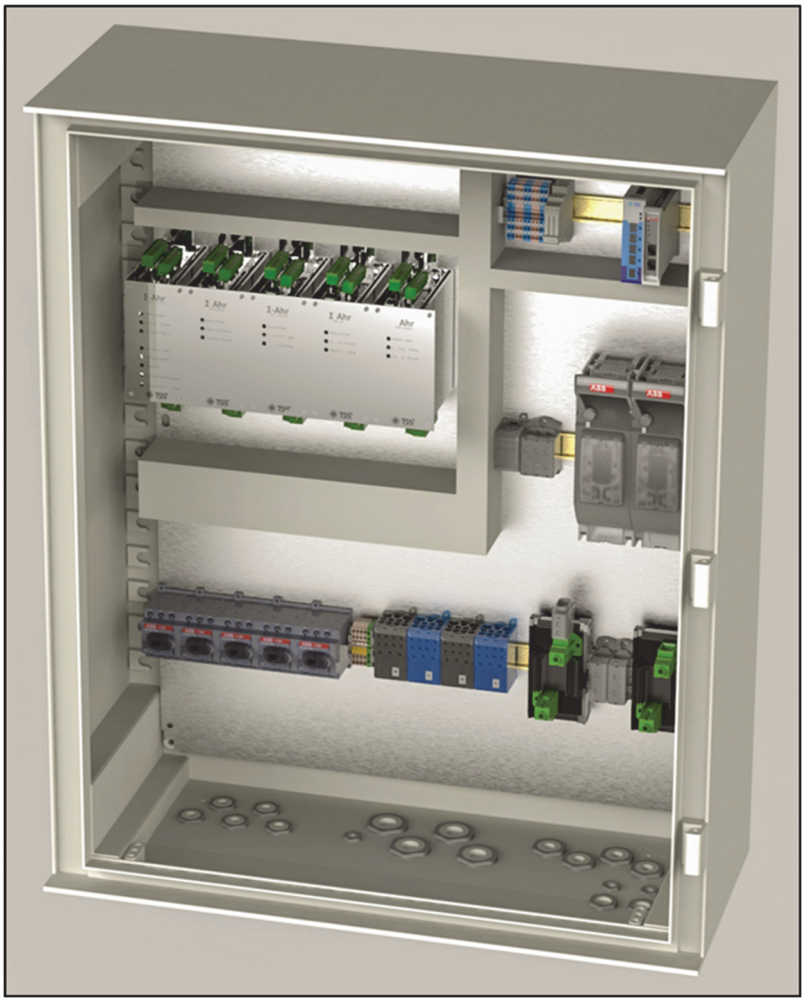
infinitum
HYBRID OFF-GRID SOLAR POWER

TSS
SOLID SOLAR SOLUTIONS

infinitum S2/S5 Control Box

With 35+ year experience in the design and supply of off-grid Solar Energy Systems TSS has developed a sustainable modular, upgradable solar hybrid control box. The perfect solution combining solar energy with the ability to control multiple energy sources. Always maximum uptime, high reduction and a solar only solution eliminating the CO_2 footprint. Ultimate reliability for powering a multitude of appliances for Oil & Gas, Telecom, Water treatment, etc.



Multi battery and solar module

Suitable for Lead Acid, Li-Ion or NiCad batteries and various type of solar modules. With optimized battery charging regime for any battery type.

Small and large systems

Modular design allowing future expansion. Marrying the correct capacity to your requirement at any time.

Combining old and new systems

Modular sub-system approach allows combining old and new systems. No matter the age of existing systems without compromising on reliability.

Ultimate reliability

Eliminating single point of failure with multi solar input, multiple energy sources and independent sub-systems.

Remote Monitoring

Via Modbus TCP/IP, SNMP or any other interface. Or our cloud-based platform ensuring real-time and historic data for your preventive maintenance program.

TSS-DS-049-R01

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infinitum S2/S5 Control Box

Electrical characteristics	Infinitum S2 Control Box	Infinitum S5 Control Box
Nominal system voltage	48 Vdc	48 Vdc
Quantity MPPT Charge Controller	1 - 2	3 - 5
Independent solar array inputs	2 - 4	6 - 10
Max. array input current each	12 Adc	12 Adc
Array input voltage	120-350 Vdc	120-350 Vdc
Max. array input power	4x 1800 Wp (total 7.2 kWp)	10x 1800 Wp (total 18 kWp)
Operating efficiency solar input	97 %	97 %
Nominal output current to load	140 A (*)	200 A
Maximum output current to load	240 A (1 minute) (*)	360 A (1 minute)
Peak output current to load	360 A (10 seconds) (*)	540 A (10 seconds)
Additional components		
Max. output fuse	160 A (NH00)	200 A (NH1)
Max. generator fuse	N.A.	250 A (NH1)
Battery fuse switch (for inside battery box)	Max. 250 A (NH1)	Max. 500 A (NH3)
Voltage/temperature sensor	✓	✓
Voltage free contact alarm (NO/NC)	3	3
Output diode + shunt 200 A	Optional	Optional
Rectifier diode + shunt 200 A	Optional	Optional
Cloud based platform	Optional	Optional
Modbus TCP/IP to SNMP converter	Optional	Optional
Cable entry		
Solar module cable	2x M25 (4x 4 mm^2)	5x M25 (4x 4 mm^2)
Voltage/temperature sensor	1x M16	1x M16
Battery cable	2x M40 (35-150 mm^2)	4x M40 (35-120 mm^2)
Generator cable	2x M32 (35-70 mm^2)	2x M32 (35-70 mm^2)
Output cable	2x M32 (1.5-70 mm^2)	2x M32 (1.5-70 mm^2)
Blind plug	2x M16, 2x M25	2x M16, 2x M25
General specifications		
Operating temperature	-20°C to +60°C	-20°C to +60°C
Storage temperature	-30°C to +85°C	-30°C to +85°C
Enclosure material	GRP	GRP
Dimensions (H x W x D)	747 x 536 x 300 mm	1056 x 852 x 350 mm
Unit weight	25 kg	50 kg
Mounting	Indoor and outdoor	
IP degree	IP66	
Approvals	CE	
Standards	IEC 61000-6-2, IEC 61000-6-4, IEC 60950-1	

(*) with two Σ-Ahr MPPT Controllers, output current with one Σ-Ahr MPPT controller: 90 A nom. / 120A max. / 180A peak

a sustainable versatile modular power energy system