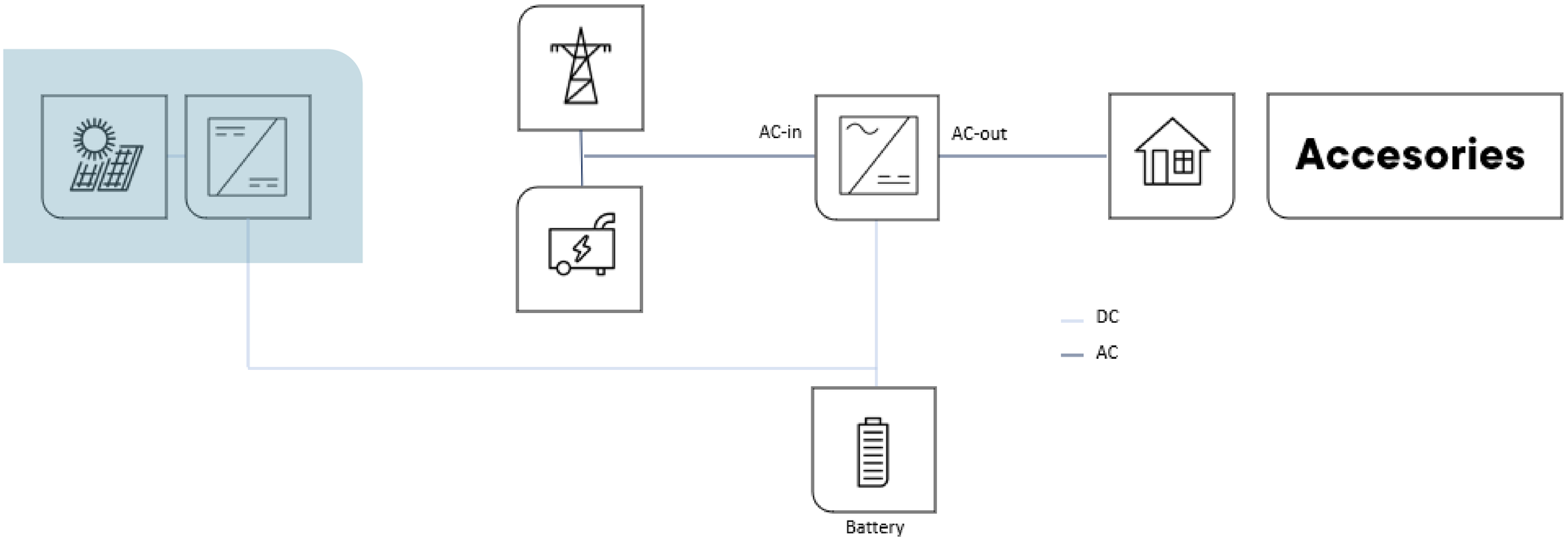
Vario Series

MPPT Solar Chargers

Agenda

- Variotrack definition and examples
- Variostring definition and examples
- Q&A Session

Xtender Family



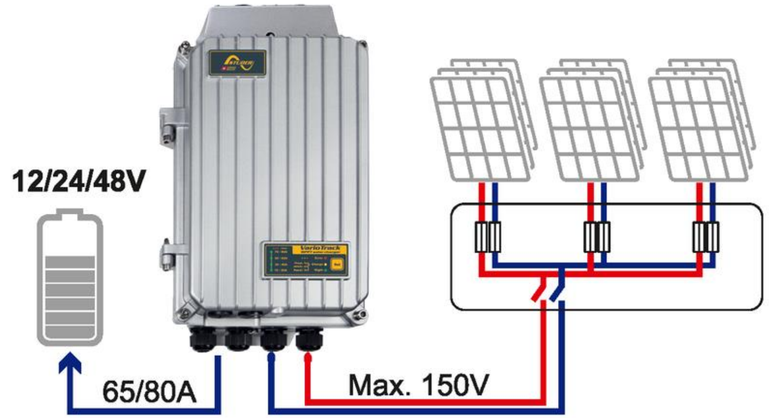
Variotrack

MPPT Solar Charger

Battery
12, 24 or 48Vcc

Up to 15 x VT in parallel (75kW)

