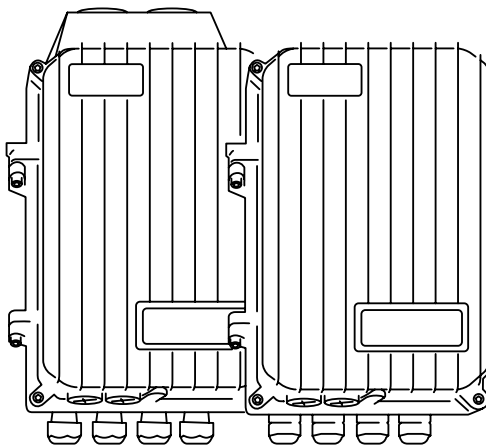




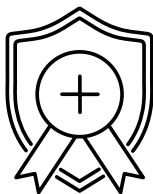
quick guide variotrack

vt 40-145 & vt 60/80-175



swiss made power





See more about our warranty conditions
on our website studer-innotec.com/studer-care

designed and manufactured
by studer in Switzerland



Introduction

EN 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 variotrack (vt) is a solar MPPT charge controller. When connected to a battery and photovoltaic panels the vt will recharge the battery in an optimum way. This vt has been designed, manufactured, assembled and tested in our factory in Switzerland.

FR Félicitations !

Vous vous préparez à installer et à utiliser un appareil haute-gamme qui jouera un rôle central dans la gestion d'énergie de votre système avec stockage. Le variotrack (vt) est un contrôleur de charge solaire MPPT. Lorsque qu'il est connecté à des batteries et des panneaux photovoltaïques, il rechargera automatiquement les batteries de manière optimale. Ce vt a été conçu, fabriqué, assemblé et testé dans notre usine en Suisse.

DE Herzlichen Glückwunsch!

Wir freuen uns, dass Sie sich für eines High-Tech-Gerät entschieden haben, welches bei der Energie-management Ihrer Anlage entscheidende Rolle spielen wird. Der variotrack (vt) ist ein MPPT-Solarladegerät. Wenn an Batterien und Photovoltaikmodule angeschlossen wird, lädt der vt die Batterien optimal nach. Dieser vt wurde in unserem Werk in der Schweiz entwickelt, hergestellt, montiert und getestet.

ES ¡Enhorabuena!

Está a punto de instalar y de utilizar un equipo de alta gama que desempeñará una función esencial en la gestión de energía de su sistema con almacenamiento. El variotrack (vt) es un controlador de carga solar MPPT. Conectado a una batería y a paneles fotovoltaicos, el vt recarga automáticamente las baterías de manera óptima. Este vt ha sido diseñado, fabricado, ensamblado y probado en nuestra fábrica en Suiza.

General Information

EN 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?



FR Exclusion de la responsabilité

Studer décline toute responsabilité pour les dommages, les coûts ou les pertes résultant d'une installation non conforme aux prescriptions, d'un fonctionnement défectueux, ou d'un entretien déficient. L'utilisation des appareils studer relève dans tous les cas de la responsabilité du client.

Lisez attentivement les instructions de sécurité et d'utilisation / L'installation doit être confiée à du personnel qualifié / Consultez le manuel d'utilisation en ligne / Besoin d'aide ?



DE Haftungsausschluss

Studer übernimmt keinerlei Verantwortung und Haftung für Schäden, Kosten oder Verluste, die sich aus unsachgemäßer Installation, unsachgemäßem Betrieb sowie fehlerhafter Wartung ergeben oder in irgendeiner Art und Weise damit zusammenhängen. Der Einsatz und Betrieb der studer-Geräte obliegt in jedem Fall der Verantwortung des Kunden.

Lesen Sie die Sicherheits- und Betriebsanweisungen sorgfältig durch / Die Installation muss qualifiziertem Personal anvertraut werden / Überprüfen Sie die Bedienungsanleitung online / Brauchen Sie Hilfe?



