

# STUDER VarioString VS-70 MPPT Solar Charge Controllers **User Guide**

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### Introduction

# Congratulations!

You are about to install and use a high-end equipment that will play a central role in the energy management of your battery-based system. The variostring (vs) is a solar MPPT charge controller. When connected to a battery and photovoltaic panels the vs will recharge the battery in an optimum way. This vs has been designed, manufactured, assembled and tested in our factory in Switzerland. It has a 5-year warranty and is eligible for an extension 5+5.

# **General Information**

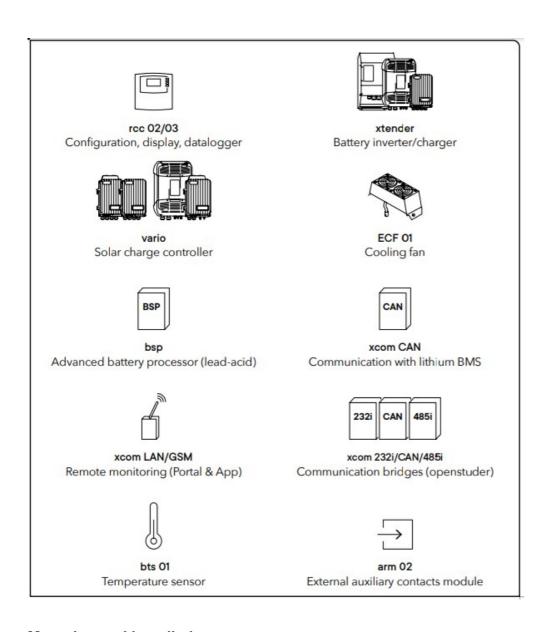
### **Exclusion of liability**

Studer disclaims all responsibility and liability for damage, costs or losses resulting from an installation that does not comply with the instructions, a faulty operation or inadequate maintenance. The use of studer equipment is in any case under the responsibility of the customer.

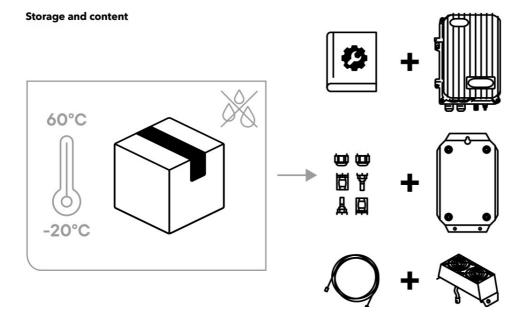


Read carefully the safety and operation instructions / Installation must be entrusted to qualified personnel / Check the user manual online / Need help?

### Compatible with:

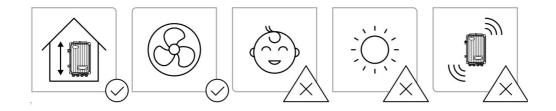


# Mounting and installation

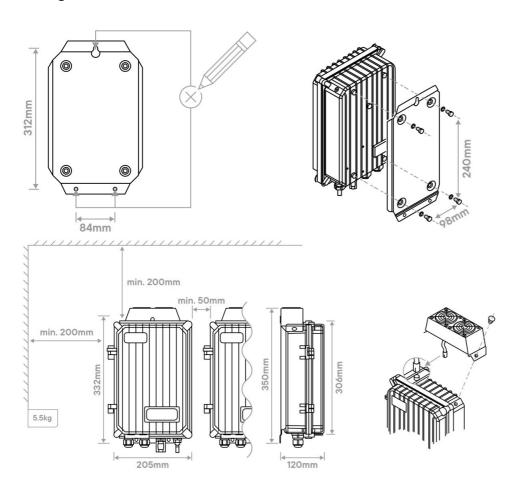


# **Mounting place**

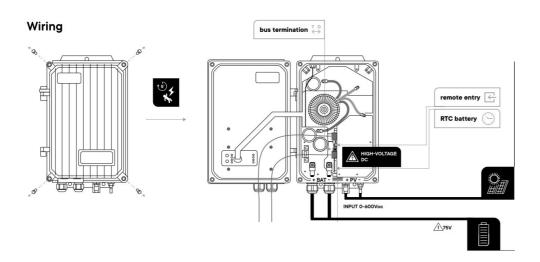
The batteries should only be installed by qualified personnel.