Max. PV Input Voltage (Voc)
150Vcc: 24 & 48Vcc
75V: 12Vcc

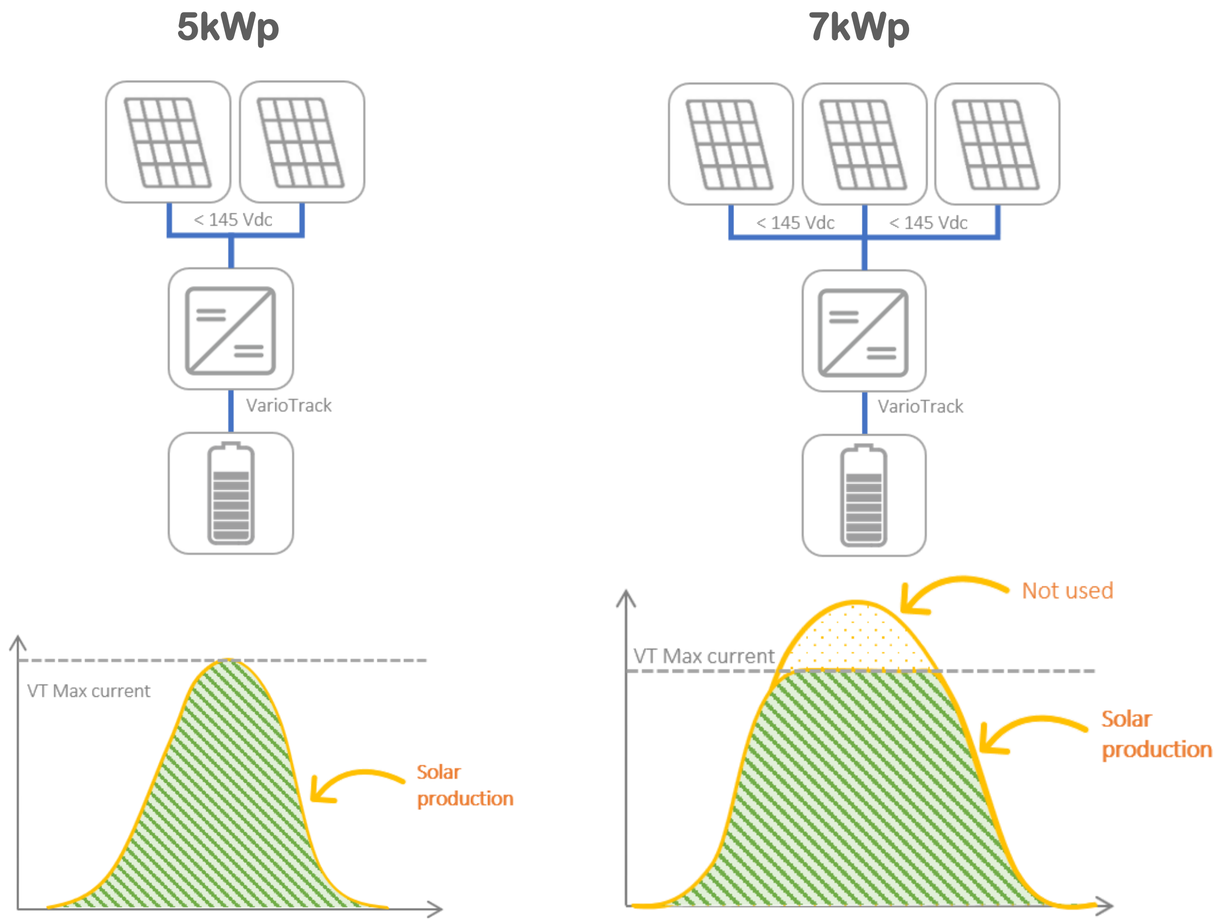


10 YEAR WARRANTY

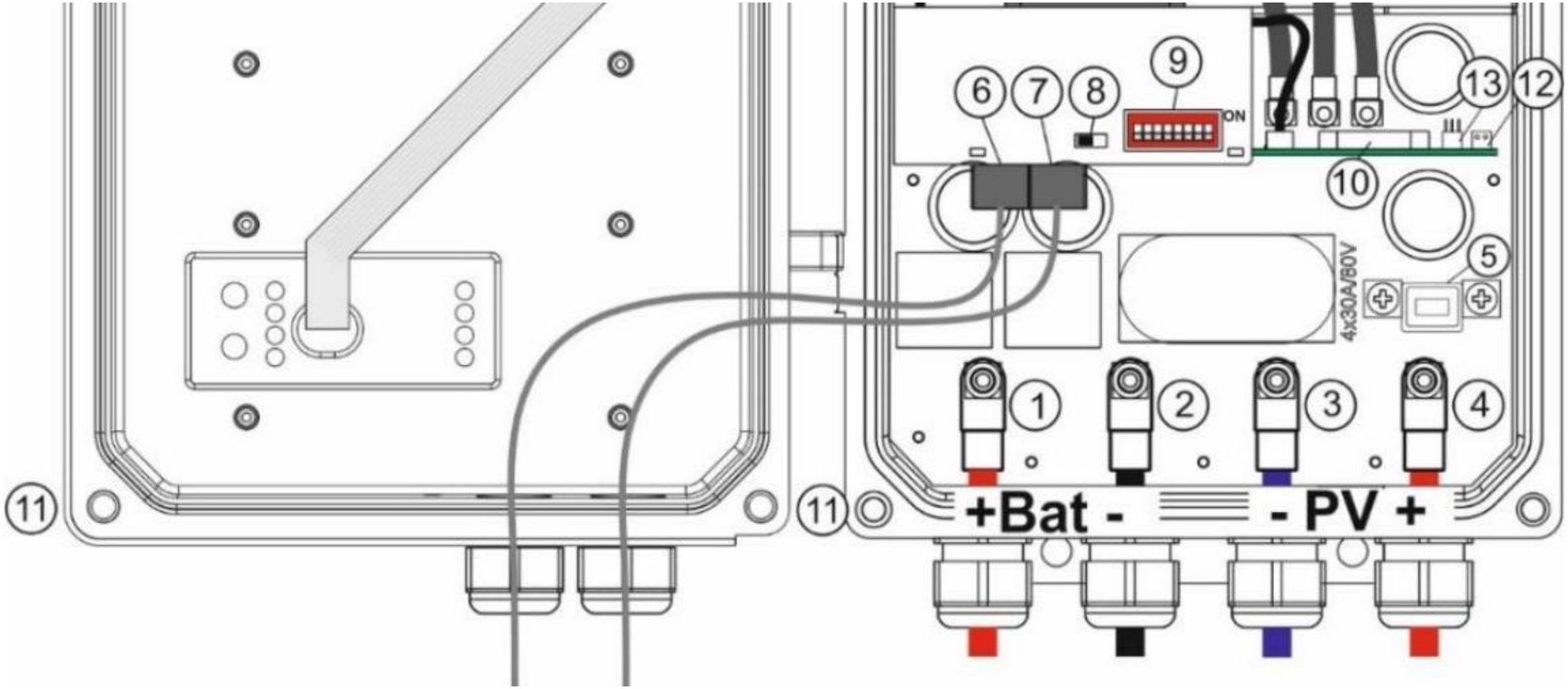
Variotrack MPPT

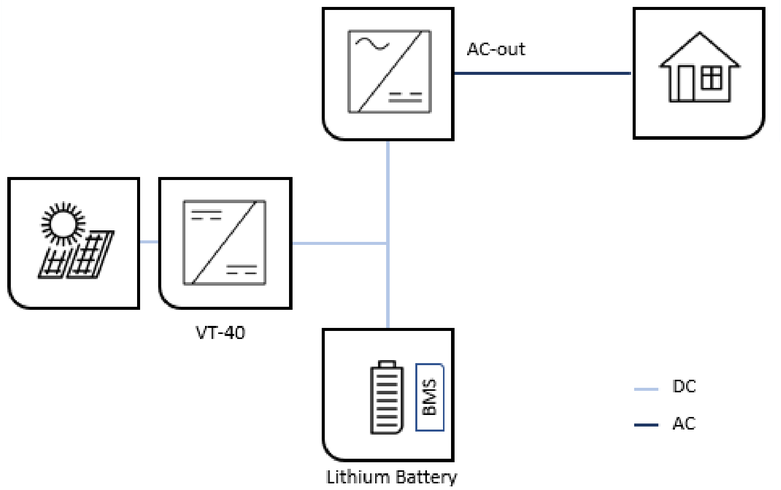
Variotrack	Battery Voltage	Max. Solar Power Recomended	Max PV Input Voltage (Voc)	Charge Current
VT-40	12 V 24 V 48 V	625 Wp 1250 Wp 2500 Wp	**75 Vdc** **150 Vdc** **150 Vdc**	40 Acc
VT-65	12 V 24 V 48 V	1000 Wp 2000 Wp 4000 Wp	**75 Vdc** **150 Vdc** **150 Vdc**	65 Acc
VT-80	12 V 24 V 48 V	1250 Wp 2500 Wp 5000 Wp	**75 Vdc** **150 Vdc** **150 Vdc**	80 Acc

Maximum PV Power – No limit (Example VT-80)



VT Connection Panel





Pantanal – Brazil

2300 installations
Project “Leva luz a lugares remotos do Pantanal”

