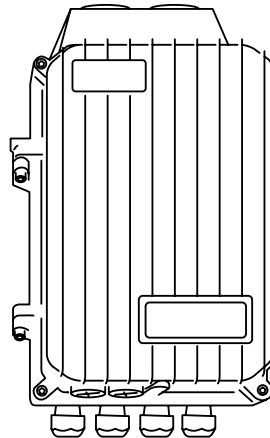




# quick guide xtender xts



swiss made power





**5 + 5**

designed and assembled  
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 xtender is an smart battery inverter/charger with advanced functions. This xtender 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.

## **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. L'xtender est un onduleur / chargeur de batterie intelligent doté de fonctions avancées. Ce xtender a été conçu, fabriqué, assemblé et testé dans notre usine en Suisse. Il bénéficie d'une garantie de 5 ans et est éligible à une extension 5+5.

## **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 xtender ist ein intelligenter Wechselrichter / Batterielader mit erweiterten Funktionen. Dieser xtender wurde in unserem Werk in der Schweiz entwickelt, hergestellt, montiert und getestet. Es hat eine 5-jährige Garantie und kann um 5+5 verlängert werden.

## **ES** ¡Enhorabuena!

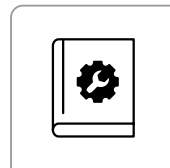
Está a punto de instalar y de utilizar un equipo de alta gama que desempeñará una función esencial en la gestión de energía de su sistema con almacenamiento. El xtender es un inversor / cargador de batería inteligente con funciones avanzadas. Este xtender ha sido diseñado, fabricado, ensamblado y probado en nuestra fábrica en Suiza. Tiene una garantía de 5 años y es elegible para una extensión 5+5.

# 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:



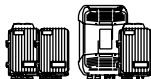
**rcc 02/03**

Configuration, display, datalogger



**xtender**

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

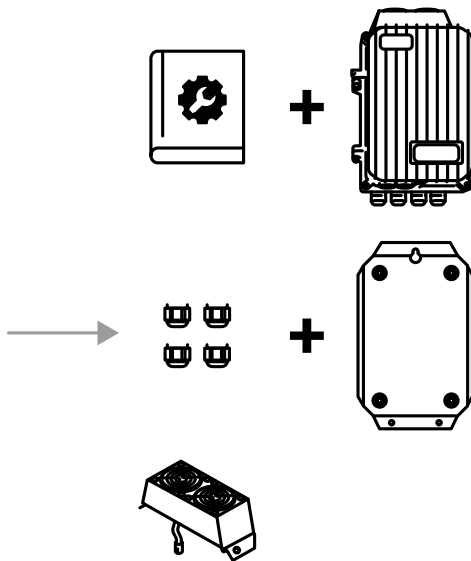
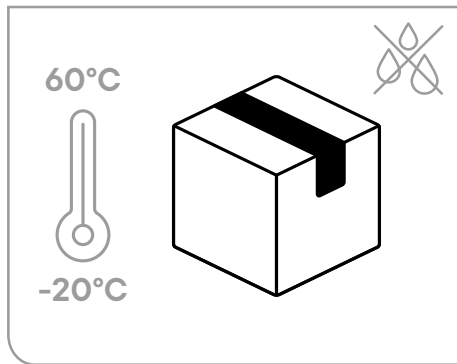


**rcm 10**

Remote control module

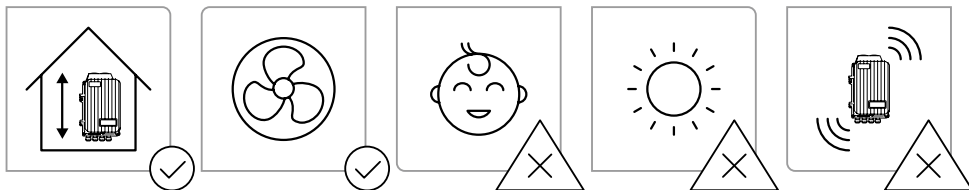
# Mounting and installation

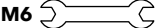


## Storage and content



## Mounting place

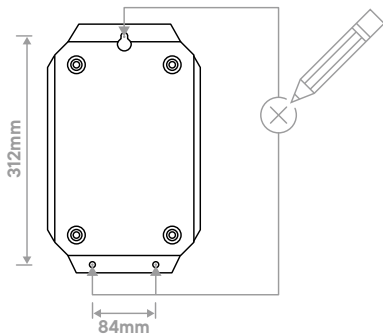
The batteries should only be installed by qualified personnel.