# Fixing and dimensions



# Wiring



# Communication

- 2x RJ 45 black flat cable : rcc 02/03 / multi-units : xtender, vt, vs, bsp, xcom
- 1x RJ 11 black flat cable for accessories : bts 01, arm 02

# **Earthing**

- 16mm2 cable
- The solar generator must be class II isolated

### **PV** connection

• 2.5-6mm2 cable, Sunclix connector

Protection device (PV side)

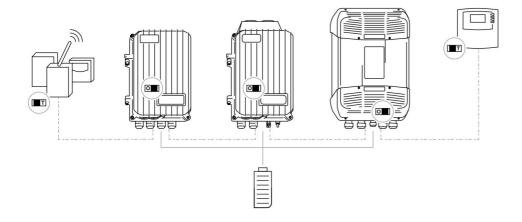
- Switching device, max solar current 13A
- Overvoltage protection, SPD (600Vdc)

Serial connection (chain or string), up to 600V

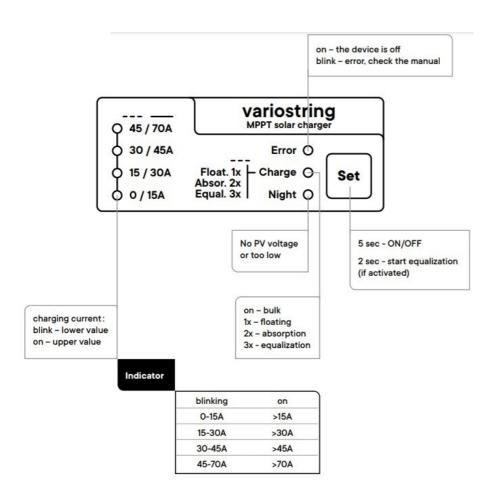
# **Battery connection**

25mm2 cable M6, 5Nm Protection device (battery side) 80A

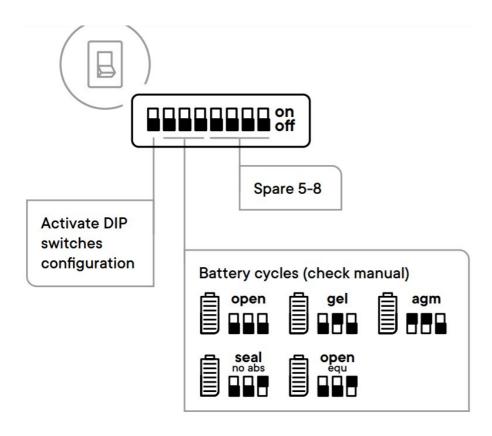
# Multi units and power up



Display system



# Configuring the variostring



### Lead-acid

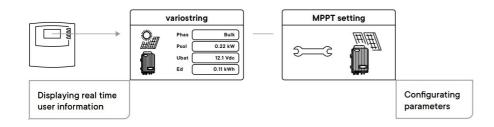
· Configure charge profile according to manufacturer

# Lithium (comm BMS, xcom CAN)

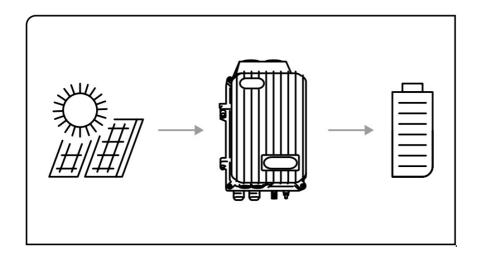
· Check compatibility list and xcom CAN manual

Others: NiCd, NiFe, Redox flow, saltwater, etc.

· Check battery manufacturer



### **Technical data**



PV input voltage 100-600V PV max current 13A PV recommended power 4200W

Batt nominal voltage 48V Batt charge current 70A Batt min-max voltage 38-68V



# Maintenance and recycling

Except for the periodic check of the connections (tightening, general condition), the variostring does not require any particular maintenance. To dispose of this product, please use the service for the collection of electrical waste and observe all obligations in force in the place of purchase.

Serial Number:
Installed by :
Date :
Signature

Call our specialists +41 27 205 60 80 or visit studer-innotec.com/support

Studer Innotec SA rue des Casernes 57 1950 Sion, Switzerland info@studer-innotec.com



# **Documents / Resources**



<u>STUDER VarioString VS-70 MPPT Solar Charge Controllers</u> [pdf] User Guide VarioString VS-70, MPPT Solar Charge Controllers, Charge Controllers, MPPT Solar Charge, M PPT Controllers

# References

- <u> Testseite für grautvornix.de</u>
- Assistance | STUDER

Manuals+,