OMEXOM

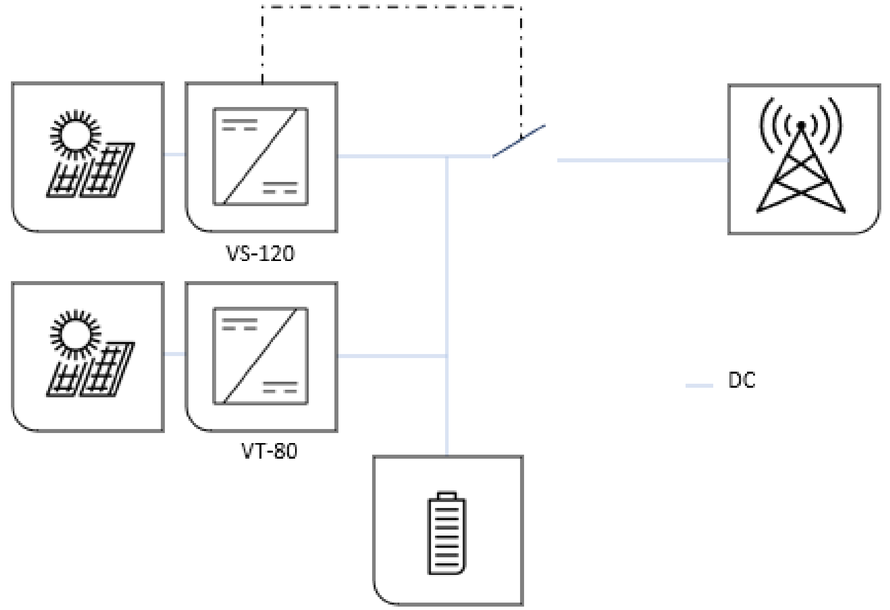
STUDER

VT - Accesories

2 x Auxiliary contacts – ARM-02

Viva – Bolivia

Telecom – Environmental protection

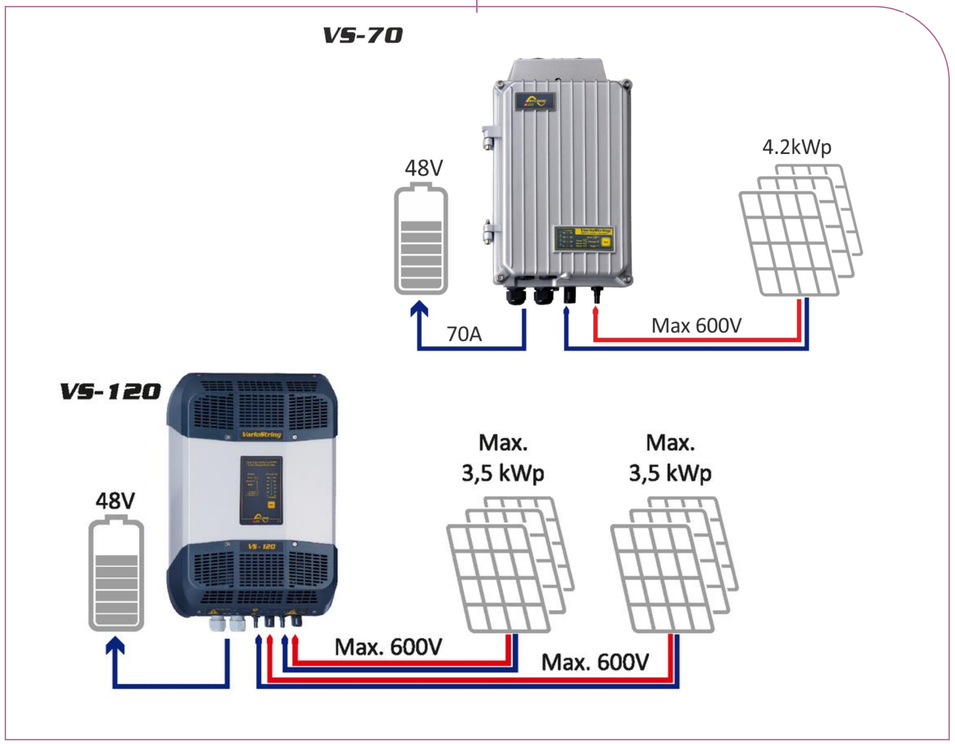


1 VS-120 | 1 VT-80 | 4.2 kWp | 900Ah C100

Link to study case

Variostring

MPPT HV Solar Charger



Battery
Only 48Vcc

Up to 15 x VS (105kW)