ES Exclusión de responsabilidad

Studer declina cualquier responsabilidad por los daños, costes o pérdidas resultantes de una instalación no conforme con las recomendaciones, de un funcionamiento defectuoso o de un mantenimiento deficiente. El uso de equipos de studer es en cualquier caso responsabilidad del cliente.

Lea atentamente las instrucciones de seguridad y funcionamiento / La instalación debe confiarse a personal cualificado / Consulte el manual de usuario en línea / ¿Necesitas ayuda?

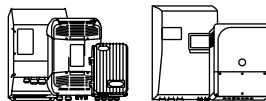


Compatible with:



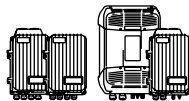
rcc 02/03

Configuration, display, datalogger



xtender and next series

Battery inverter/charger



vario

Solar charge controller



ecf 01

Cooling fan



bsp

Advanced battery processor (lead-acid)



xcom CAN

Communication with lithium BMS



xcom LAN/GSM

Remote monitoring (Portal & App)



xcom 232i/CAN/485i

Communication bridges (openstuder)



bts 01

Temperature sensor

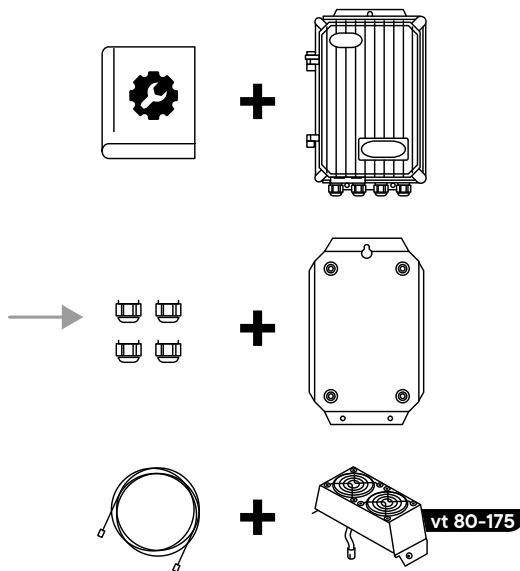
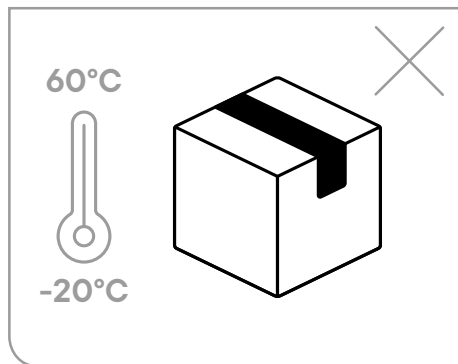


arm 02

External auxiliary contacts module

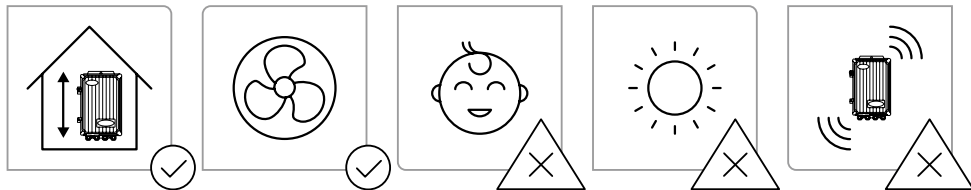
Mounting and installation

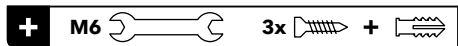
Storage and content



Mounting place

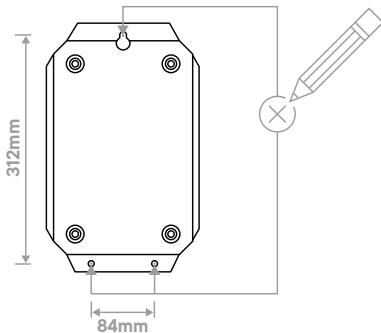
The batteries should only be installed by qualified personnel.



