

# renewable energy solutions



Solar2PS  
500/630/750



w2ps

# renewable

## SOLAR2PS 500 / 630 / 750 kW Three Phase Solar PV Inverter

a new era connecting solar energy



### GENERAL INFORMATION

- Dynamic reactive power control
- Voltage Dip ride-through capability meets stringent requirements of Grid Operators
- Higher performance and efficiency, compared to other systems with low-power inverters in parallel, and due to absence of low-voltage transformer
- Ultra-compact: Fits in standard precast concrete buildings

### AC SIDE

- Three pole automatic switch with manual disconnection
- AC integrated protections: Adjustable over- and under-voltage and -frequency, AC overvoltage discharger
- Ultra-fast fuses per phase
- Low total harmonic distortion (THD): <3%

### INTERFACE

- LCD display
- Internal data logger
- Standard communication protocols for seamless connection with monitoring and supervisory systems such as COM2PS

### DC SIDE

- Multiple input strings independently controlled
- Each input can be disconnected independently
- Insulation protection by string
- Inverse polarity protection
- Short circuit protection
- Independent monitoring by input string
- Uninterrupted supply in case of fault in a string. The faulty string becomes isolated
- DC integrated protections: DC overvoltage discharger, insulation watchdog, ultra-fast fuses on each DC input
- DC isolation switches that can be manually disconnected under load
- Island-effect watchdog

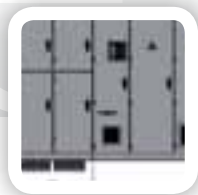


### EXTRA FEATURES

- Power limitation (P LIM)
- VAR support
- Low Voltage Ride Through (LVRT)
- Frequency-dependent control of active power
- Reduced depth dimension which permits two inverters facing each other in the same concrete building
- Com2PS PV: data acquisition, control and monitoring system for PV plants: inverters, string boxes, protection devices, meteorological stations...
- SolarCube: Integral solution for PV power plants: Medium Voltage Transformer, Switchgears, Concrete or steel building...



# eenergy



## SOLAR2PS a new era connecting solar energy

500 / 630 / 750 kW Three Phase Solar PV Inverter

### Input data

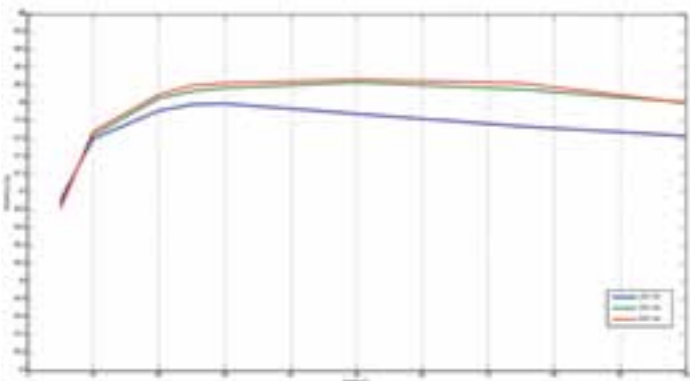
	SOLAR2PS 500	SOLAR2PS 630	SOLAR2PS 750
Nominal power in (Pin)	550 kW	675 kW	780 kW
MPP voltage range	450 - 1.000 V	520 - 1.000 V	600 - 1.000 V
Max. DC voltage	1.000 V	1.000 V	1.000 V
Max. DC current	1280 A	1280 A	1280 A

### Output data

	SOLAR2PS 500	SOLAR2PS 630	SOLAR2PS 750
Nominal power out (Pout)	500 kW	630 kW	750 kW
Max. power AC	525 kWp	650 kWp	770 kWp
Nominal AC voltage ± 10%	275 V (TL (1))	340 V (TL (1))	400 V (TL (1))
Nominal AC current	1.100 ARMS		
AC grid frequency	50 Hz / 60 Hz		
Reactive power	Yes, adjustable (s. details below)		
Max. THD	< 3% (2)		

### Efficiency

	SOLAR2PS 500	SOLAR2PS 630	SOLAR2PS 750
Max. efficiency		98.3 %	
Euro-eta	97.8 %	98.1 %	98.2 %
CEC		98 %	



### Features

	SOLAR2PS 500	SOLAR2PS 630	SOLAR2PS 750
Control	Via touchscreen		
Ground fault DC monitoring		YES	
Heating		YES	
Emergency stop		YES	
Circuit breaker AC side	Switch-disconnect with motor		
Circuit breaker DC side	DC manual breaker (Off load)		
Monitored overvoltage protectors AC / DC		YES	
Monitored overvoltage prot. for auxiliary supply		YES	
SOLAR2PS 500 interfaces			
Communication		Modbus RTU	
SOLAR2PS 500 Monitor connection		Ethernet	
Electrical External Trip		3	
Digital Inputs to be programmed		24	