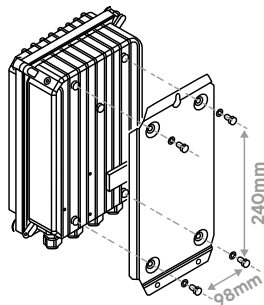
+ M6  3x  + 

## Fixing and dimensions

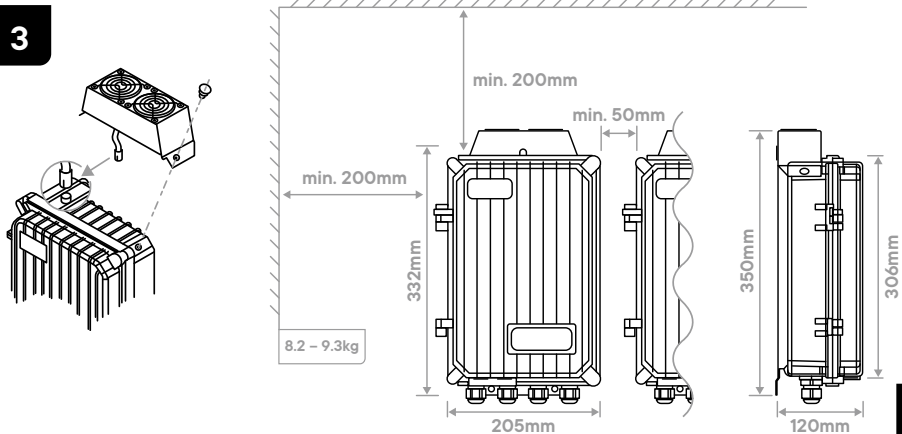
1



2

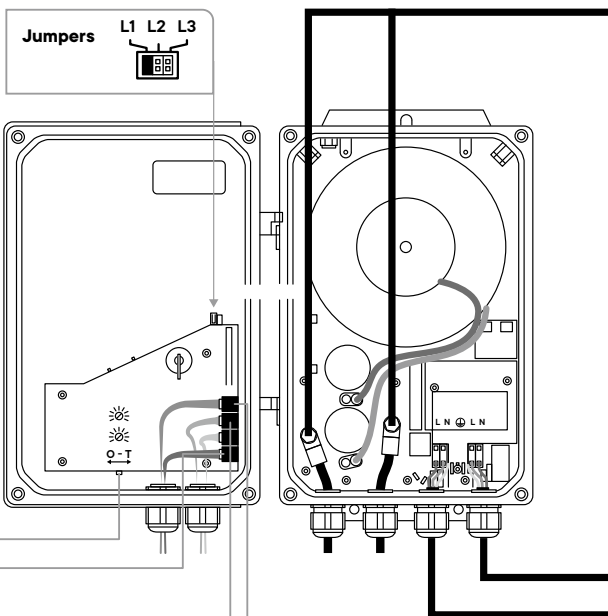
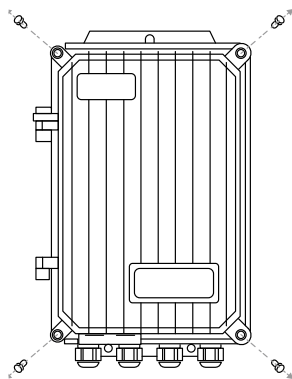


3



4

# Wiring



**Temperature sensor bts 01 / auxiliary contacts remote module arm 02**



- 1x RJ 11 black flat cable

**Communication**



- 2x RJ 45 black flat cable: rcc 02/03 / multi-units: xtender, vt, vs, bsp, xcom



**Remote control rcm 10**



- 1x RJ 11 black flat cable



- EN** The device must be installed in accordance with local standards and regulations in force.
- FR** L'appareil doit être installé conformément aux normes et réglementations locales en vigueur.
- DE** Das Gerät muss gemäß den geltenden örtlichen Normen und Vorschriften installiert werden.
- ES** El dispositivo debe instalarse de acuerdo con las normas y regulaciones locales vigentes.