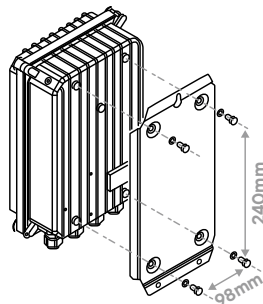


Fixing and dimensions

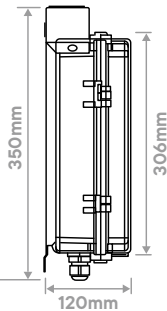
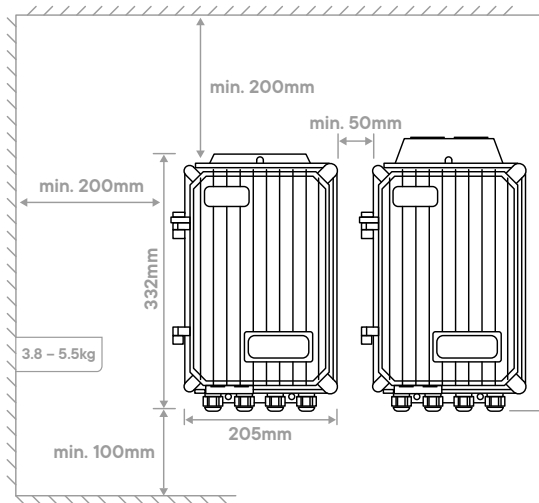
1



2

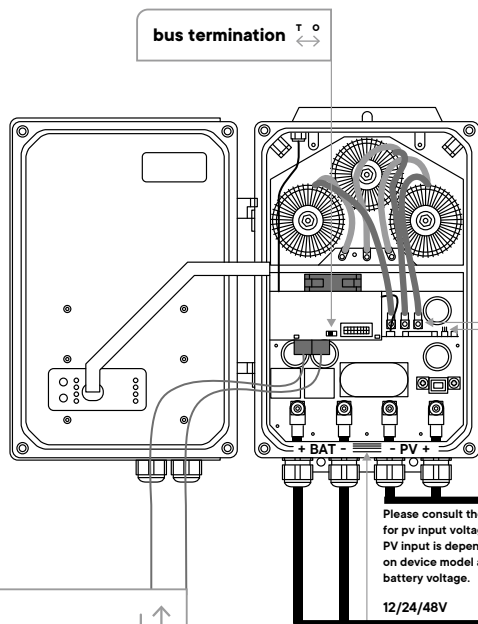


3



vt 80-175
cooling fan

13



Please consult the datasheet for pv input voltage. PV input is depending on device model and battery voltage.

12/24/48V

- 2x RJ 45 cable 8 pin:
rcc 02/03 / multi-units:
xtender, vt, vs, bsp, xcom
- 1x RJ 11 6 pin cable for accessories:
bts 01, arm 02



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



ES El dispositivo debe instalarse de acuerdo con las normas y regulaciones locales vigentes.

PV connection

- 10mm² cable M5, 3.9Nm **vt 40-145** 
- 25mm² cable M6, 3.9Nm **vt 65-175** **vt 80-175**

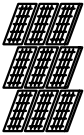
Protection device (PV side)

Switching device, max solar current 

- 35A **vt 40-145** / • 60A **vt 65-175** / • 75A **vt 80-175**

vt 40-145 Overvoltage protection, SPD (150Vdc)
vt 65/80-175 Overvoltage protection, SPD (200Vdc)

In series, up to 145Voc (vt 40-145)
In series, up to 175Voc (vt 65/80)
(75 Voc @ 12Vdc)



In parallel, see
recommended power*

Battery	vt 40-145	vt 65-175	vt 80-175
12V	625W	1000W	1250W
24V	1250W	2000W	2500W
48V	2500W	4000W	5000W

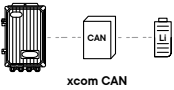
Battery connection

- 16mm² cable M5, 3.9Nm **vt 40-145** 
- 25mm² cable M6, 3.9Nm **vt 65-175** **vt 80-175**

Protection device (battery side) 