### Certificates / listings

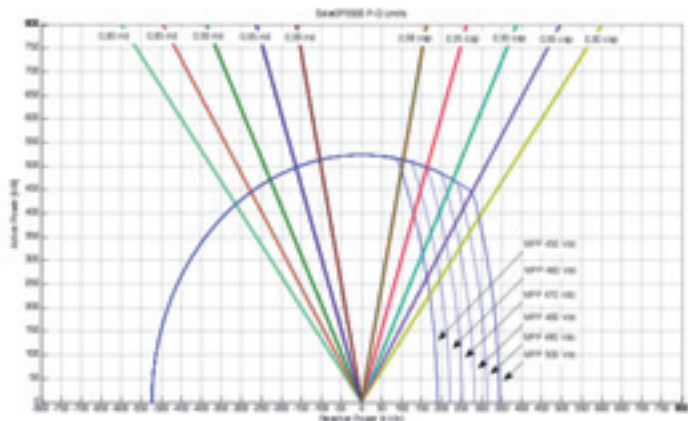
- EMC: EN 61000-6-2 / EN 61000-6-4
- CE conformity
- RD 1663 / 2000 (Spain)
- ENEL list (Italy)
- VDE 0126-1-1 (Germany)
- IEEE 1547
- UL 1741 (U.S.A.)
- CSA 22.2.107.1 (Canada)
- BDEW Technical Guideline (Germany)
- EN 50160
- PO.12.2 + P.O.12.3. (Spain)
- TERNA - Allegato A.17 (Italy)
- Decret Arrête du 23 avril 2008 (France)