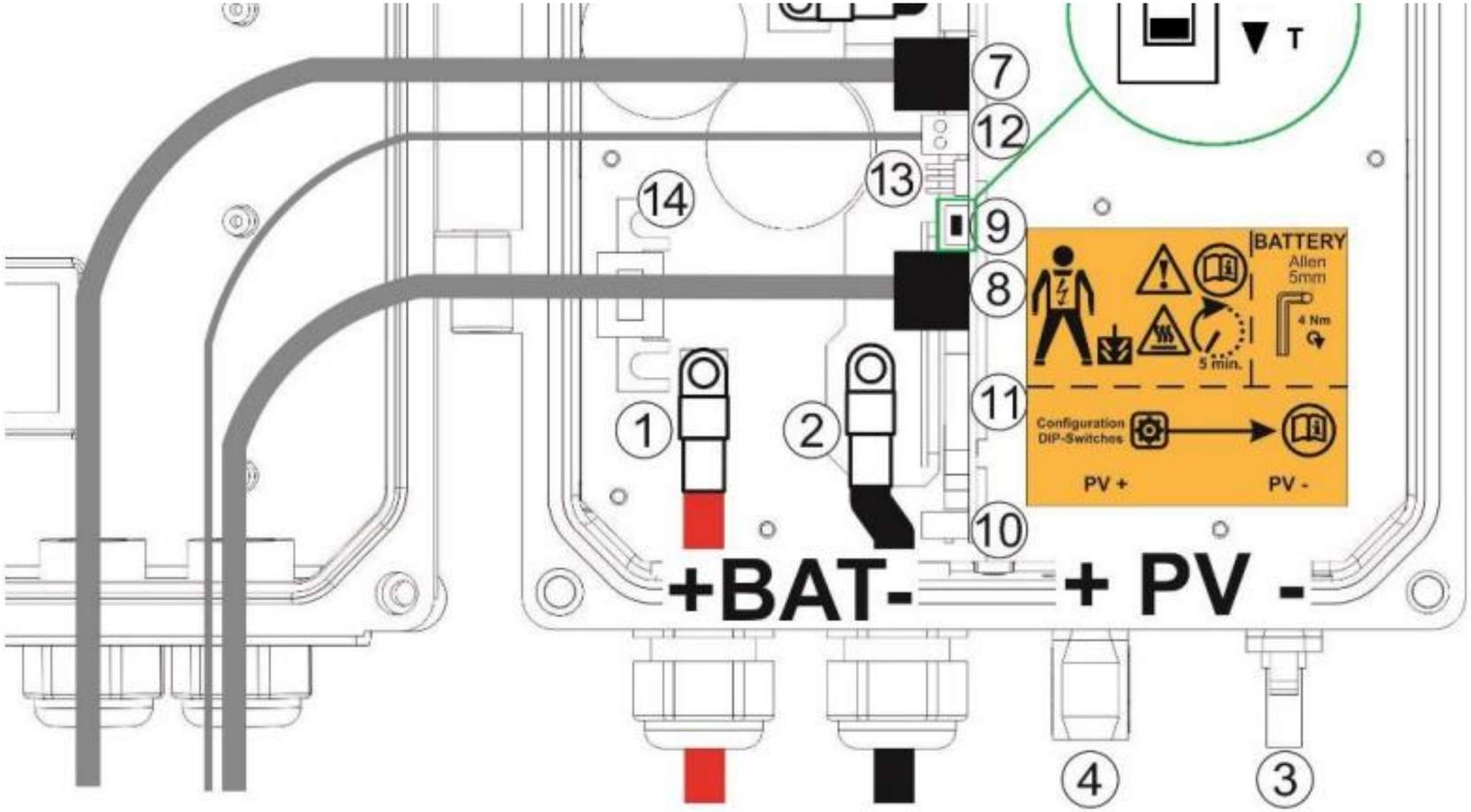
Max PV Input Voltage (Voc)
600Vcc (900Vcc)

