

# solar*r*

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P&D - Programa de Pesquisa  
e Desenvolvimento

**enel**

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## DC INPUT — SOLAR PLATE

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Maximum PV input voltage	800V
Starting voltage	480V
MPPT voltage range	465-570V
MPPT number	1
Min. nº of PV/string per MPPT	19
Máx nº of PV/string per MPPT	19
Max PV current input	215 A
Max input current for connector	30 A

## DC INPUT — BATTERY BANK

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Maximum BAT input voltage	460 V
Starting voltage	422 V
DC/DC Converter MPPT Voltage Range	336-460V
MPPT number	1
Number of Batteries	32
Autonomy	At the customer's discretion

## SOLAR FUNCTION

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Supply of energy to consumers interactive with the electricity network with interruption of maximum	8ms
Solid State Relay (Static Switch)	Yes
Static Switch Power	50KW   30KW   20KW
Automatic and manual operation	Yes, manual operation via HMI

## SAC OUTPUT — NETWORK

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Rated AC Output Power	50KW   30KW   20KW
Maximum AC output power (fp=1)	55KW   33KW   22KW
Maximum AC output apparent power	55KW   33KW   22KW
AC output voltage	220/127Vac
Output pattern	F+F+F+N
Maximum AC output current	130 A   79 A   52 A
Nominal network frequency	60 Hz (59,5 to 60,5 Hz)
THD	+/- 5%*1
Power factor	> 0.98 at rated power

## AC OUTPUT — SPECIFIC CONSUMERS

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Energy supply to consumers interactive with the electricity network with interruption of maximum	8ms
Rated AC Output Power	50KW   30KW   20KW
Maximum AC output power (fp=1)	55KW   33KW   22KW
Maximum AC output apparent power	55KW   33KW   22KW
AC output voltage	220/127Vac
Output pattern	F+F+F+N
Maximum AC output current	130 A   79 A   52 A
Nominal network frequency	60 Hz (59,5 to 60,5 Hz)



THD	+/-5%* <sup>1</sup>
Power factor	>0.98 at rated power

## FUNCTIONS, PROTECTIONS AND DATA

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Under and over voltage protection	Yes* <sup>2</sup>
Under and over frequency protection	Yes* <sup>2</sup>
Timing relay	Yes* <sup>3</sup>
Anti-islanding	Yes* <sup>4</sup>
DC reverse connection protection	Yes
AC short circuit protection	Yes
DC fuse	Yes
Degree of Protection	IP54
Operating temperature range	5 to 60°C (>45°C pot degradation)
Refrigeration system	Forced
Operating altitude	3000m
HMI	7" touch sensitive
Communication	RS485
DC connection type	Termin
AC connection type	Terminal
Maximum efficiency	98%
Galvanic isolation	No

## MECHANICS

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Dimensions	1500x100x800x600 mm
Weight	200 kg

## OPTIONS – to be installed outside the hybrid inverter cabinet

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Inverter for double conversion UPS 127Vc or 220Vac  
 Frequency inverter for electric motors  
 Converter for DC consumers  
 Battery charger for electric vehicles  
 Range extender  
 MGCCT – Tracel Direct Current Generator Motor  
 GEEHT – Tracel Hydrogen Electricity Generator

## Notes

\*<sup>1</sup> The inverter has current harmonic distortion of less than 5% in relation to the fundamental current at rated power. Each individual harmonic is limited according to Table 1 of the item

4.6 Harmonics and waveform distortion from ABNT ABNT NBR 16149

\*<sup>2</sup> The inverter control has an electronic system that detects under and over voltage and under and over frequency anomalies acting on the interruption elements, solid state relay (static switch) and electromechanical contactor, according to the reference values in item 5.2 Variations of voltage and frequency of ABNT NBR 16149

\*<sup>3</sup> The inverter control has an electronic system that synchronizes with the electrical network.

\*<sup>4</sup> The electromechanical contactor and solid state relay elements (static switch) guarantee physical disconnection between the distribution network and the electrical installations internal to the consumer unit in accordance with ABNT NBR IEC 62116.