

# HYUNDAI Solar Inverters

## Clean, Renewable, Reliable Solar Energy

Power Conversion System (Inverter) converts DC power produced by solar arrays into AC power.

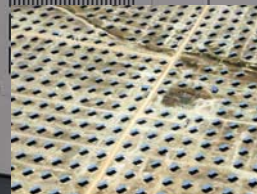
The Solar Inverters consist of three parts: DC/DC Converter, Inverter, and Controller.

Grid-Tie Solar Inverters have been developed using the most advanced technology and design techniques.



### Features →

- Compact design, lightweight, and easy to install
- Maximum efficiency with high performance MPPT control
- Increased flexibility due to a wide range of MPPT tracking
- Remote and local data monitoring
- LCD display of operating status
- Anti-islanding protection
- Issued CE and TÜV certificate, ENEL 2009 certificate, MEA & PEA(Thailand) certificate, RD1663 certificate (50kW, 100kW and 250kW class)
- Support 5 year standard warranty + 20 year extended warranty



## 5.2 External connections for HPC-100HT-E

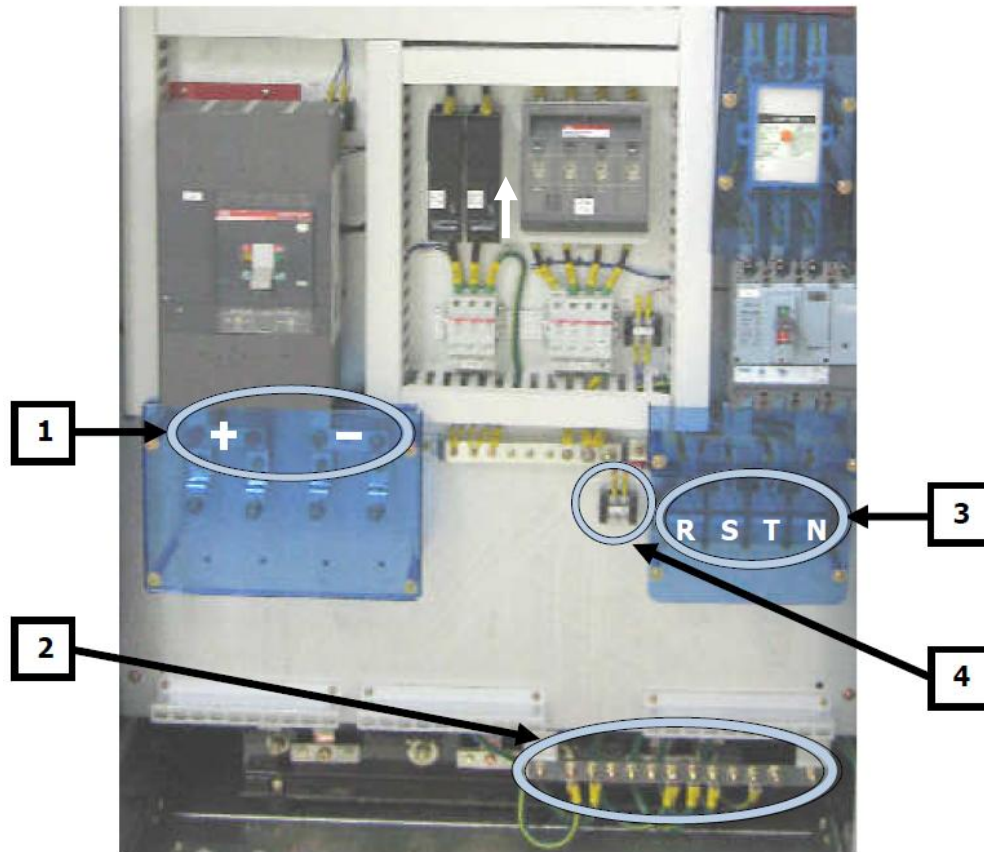


Figure 5-2 HPC-100HT-E front inside

Figure 5-2 shows the front inside part of HPC-100HT-E (100kW model). Details for wiring are as follows.

**1**: Connect DC power lines (DC power lines from string box). Connect DC(+) line to left terminal and DC(-) line to the right terminal by considering terminal holes (M10).

**2**: Refer the 5.3 Ground connection

**3**: Connect grid power lines (AC 400V, three-phase, line-to-line voltage). Terminals of R-phase, S-phase, T-phase, and Neutral are aligned orderly from left. Please connect grid power lines by considering holes size (M10) and phase order.