10+ YEAR WARRANTY

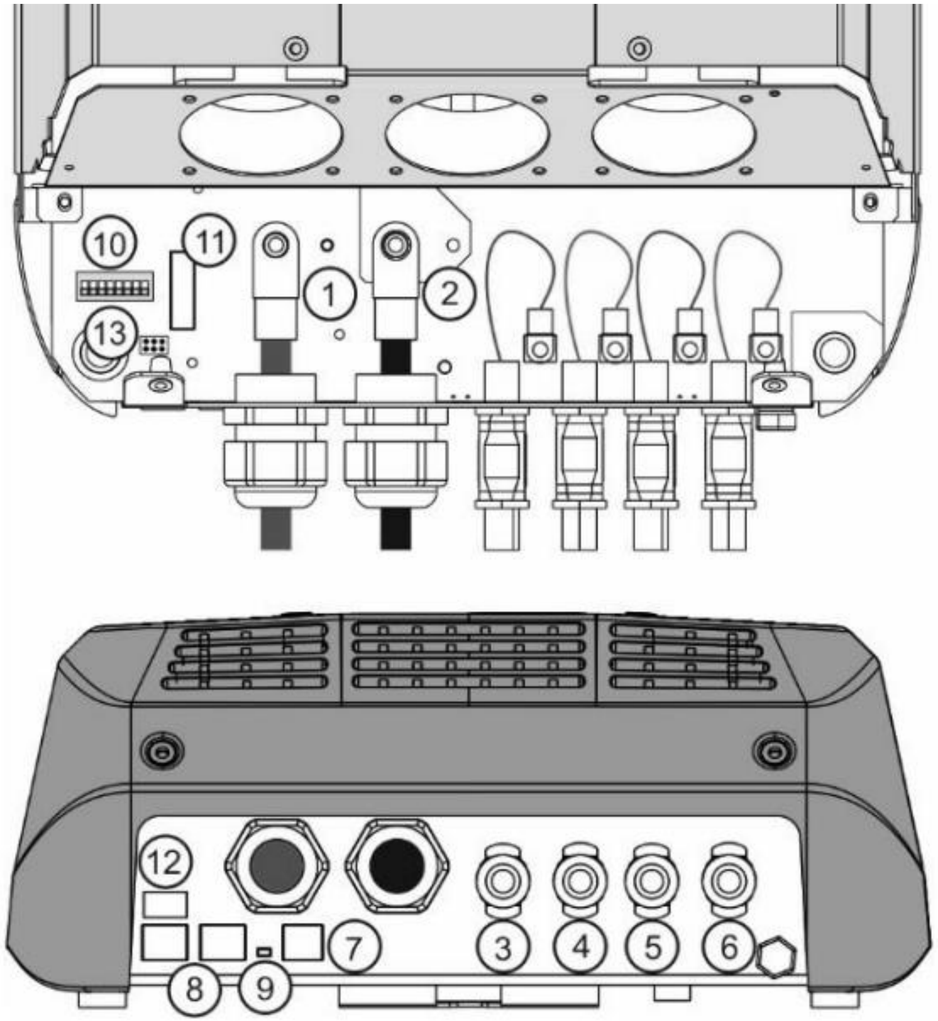
Variostring MPPT HV

Variostring	Number of PV Inputs	Battery Voltage	Max. PV Power recommended	Min. PV Input Voltage	Max. PV Input Voltage (Voc)	Charge Current
VS-70	1x	48 V	4200 Wp	100 Vdc	**600 Vdc**	70 A
VS-120	2x Series Parallel	48 V	3500 Wp 7000 Wp 7000 Wp	100 Vdc 200 Vdc 100Vdc	**600 Vdc** **900 Vdc** **600Vdc**	60 A 120 A 120 A

VS-70 Connection Panel



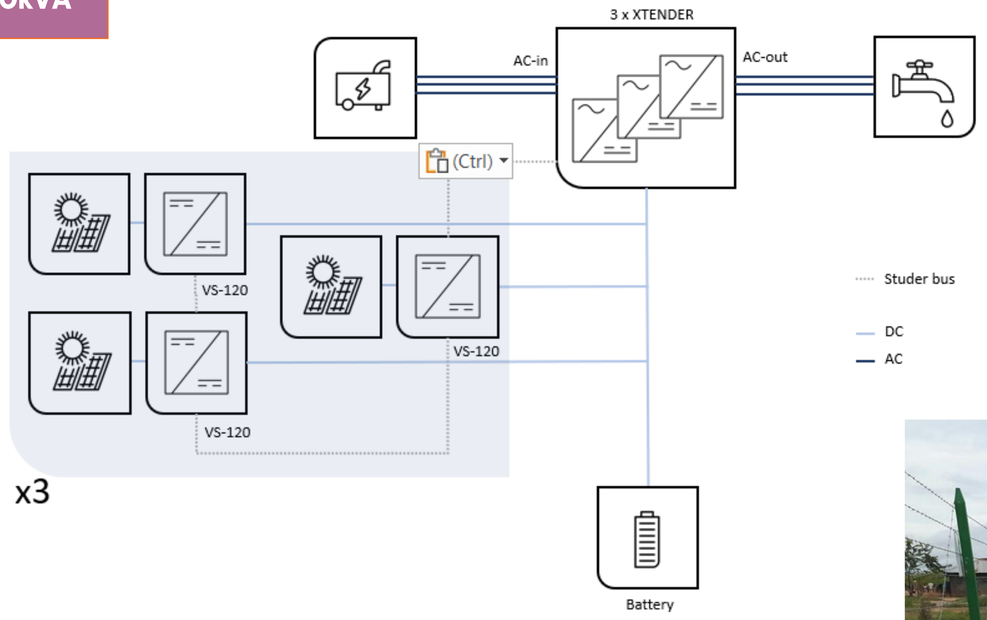
VS-120 Connection Panel



Water Distribution Hub Colombia

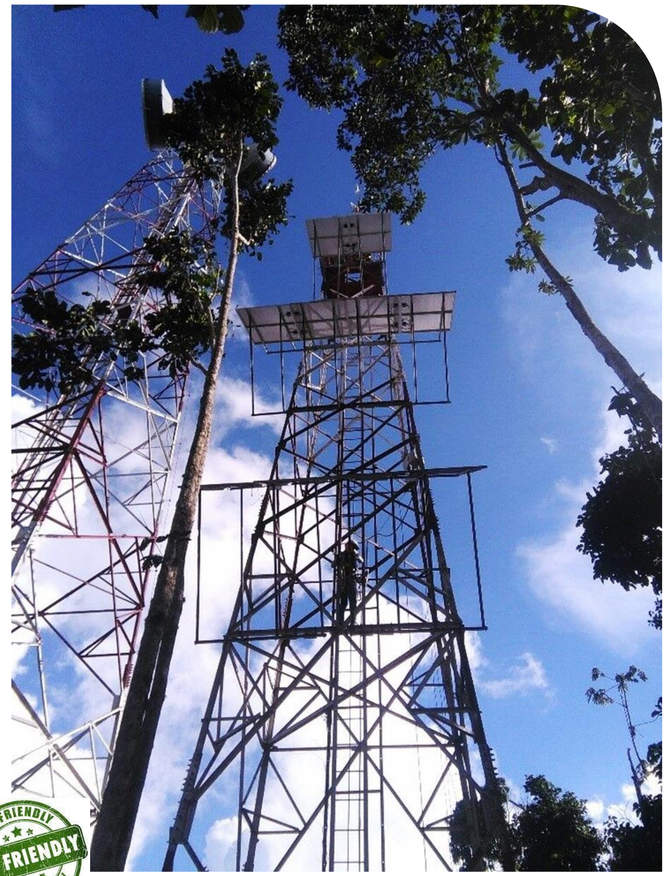
Off-grid – Industrial (Diesel Independance)