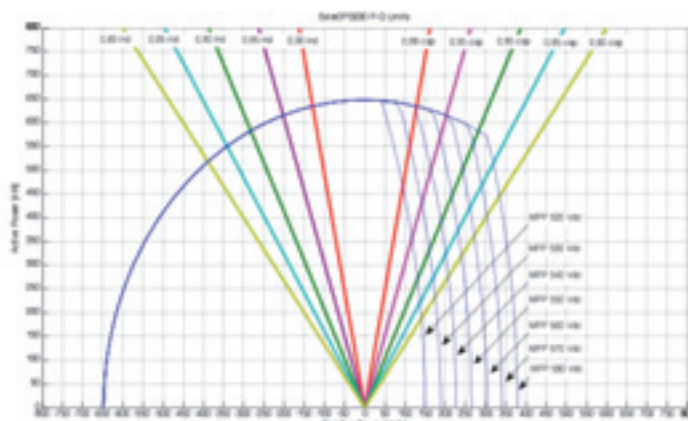
# e n e r g y

## REACTIVE POWER

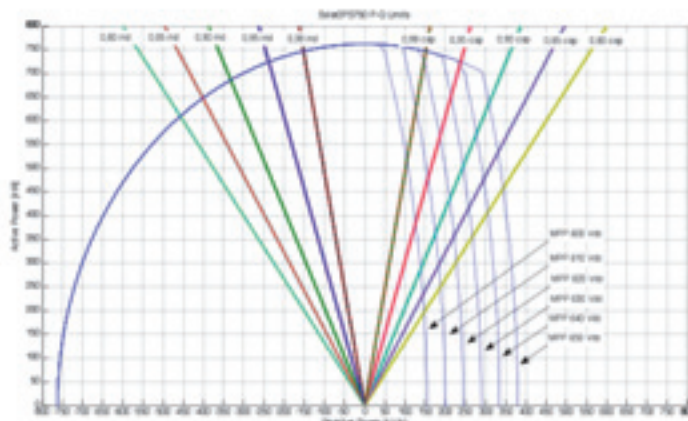
### Solar2PS 500 P-Q / MPP Limits



### Solar2PS 630 P-Q / MPP Limits



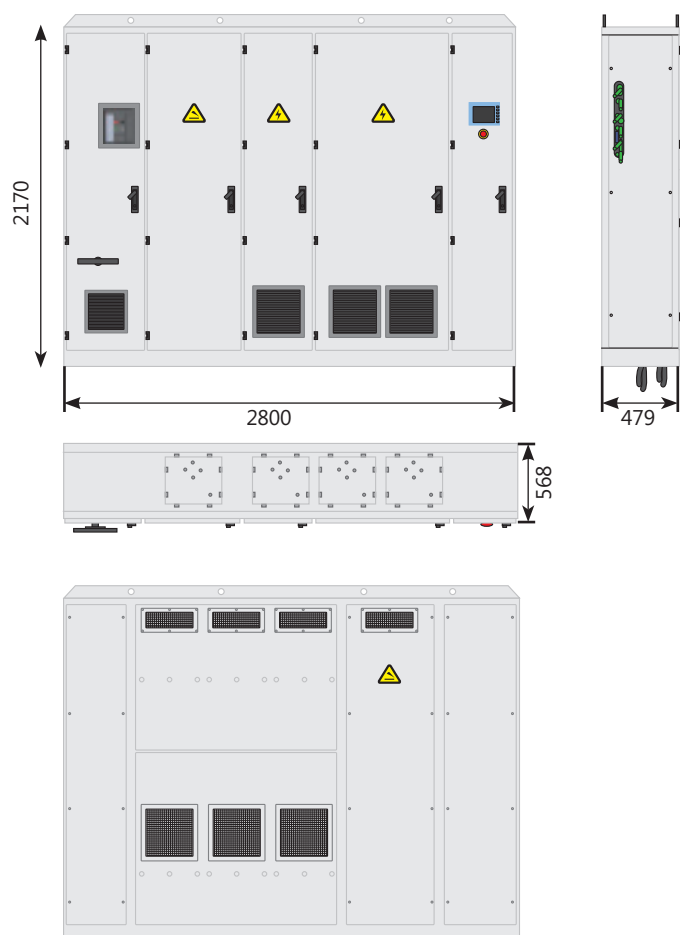
### Solar2PS 750 P-Q / MPP Limits



## Dimensions and weight

SOLAR2PS 500 SOLAR2PS 630 SOLAR2PS 750

Height	2160 mm
Width	2800 mm
Depth	500 mm
Weight	1660 kg



## Power consumption

SOLAR2PS 500 SOLAR2PS 630 SOLAR2PS 750

Own consumption in operation (Pday)	< 2.500 W
Standby operating consumption (Pnight)	< 100 W
External auxiliary voltage / grid structure	230 V 50/60 Hz <sup>(3)</sup>

- (1) TL = Transformer less. Other voltages upon request
- (2) For Pout > 25% of the rated power
- (3) Other supplies voltage upon request. The inverter can auto-supply upon request



# SOLUTIONS

## SUBCOMBINER AC/DC extension module a new era connecting solar energy

### DC EXTENSION SOLAR2PS

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Extension allows for protection of each string line with fuses. The main objective is to protect the cabling between the solar farm and the inverter against any power leakage between cables of different sections.

This cabinet, with dimensions 1250x1070x500 mm, is adapted to the Solar2PS 500/630/750 inverter.

This module is prepared for:

- Up to 16 strings or string groupings inputs (N, to be specified)
- N x fuse base 1.000 V, up to 160 A
- N x fuses, up to 160 A (to be specified, based on input circuit currents)
- N x isolators for the connection of two wires; allows connecting two string boxes to one single input
- Includes Copper bus bar for an easy and secure connection, with polycarbonate cover for protection
- Control of fuses using Solar2PS PLC (optional)

### AC EXTENSION SOLAR2PS

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Enhances the capabilities of Solar2PS. Current and voltage measurement directly or by means of transformers for the protection of grid connection, grid analyzers and/or measuring at inverter output.

This cabinet, with dimensions 850x1070x500 mm, is adapted to the Solar2PS 500/630/750 inverter.

This module is prepared with Copper bus bar and isolators for easy installation of:

- Current transformers (transforming relationship, precision class, charge to be specified)
- Direct voltage intake, or protected with fuses or voltage transformers
- Direct mount of analyzers, grid connection protections, measurement gear, or external use via test block
- Additional optional add-ons (such as external supply for trackers) can also be considered.

### ADVANTAGES OF SUBCOMBINER AC/DC

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- easy installation
- non wiring problems between cabinet and "hot spots"
- reduced depth: only 500 mm; this feature of the solar2ps inverter allows
- "plug & play" connection using a flexible strip in DC circuit breaker of inverter; a side window between inverter and module is also enabled



### Dimensions and weight

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### SUBCOMBINER AC/DC extension module

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- Height: 2100 mm
- Depth: 500 mm
- Width: 1070 mm
- Weight: 300 kg



# SOLUTIONS

## HEADQUARTERS

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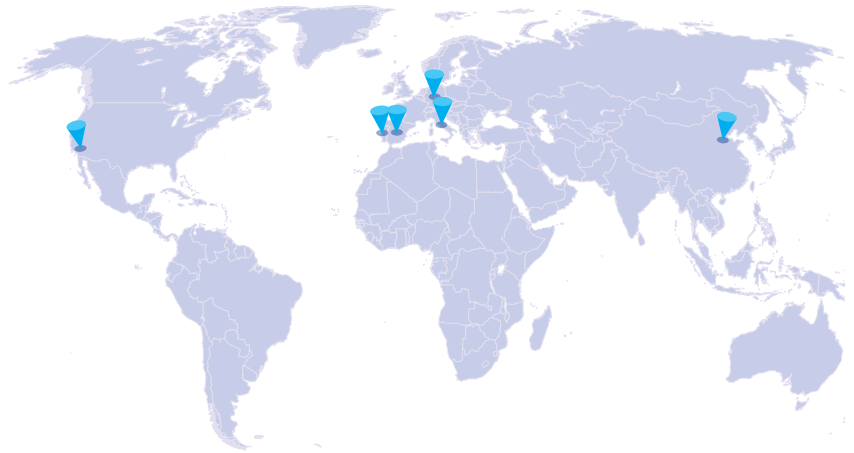
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