

# **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





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  
Battery voltage (autoselect): 12 / 24Vdc  
Max PV Power 12Vdc: 135W  
Max PV Power 24Vdc: 270W  
Rated charge current: 10A

**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:** 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. ...', positioned above 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 black ink, appearing to be 'JR', written over 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

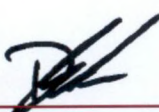
**\*Addendum\***

**Certificate No.:** SAA152177

**Date of Issue:** 25 January 2018

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

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



Issued: 03-07-18 152177/3a  
Certificate Reissued



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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



A P P R O V A L S ®

# 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)

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

| <b>Additional Models</b>  | <b>Description</b>   |
|---------------------------|--|
| SmartSolar MPPT100 20_48V | 100Vdc<br>Max Battery Voltage (auto Select) 12/24/36/48Vdc<br>Max PV Power 12Vdc: 290W<br>Max PV Power 24Vdc: 580W<br>Max PV Power 36Vdc: 870W<br>Max PV Power 48Vdc: 1160W<br>Charging Current: 20A |

  
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



# 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;<br>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;<br>36; 48 | 500  | 1000 | 1500 | 2000 | 35  |
| SmartSolar MPPT150 35         | 150 | 12; 24;<br>36; 48 | 500  | 1000 | 1500 | 2000 | 35  |
| BlueSolar MPPT 150/45-Tr      | 150 | 12; 24;<br>36; 48 | 650  | 1300 | 1950 | 2600 | 45  |
| BlueSolar MPPT 150/45-MC4     | 150 | 12; 24;<br>36; 48 | 650  | 1300 | 1950 | 2600 | 45  |
| BlueSolar MPPT 150/60-Tr      | 150 | 12; 24;<br>36; 48 | 860  | 1720 | 2580 | 3440 | 60  |
| BlueSolar MPPT 150/60-MC4     | 150 | 12; 24;<br>36; 48 | 860  | 1720 | 2580 | 3440 | 60  |
| BlueSolar MPPT 150/70-Tr      | 150 | 12; 24;<br>36; 48 | 1000 | 2000 | 3000 | 4000 | 70  |
| BlueSolar MPPT 150/70-MC4     | 150 | 12; 24;<br>36; 48 | 1000 | 2000 | 3000 | 4000 | 70  |
| SmartSolar MPPT 150 85 – Tr   | 150 | 12; 24;<br>36; 48 | 1200 | 2400 | 3600 | 4900 | 85  |
| SmartSolar MPPT 150 85 – MC4  | 150 | 12; 24;<br>36; 48 | 1200 | 2400 | 3600 | 4900 | 85  |
| SmartSolar MPPT 150 100 – Tr  | 150 | 12; 24;<br>36; 48 | 1450 | 2900 | 4350 | 5800 | 100 |
| SmartSolar MPPT 150 100 - MC4 | 150 | 12; 24;<br>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.

**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: E4-10R-053674****Extension number: 00**

1. Make (trade name of manufacturer) : Victron Energy B.V.
2. Type and general commercial description(s) : BlueSolar charge controller MPPT 75 | 15  
Similar to:  
BlueSolar charge controller MPPT 75 | 10
3. Means of identification of type, if marked on the ~~vehicle/component/~~ separate technical unit <sup>(1)</sup> : Typeplate on enclosure
- 3.1. Location of that marking : Rear (bottom) side Product
4. Category of vehicle : All
5. Name and address of manufacturer : Victron Energy B.V.  
De Paal 35  
1351 JG Almere Haven  
The Netherlands
6. In the case of components and separate technical units, location and method of affixing of the approval mark : Rear (bottom) side Product

*Vehicle Admission & Surveillance*

8. Additional information (where applicable) : see Appendix below
9. Technical service responsible for carrying out the tests : TÜV Rheinland Nederland B.V.
10. Date of test reports : January 19, 2016
11. Number of test report : 15082708.a01
12. Remarks (if any) : see Appendix
13. Place : Zoetermeer
14. Date : 27-OCT-2016
15. Signature :
16. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.
17. Reasons for extension : Not applicable

  
L. Vellekoop

  
RDW

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

## APPENDIX

to type-approval communication form number: E4-10R-053674, Extension number: 00

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

1. Additional information : See annex
  - 1.1. Electrical system rated voltage : 12/24V DC ~~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 : n.a.
  - 1.3. This ESA can be used only on the following vehicle types : All
  - 1.3.1. Installation conditions, if any : See Installation manual, attached
  - 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were : ESA Not Safety related. 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 : Attached to this Type Approval:
    - 1 Application form
    - 1 Annex 2B form
    - 1 EMC Testreport
    - 1 Manual/datasheet
    - 1 Declaration of similarity
    - Photos (testreport and manual)
    - BOM's
    - Schematic Diagrams
    - PCB Layouts

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



## ***Declaration of Conformity***

**Applicant:** Victron Energy B.V.

**Product type:**

**Model:** Solar Charger

BlueSolar MPPT 75|15  
(SCC010015050R)

BlueSolar MPPT 75|10  
(SCC010010050R)

SmartSolar MPPT 75|15  
(SCC075015060R)

**Rating:** SmartSolar MPPT 75|10  
(SCC075010060R)

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:** 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<br>(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<br>(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.

***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

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:*** 15PP038-01\_3

***Certificate no:***

***Date of issue:*** 15-108-02

2018-05-04

Raphael Rader



# Technische Daten

## *Technical Data*

| <b>Model /Type<br/>reference</b>    | <b>BlueSolar MPPT<br/>100   15</b>      | <b>BlueSolar MPPT<br/>100   30</b>  |
|-------------------------------------|---|-------------------------------------|
| Max. input voltage:                 | 100Vdc                                  | 100Vdc                              |
| Battery voltage<br>(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<br/>100   15</b> | <b>SmartSolar MPPT<br/>100   20</b>     | <b>SmartSolar MPPT<br/>100   30</b> |
| 100Vdc                              | 100Vdc                                  | 100Vdc                              |
| 12Vdc/24Vdc                         | 12Vdc/24Vdc                             | 12Vdc/24Vdc                         |
| 220W                                | 290W                                    | 440W                                |
| 440W                                | 580W                                    | 880W                                |
| 15A                                 | 20A                                     | 30A                                 |
| <b>Model /Type<br/>reference</b>    | <b>SmartSolar MPPT<br/>100   40_48V</b> |                                     |
| Max. input voltage:                 | 100Vdc                                  |                                     |
| Battery voltage<br>(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                                     |                                     |



## DECLARATION OF CONFORMITY



COMPANY : Victron Energy B.V.

Declares that the following products:

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

|  |   |
|--|---|
| BlueSolar MPPT 75/10, 75/15 and 100/15 | BlueSolar MPPT 150/45-Tr and 150/45-MC4   |
| BlueSolar MPPT 100/30                  | BlueSolar MPPT 150/60-Tr and 150/60-MC4   |
| BlueSolar MPPT 100/50                  | BlueSolar MPPT 150/70-Tr and 150/70-MC4   |
| BlueSolar MPPT 150/35                  | BlueSolar MPPT 150/85-Tr and 150/85-MC4   |
|  | BlueSolar MPPT 150/100-Tr and 150/100-MC4 |
| BlueSolar MPPT 150/70 CAN-bus          |   |
| BlueSolar MPPT 150/85 CAN-bus          |   |

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: June 1st, 2015

Signed: Reinout Vader

Authority: Managing Director

Date: 19 July 2019