

PROTECT - PV

Grid connected solar Inverters
from 30 kVA up to 250 kVA



Robustness and reliability, complies with EC and PV specifics standards.

The PROTECT PV Inverters convert the DC voltage generated in photovoltaic modules into a 3-phase output voltage, conforming to network specifications. An integrated transformer between the Inverter and the network provides galvanic isolation to the grid.

PROTECT PV includes MPPT (Maximum Power Point tracking) solar power control, in association with the DSP control system of the DC/AC conversion with a highly efficient IGBT solution, and thus, provides the maximum possible energy from the solar array to the network.

PROTECT PV can produce reactive power (visible on the LCD display) with a 0.98 power factor when

operating under nominal voltage and loads above 15 % of the maximum power rating.

With an optimized harmonic and power, the PROTECT - PV can operate in parallel with several units on the AC bus.

The internal protection, coupled with the active anti islanding system, which disconnects the inverter in case of failure of the grid supply, gives high safety level operation.



>> PROTECT - PV

Specification:

- Three phase models
- Wide operating input voltage range: 250 Vdc - 750 Vdc
- MPPT input power control to maximise the solar power
- Allows Parallel operation on AC bus
- Efficiency > 95 % (with transformer from 15 % to 100 % of output power)
- Overload capability: 120 % during 10 min
- Islanding system according to DIN 0126-1-1 specification
- LCD display to supervise the instantaneous data of the PROTECT-PV
- User friendly interface - signalling via LEDs and LCD display
- Regulated fan cooling
- Input Lightning protection
- CE marked, EMC directives (EN50178 – EN61000-6-2 et 6-3, WEE, ROHS), IEC (62093,62109)

Options:

- Capability to inject reactive power
- Complete energy management of the power plant with NRC50 control unit
- Grid analysing (harmonics up to N°50, waveform, ...)
- Tropical Protected PCB assemblies.

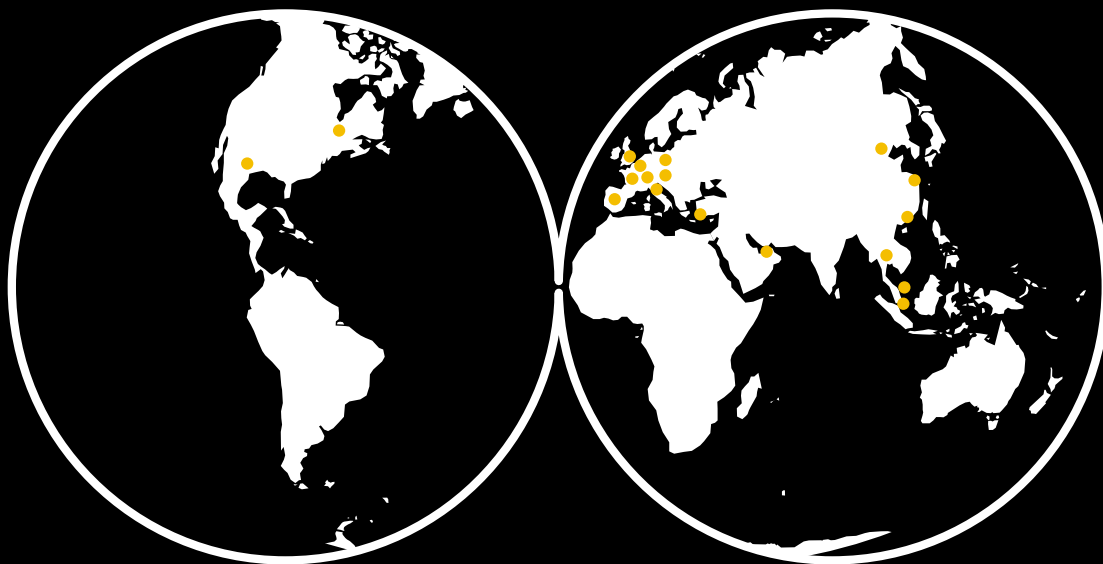


SPECIFICATION

Grid connected solar Inverters from 30 kVA up to 250 kVA

PROTECT – PV models	PV30	PV100	PV250
Nominal power	30 kVA	100 kVA	250 kVA
INPUT			
Nominal voltage with MPPT	250 – 750 Vdc		
Max voltage	+ 900 Vdc		
Maximum power of the solar array	33 KWc	110 KWc	275 KWc
Maximum input current	126 A	420 A	1050 A
OUTPUT			
3 phase voltage output	400 Vac ± 10 %, network synchronised		
Nominal output current	80 A	265 A	660 A
Maximum output current	96 A	318 A	792 A
Maximum output power	32 kVA	105 kVA	262 kVA

PROTECT – PV models	PV30	PV100	PV250
Frequency	50 Hz \pm 4 %, network synchronised		
Output power factor	0.98 with nominal voltage		
Efficiency with 100 % of power	95 % (with transformer)		
Efficiency with 50 % of power	95 % (with transformer)		
Distortion factor of the output current	< 3 %		
Reactive power	Option		
PROTECTIONS			
Inputs	Overvoltage, polarity protection, EMC filter		
Output	Overvoltage and EMC filter		
Excessive temperature	Shutdown with automatic re start		
Protection in case of grid failure (islanding system)	Electronic disconnection < 20 ms Contactor in AC output		
Galvanic AC isolation	With transformer before EMC filter		
VISUAL SIGNALLING AND DISPLAY			
On/off and reset of the system	LED		
Alarms in case of operating failure	LED		
Display screen	320 x 240 pixels LCD panel, 128 x 128 mm		
MEASUREMENTS DISPLAY ON LCD PANEL			
	Output voltage, current and frequency Input voltage and current Active and reactive power (option) Output voltage: wave form (option)		
SUPERVISION AND COMMUNICATION			
Local LCD display	Output power, input and output currents, input and output voltages		
Communication exit	RS232 or RS485 interface		
Complete energy management solution (option)	19" NRC 50 control unit		
STANDARDS			
Marked	CE		
EC labels	EN 61000-6-2 et EN 61000-6-3		
Islanding system	According to DIN VDE 0126 -1-1		
European regulations	Comply with European countries regulations		
DIMENSIONS			
l x p x h (mm)	800 x 900 x 1800	1200 x 900 x 2100	2000 x 900 x 2100
Weight, kg (with transformer)	400	900	1950
Ingress protection	IP21 (Option: IP23)		
ENVIRONMENTAL			
Operating temperature	- 10 °C up to 50 °C		
Humidity	0 - 80 % non condensing		



Power Systems

Whenever wherever watterver

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