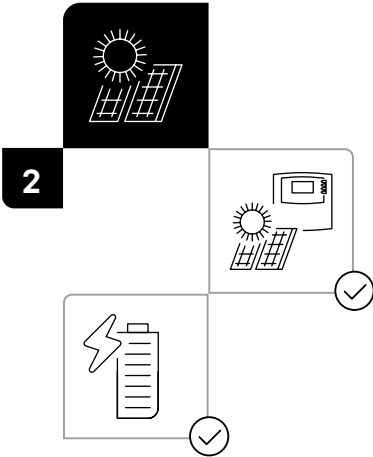
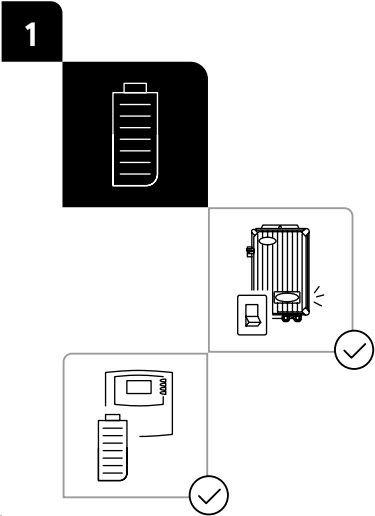
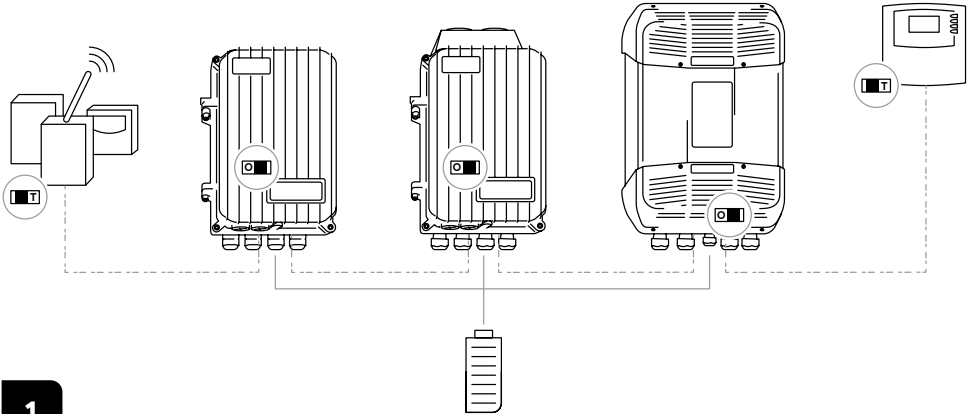
- 50A **vt 40-145** / • 80A **vt 65-175** / • 100A **vt 80-175**
- vt 40-145 Overvoltage protection, SPD (150Vdc)
vt 65/80-175 Overvoltage protection, SPD (200Vdc)

