>(1)</sup> Strike out what does not apply.

## APPENDIX

to type-approval communication form number: E4\*10R05/01\*4363\*00 Cor.01

concerning the type-approval of an ~~electrical~~/electronic sub-assembly<sup>(1)</sup> under Regulation number 10.

1. Additional information : ---
- 1.1. Electrical system rated voltage : 12 V or 24V ... ~~pos./neg.~~ ground<sup>(1)</sup>
- 1.2. This ESA can be used on any vehicle type with the following restrictions : None
- 1.2.1. Installation conditions, if any : Not applicable
- 1.3. This ESA can be used only on the following vehicle types : All
- 1.3.1. Installation conditions, if any : Not applicable
- 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were : ESA is Not Safety Related. Radiated Immunity Tests not applicable
- 1.5. Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests : TÜV Rheinland Nederland B.V.
2. Remarks : Valid for left-hand drive and right hand drive vehicles  
Attached to this Type Approval:  
Application form  
1 Annex 2B form  
1 EMC Testreport  
Photo's  
BOM's  
Schematic Diagrams  
PCB Layouts

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<sup>(1)</sup> Strike out what does not apply.





## DECLARATION OF CONFORMITY



COMPANY : Victron Energy B.V.

Declares that the following products:

PRODUCT TYPE : SmartSolar Charge Controllers  
BRAND : Victron Energy  
MODELS :

SmartSolar MPPT 75/10, 75/15 and 100/15	SmartSolar MPPT 150/70-Tr and 150/70-MC4
SmartSolar MPPT 100/20	SmartSolar MPPT 150/85-Tr and 150/85-MC4
SmartSolar MPPT 100/30	SmartSolar MPPT 150/100-Tr and 150/100-MC4
SmartSolar MPPT 100/50	SmartSolar MPPT 250/60-Tr and 250/60-MC4
SmartSolar MPPT 150/35	SmartSolar MPPT 250/70-Tr and 250/70-MC4
SmartSolar MPPT 150/70	SmartSolar MPPT 250/85-Tr and 250/85-MC4
SmartSolar MPPT 150/85	SmartSolar MPPT 250/100-Tr and 250/100-MC4
SmartSolar MPPT 150/45-Tr and 150/45-MC4	SmartSolar Pluggable Display
SmartSolar MPPT 150/60-Tr and 150/60-MC4	

Are in conformity with the requirements of the following Directives of the European Union:

**EMC Directive 2014/30/EU with the following harmonized standards:**

EN 61000-6-1:2007  
EN 61000-6-2:2005/AC:2005  
EN 61000-6-3:2007/A1:2011/AC:2012  
EN 55014-1:2006/A1:2009/A2:2011  
EN 55014-2:1997/A1:2001/A2:2008

**Low Voltage Directive 2014/35/EU with the following harmonized standards:**

EN 60950-23:2006/AC:2008  
EN 62109-1:2010

**Restriction of the use of certain hazardous substances RoHS (2011/65/EU and 2015/863/EU) with the following harmonized standards:**

EN-IEC 63000:2018

CE MARK DATE: September 1st, 2017

Signed: Reinout Vader

Authority: Managing Director  
Date: 22 July 2019