**4**: Connect control power lines (AC 230V, single-phase). Any phase order is allowed for the connection.

# Technical Specifications & Product Overview

## ► Transformer-less Type

Model		Specifications				
		HPC-004SL (for Japan)	HPC-100HL-E	HPC-125HL-E	HPC-250HL-E	HPC-500HL-E
System Overview	Phase	1-Phase	3-Phase	3-Phase	3-Phase	3-Phase
	Output Operating Method	Grid-Tied Inverter	Grid-Tied Inverter	Grid-Tied Inverter	Grid-Tied Inverter	Grid-Tied Inverter
	Design Concept	Transformerless				
Input Data	Max. Input Voltage	390Vdc	880Vdc	880Vdc	900Vdc	900Vdc
	Nominal Voltage	250Vdc	635Vdc	635Vdc	650Vdc	650Vdc
	MPPT Voltage Range	100~380Vdc	450~820Vdc	450~820Vdc	450~820Vdc	450~820Vdc
	Max. Input Current	25Adc	234Adc	292Adc	625Adc	1,140Adc
Output Data	Nominal AC Power	4kW	100kW	125kW	250kW	500kW
	Nominal AC Voltage	202V, +10%/-12%	290V, +10%/-12%		275V, +10%/-12%	275V, +10%/-12%
	Nominal AC Current	19.8A	199A	249A	540A	1,050A
	Nominal AC Frequency	50Hz/60Hz				
	THD of AC Current	< 5% Total (<3% Individual) at rated power				
System Specifications	Max. Efficiency	95.0%	98.0%	98.0%	98.0%	98.0%
	European Efficiency	94.5%	97.7%	97.7%	97.6%	97.5%
	Power Factor	>0.95	>0.99	>0.99	>0.85	>0.85
	Protection Degree	IP20	IP20	IP20	IP20	IP20
	Operating Temperature	-10°C~40°C	-10°C~40°C	-10°C~40°C	-20°C~45°C	-20°C~45°C
Dimensions	Width/Depth/Height[mm]	480/120/280	1,000/800/2,095	1,000/800/2,095	1,800/750/2,150	2,600/800/2,080
	Weight	14kg	800kg	800kg	1,170kg	1,550kg
Protective Functions		DC Over-/Under-Voltage, AC Line Over-/Under-Voltage, AC Line Frequency Failure, AC Line Failure, Anti-Islanding Protection, Overheating				

※ Specifications subject to change without prior notice.

# Technical Specifications & Product Overview

## ► Low-Frequency Transformer Type

Model		Specifications				
		HPC-050HT-E	HPC-100HT-E	HPC-250HT-E	Solar Station 500kW	Solar Station 1MW
System Overview	Phase	3-Phase	3-Phase	3-Phase	3-Phase	3-Phase
	Operating Method	Grid-Tied Inverter	Grid-Tied Inverter	Grid-Tied Inverter	Grid-Tied Inverter	Grid-Tied Inverter
	Design Concept	Low-Frequency Transformer			Medium Voltage	
		[ $\Delta$ -Y]	[ $\Delta$ -Y]	[ $\Delta$ -Y]		
Input Data	Max. Input Voltage	650Vdc	650Vdc	880Vdc	900Vdc	900Vdc
	Nominal Voltage	450Vdc	450Vdc	635Vdc	650Vdc	650Vdc
	MPPT Voltage Range	300~600Vdc	300~600Vdc	450~820Vdc	450~820Vdc	450~820Vdc
	Max. Input Current	175Adc	350Adc	580Adc	2 x 626Adc	2 x 1,140Adc
Output Data	Nominal AC Power	50kW	100kW	250kW	500kW	1,000kW
	Nominal AC Voltage	400V, +10%/-12%			20kV, +10%/-12%	
	Nominal AC Current	72A	144A	361A	14.4A	28.9A
	Nominal AC Frequency	50Hz/60Hz				
	THD of AC Current	< 5% Total (<3% Individual) at rated power				
System Specifications	Max. Efficiency	95.8%	95.8%	96.9%	97.0%	97.0%
	European Efficiency	95.0%	95.0%	96.4%	96.5%	96.5%
	Power Factor	>0.99	>0.99	>0.99	>0.85	>0.85
	Protection Degree	IP20	IP20	IP20	IP54	IP54
	Operating Temperature	-10°C~40°C	-10°C~40°C	-20°C~40°C	-20°C~45°C	-20°C~45°C
Dimensions	Width/Depth/Height[mm]	800/700/1,994	1,000/800/2,095	2,200/850/2,215	5,300/3,000/3,100	5,600/3,000/3,100
	Weight	800kg	1,250kg	2,350kg	approx. 28t	approx. 32t
Protective Functions		DC Over-/Under-Voltage, AC Line Over-/Under-Voltage, AC Line Frequency Failure, AC Line Failure, Anti-Islanding Protection, Overheating				

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