Lithium batteries
communication
BMS CAN



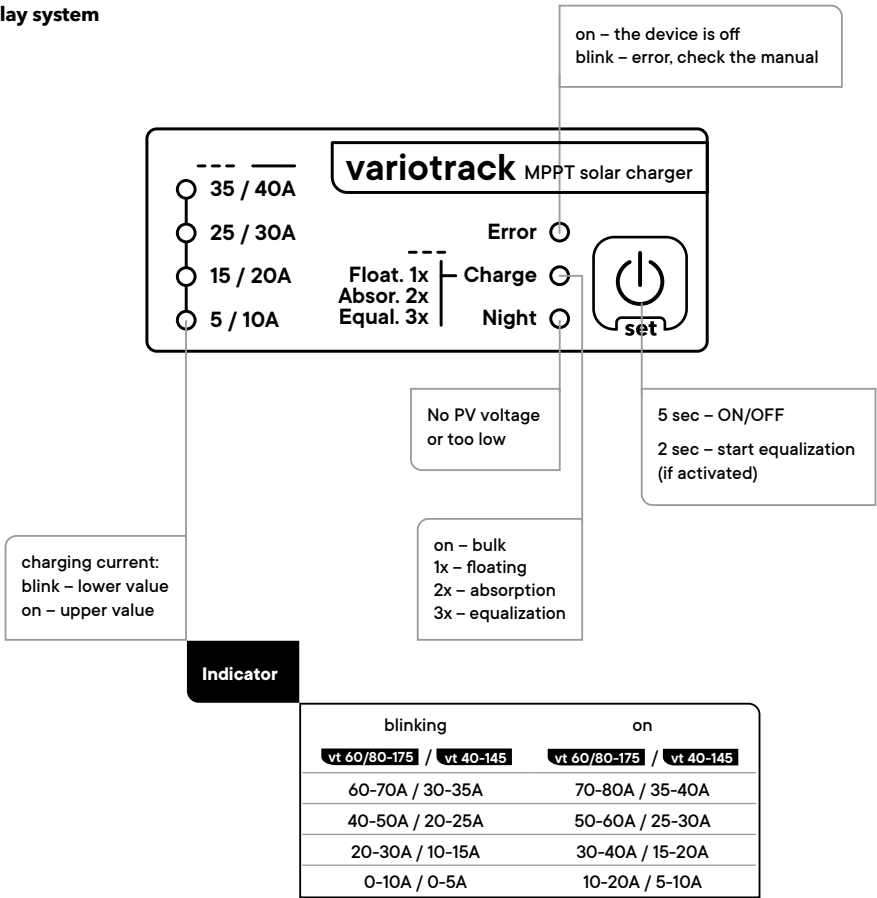
xcom CAN

Multi units and power up



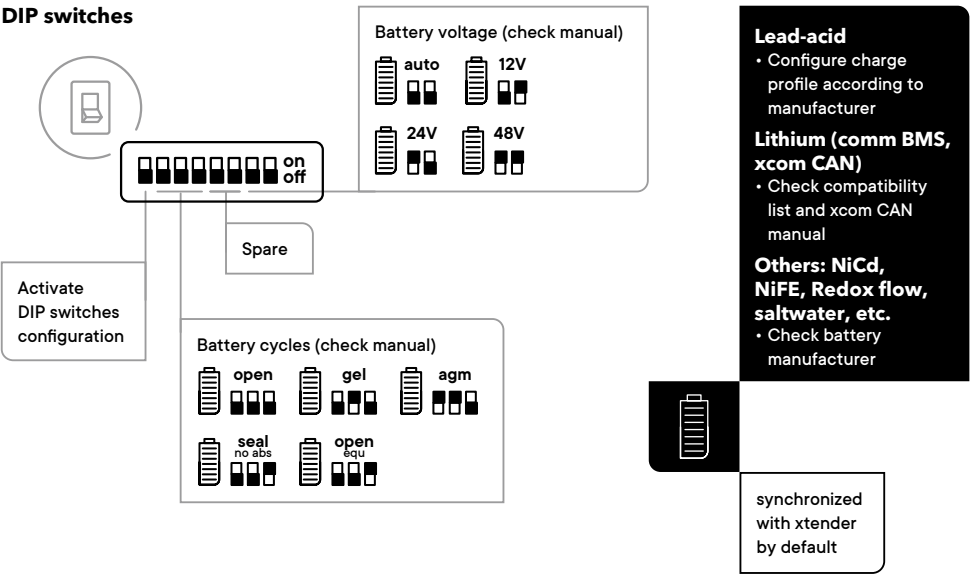
Display

Display system

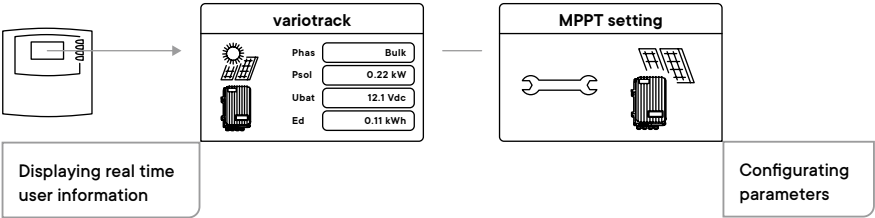


Configuring the variotricks

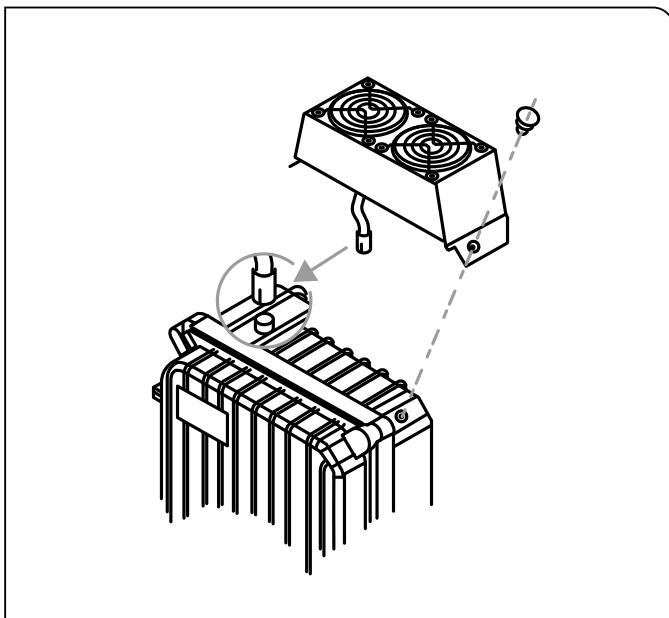
DIP switches



rcc 02/03

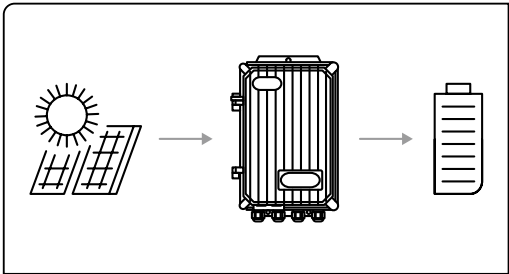


vt 80-175 ecf 01 included
vt 60-175 ecf 01 can be added



**Assembling
the cooling
fan**

Technical data



IP 54
Protection Class I



	vt 40-145	vt 65-175	vt 80-175
Open PV max voltage (battery 12V)	80Vdc	80Vdc	80Vdc
Open PV max voltage (battery 24V)	145Vdc	150Vdc	150Vdc
Open PV max voltage (battery 48V)	145Vdc	175Vdc	175Vdc
PV max current	35A	60A	75A
Batt nominal voltage	12/24/48 Vdc		
Batt max charge current	40A	65A	80A
Batt min-max voltage	depending on model and battery voltage please consult the datasheet		



Maintenance and recycling

EN Maintenance and recycling

Except for the periodic check of the connections (tightening, general condition), the variotrack 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.

FR Entretien et recyclage

À l'exception du contrôle périodique des branchements (serrage, état général), le variotrack ne nécessite pas d'entretien particulier. Pour vous débarrasser de ce produit, veuillez utiliser les services de collecte des déchets électriques et observer toutes les obligations en vigueur selon le lieu d'achat.

DE Wartung und Recycling

Abgesehen von der regelmäßigen Kontrolle der Anschlüsse (Fixierung, allgemeiner Zustand) bedarf der variotrack keinerlei besonderer Wartungsarbeiten. Beachten Sie bei der Entsorgung dieses Gerätes die geltenden örtlichen Vorschriften und nutzen Sie die Sammeldienste/-stellen für Elektro-/Elektronik-Altgeräte.

ES Mantenimiento y reciclaje

A excepción del control periódico de las conexiones (apriete, estado general), el variotrack no requiere un mantenimiento particular. Para la eliminación del producto, acuda a los servicios de recogida de residuos eléctricos y cumpla todas las obligaciones vigentes en el lugar de compra.

Serial Number:

Installed by:

Date:

Signature:

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

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rue des Casernes 57
1950 Sion, Switzerland

info@studer-innotec.com