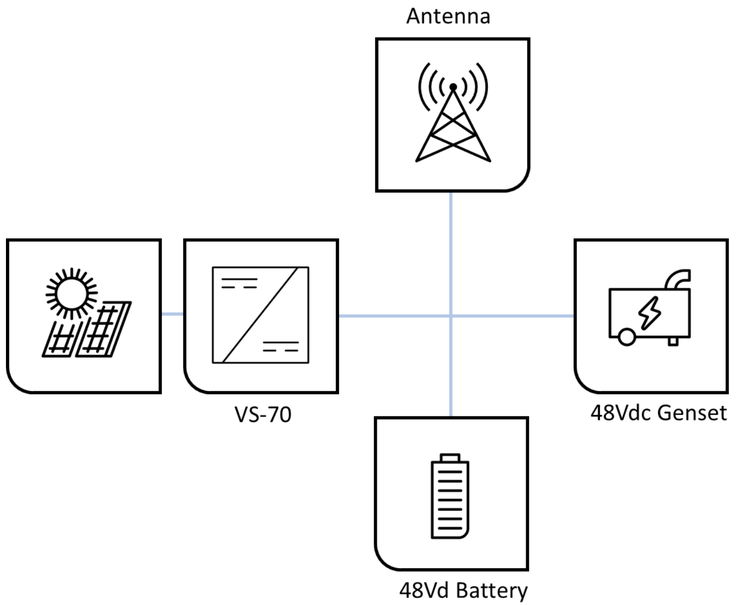
9 VS 120 | 54 kWp | 9620Ah C100 | 30kVA



Link to study case

Telecom, DC power only
Peru





1 VS-700 | **5 kWp** | **1000Ah C100** | **3kVA**

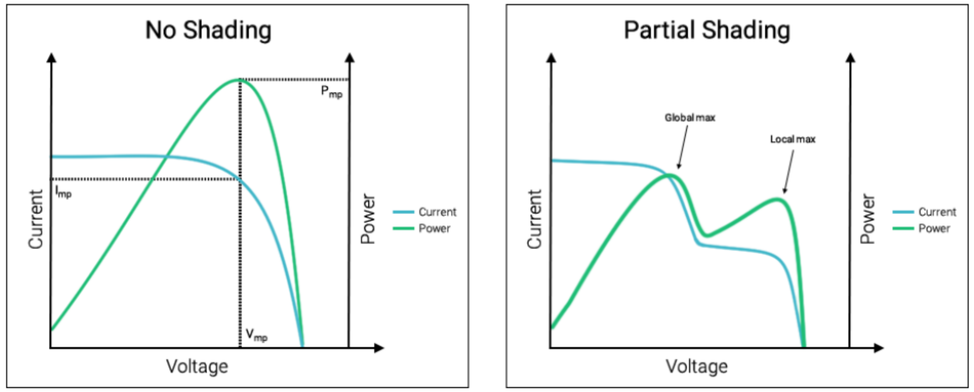
Link to study case

Studer MPPT Algorithm

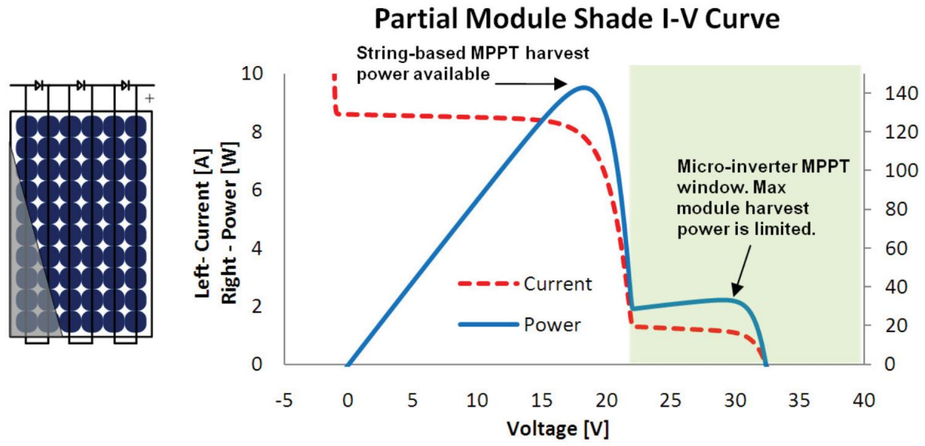
MPPT Efficiency >99,8%

Begins to produce at very low voltages - More energy

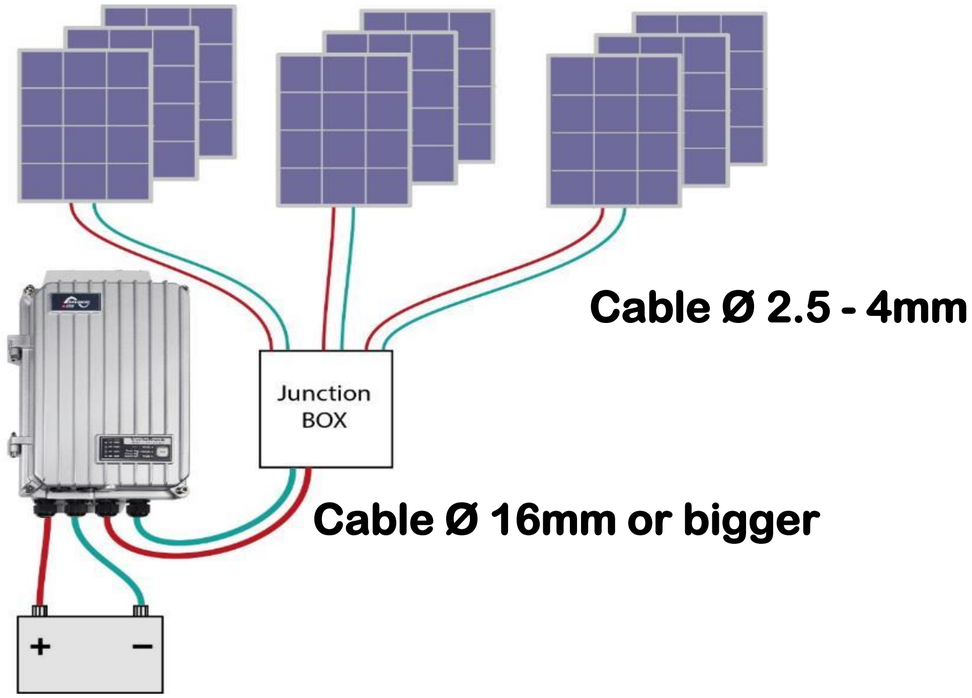
Detect partial shades and maximize power



