



MPPT solar charge controller

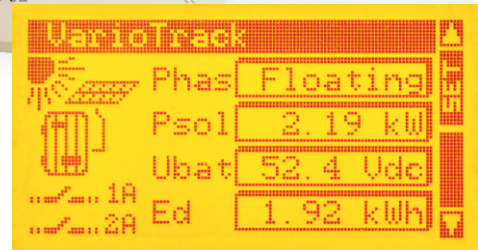
VarioTrack

Maximize the energy generated from solar panels by adding a **VarioTrack** solar charge controller with maximum power point tracker (MPPT) to any solar installation.

VT-80
VT-65

The solar charge controller, **VarioTrack**, contains the MPPT algorithm that continuously tracks the maximum power point and automatically charges the batteries in an optimal way with all the available solar power.

**65 or 80A / Battery voltage: 12-24-48V
up to 150V input PV voltage range**



Product features

- Easy and safe commissioning with full protection against incorrect wiring
- Rugged and durable, this device is designed to perform in harsh environmental conditions (IP54)
- High conversion efficiency, >99%
- Up to 15 **VarioTrack** in parallel
- 6 step charger for longer battery life
- Low self-consumption : <1W in night time mode
- Display with 7 LEDs showing status and current
- Comprehensive display, programming and datalogging with RCC-02/-03
- Optimal usage in an **Xtender** system with a synchronized battery management



VarioTrack

VT-80

VT-65

Electrical characteristics PV array side	VT-65			VT-80		
	12 V	24 V	48 V	12 V	24 V	48 V
At nominal battery voltage	12 V	24 V	48 V	12 V	24 V	48 V
Maximum Solar power recommended (@STC)	1000 W	2000 W	4000 W	1250 W	2500 W	5000 W
Maximum Solar Open Circuit Voltage	80 Vdc	150 Vdc	80 Vdc	80 Vdc	150 Vdc	150 Vdc
Maximum Solar functional circuit voltage	75 Vdc	145 Vdc	75 Vdc	75 Vdc	145 Vdc	145 Vdc
Minimum Solar functional circuit voltage	above battery voltage					
Electrical characteristics Battery side						
Maximum Output Current	65 A			80 A		
Nominal Battery Voltages	automatic / manual set to 12, 24 or 48 Vdc					
Operating voltage range	above battery voltage, minimum 7 V					
Performances of the device						
Power Conversion Efficiency (in a 48 V typical-system)	>99 %					
Maximum Stand-By Self-consumption (48 V)	25 mA > 1.2 W					
Maximum Stand-By Self-consumption (24 V)	30 mA > 0.8 W					
Maximum Stand-By Self-consumption (12 V)	35 mA > 0.5 W					
Charging stages	6 stages : Bulk, Absorption, Floating, Equalization, reduced floating, periodic absorption					
Battery temperature compensation (available with accessory BTS-01)	-3 mV /°C /cell (25°C ref) default value adjustable -8 to 0 mV /°C					
Electronic protections						
PV reverse polarity	up to -150 Vdc					
Battery reverse polarity	up to -150 Vdc					
Battery overvoltage	up to 150 Vdc					
Over temperature	protected					
Reverse current at night	prevented by relays					
Environment						
Operating Ambient Temperature Range	-20 to 55°C					
Humidity	100 %					
Ingress Protection of enclosures	IP54, IEC/EN 60529:2001					
Mounting location	indoor					
General data						
Warranty	5 years					
Weight	5.2 kg			5.5 kg		
Dimensions h/w/l [mm]	120 / 220 / 310			120 / 220 / 350		
Parallel operation (separated PV arrays)	up to 15 devices					
Max wire size	35 mm ²					
Glands	M 20 x 1,5					
Communication						
Network Cabling	STUDER communication BUS					
Remote Display and Controller	RCC-02/-03 / Xcom-232i					
Menu languages	English / French / German / Spanish					
Data Logging	With RCC-02/03 on SD card · One point every minute					
Accordance to standards						
CE compliant	EMC 2004/108/CE · LV 2006/95/CE · RoHS 2002/95/CE					
Safety	IEC/EN 62109-1:2010					
EMC (Electro Magnetic Compatibility)	IEC/EN 61000-6-3:2011 · IEC/EN 61000-6-1:2005					

Accessories (optional):



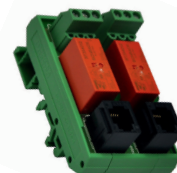
RCC -02
Remote control and programming center (Wall mounted)



RCC -03
Remote control and programming center (Panel mounted)



BTS -01
Battery temperature sensor



ARM-02
Auxiliary relay module