5mm



### Battery connection




BAT+, M6



BAT-, M6

- 25mm<sup>2</sup> cable M6, 4Nm **xts 1200-24** **xts 900-12**
- 16mm<sup>2</sup> cable M6, 4Nm **xts 1400-48**

Protection device (battery side)\*  \_

- 100A **xts 900-12**
- 80A **xts 1200-24**
- 50A **xts 1400-48**

### AC out connection

- Up to 3x4mm<sup>2</sup> cable

Protection device to protect cables

Up to 20Aac, circuit breaker type B

Protection device to protect people

Up to 20Aac, RCCB/RCD, check earth scheme

Overvoltage protection, SPD



### AC in connection

- Up to 3x4mm<sup>2</sup> cable

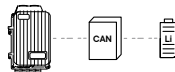
Protection device AC

Integrated protective device  
AC input (16Aac)

16Aac, circuit breaker type B

Overvoltage protection, SPD

### Lithium batteries communication BMS CAN



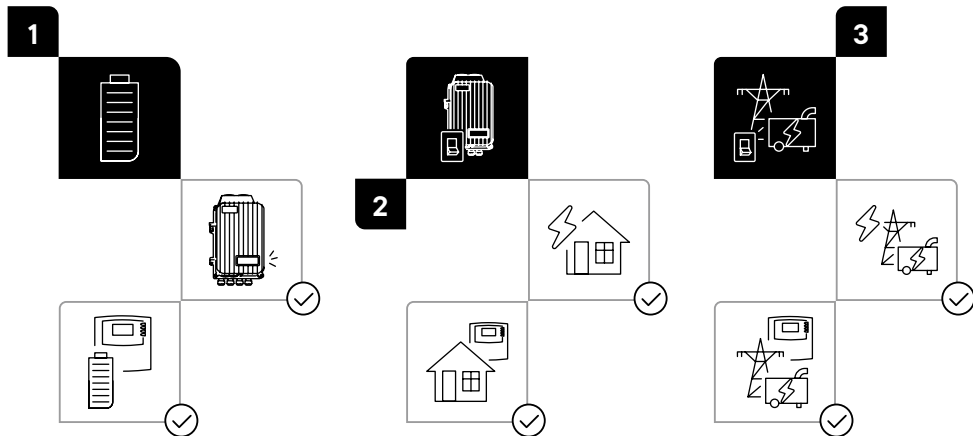
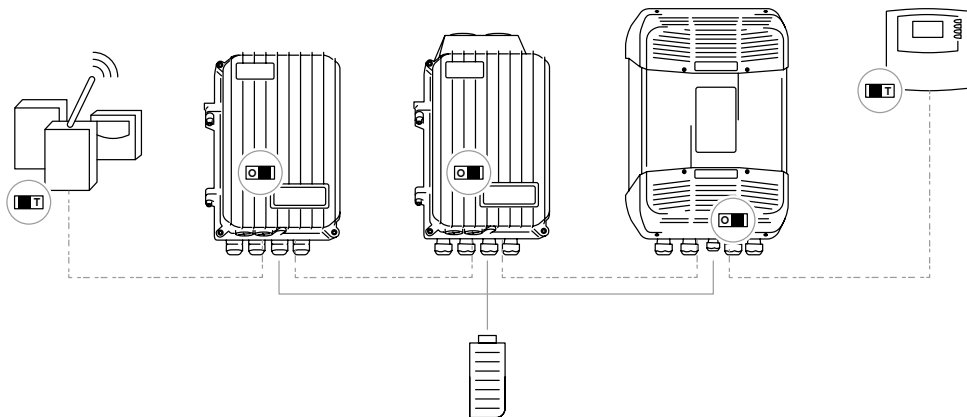
xcom CAN