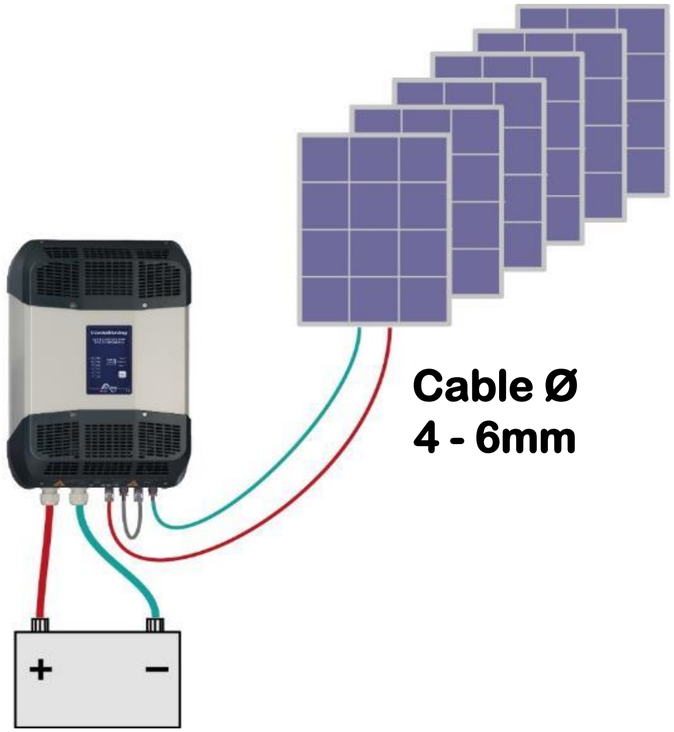
The power-voltage curve shows the point (or points) at which the power output is maximized (the MPPT). As shown at right, an array can have multiple MPPTs when it is partially shaded. Image courtesy of Aurora Solar.



Vario’s dilemme: VT-80 or VS-70?



VT-80 150Vdc 4kWp



VS-70 600Vdc 4kWp

Q&A

NEXT SESSION

New events soon

Check and register here: events.studer-innotec.com


Thanks for the attention