\* Check  
xcom CAN  
manual

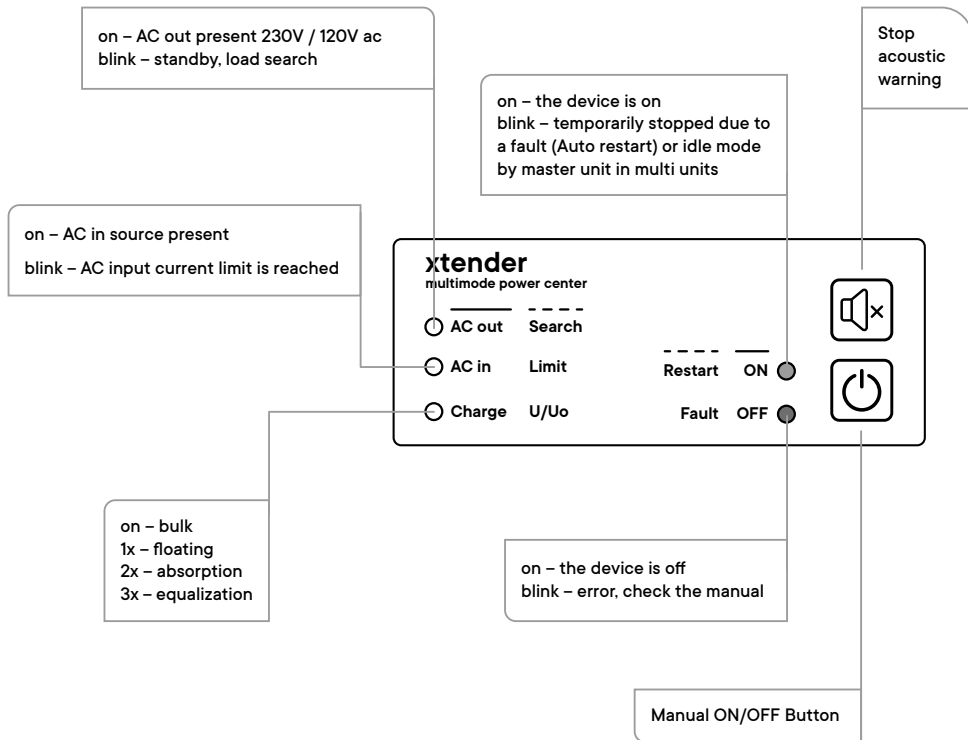
# Multi units and power up

Up to 9 Xtenders in the same communication bus



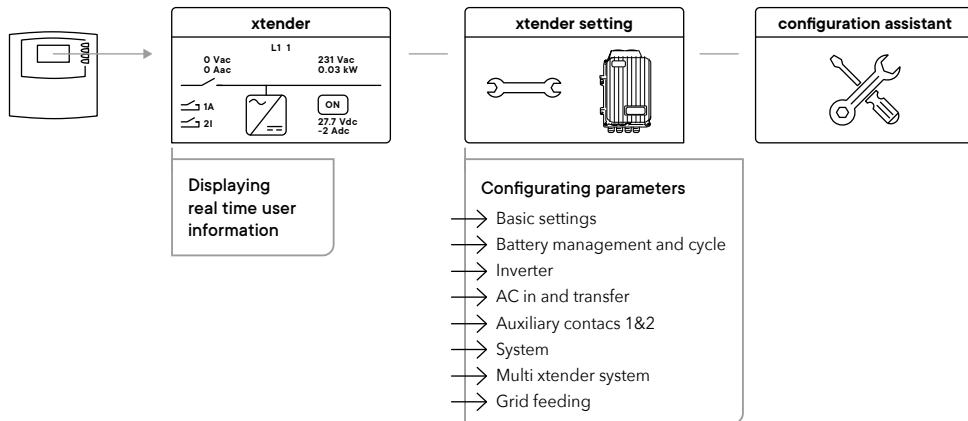
# Display

## Display system

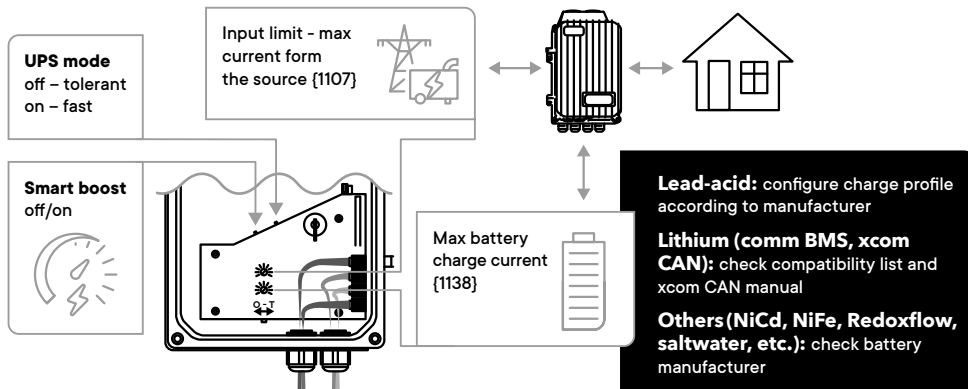


# Configuring the xtender

rcc 02/03

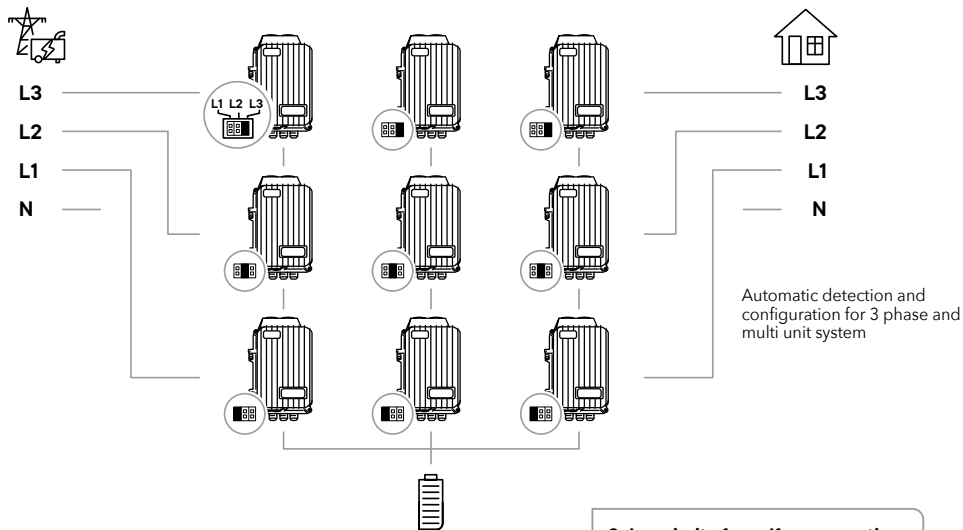


## DIP-switches

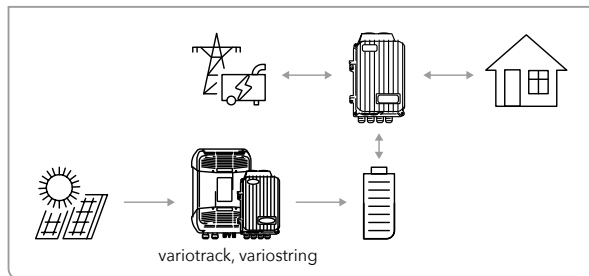


# Multi units

## 3 phase and parallel combination



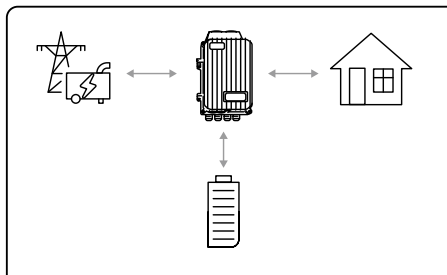
**Solar priority for self consumption**  
In combination with a vario



**Automatic start generator & self consumption configuration**

**See FAQ section!**

# Technical data



**IP 54**  
Protection Class I



	xts 900-12	xts 1200-24	xts 1400-48
Batt nominal voltage	12Vdc	24Vdc	48Vdc
Batt charge current	35A dc	25A dc	12A dc
Batt min-max voltage	9.5-17Vdc	19-34Vdc	38-68Vdc

AC input voltage 230V (150-265V)  
\*120V (50-140V)

AC input max current 50A

Continous Power	650**/500VA	800**/650VA	900**/750VA
Power 30min	900**/700VA	1200**/1000VA	1400**/1200VA
Power 5sec	2.3kVA	2.5kVA	2.8kVA
AC output voltage	230V (150-245V) / *120V (50-140V)		
AC output frequency	45-65Hz (configurable)		
AC output max current	20Aac		

\* Version - 01  
120Vac/60Hz version

\*\* With cooling  
module ECF-01

**RoHS**  
COMPLIANT



## Maintenance and recycling

### **EN Maintenance and recycling**

Except for the periodic check of the connections (tightening, general condition), the xtender 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 xtender 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 xtender 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 xtender 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](http://studer-innotec.com/support)**

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