

# PV Hybrid PCS ENEREX H4xxxH

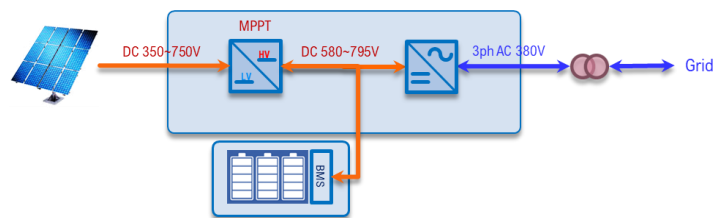
Providing Photo-voltaic generation and energy storage functions, the **ENEREX PV-hybrid PCS** can be easily installed in any place with minimum space.

**ENEREX PV-hybrid PCS** is optimized to small/medium size buildings and provides efficient and reliable distributed power system solution.

## Features

- Hybrid system including PV input and battery terminal realize single panel distributed power system solution without PV inverter.
- Low operation cost - high round trip efficiency by 90% (including battery).
- Small installation space - 3.3m<sup>2</sup>.
- Built-in Power management functions – self managing of PV generation and battery charge/discharge.
- Convenient diagnostic functions - by built-in HMI, full protective functions, status monitoring and fault/alram detection and log data.
- Minimum system downtime (<30 min.) by block system structure.
- Easy to monitor, control, data backup and maintenance by Ethernet connection.

## Best combined single panel solution of PV generation and energy storage



## Target market & applications

- Small Size Solar power plant upto 50kW
- Office building, School, Merchandizing & shopping center
- Renewable energy support, stand-alone/microgrid power system

## Product type

- PCS
- Battery\*
- Transformer
- Switch board

## All-in-one System

- 50kW (1 rack)
- 113.7kWh (1 racks) (Recommended)
- None
- Option

## Key specifications

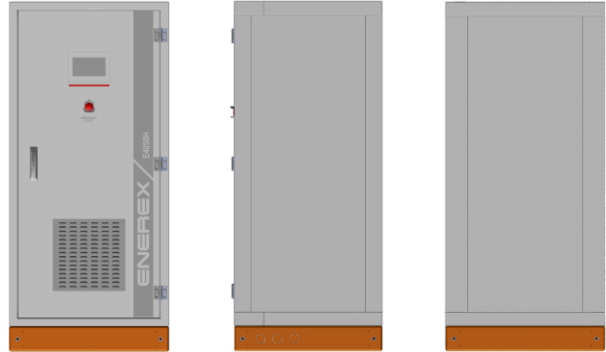
- Capacity: 50kW(PCS) – 113.7kWh(BAT)
- Output: 3-wire(Delta, 50kW), AC 380V(depends on battery), 50/60Hz
- Form factor: Single panel steel cabinet
- Ambient condition: -20 ~45°C, 95% RH or below (non-condensing)
- Cooling: Forced air-cooled (Fan installed in PEBB module)
- Acoustic noise: < 75db
- System efficiency: Round Trip > 90%
- Protection: IP21 (Indoor installation)

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- Exterior (IP21)



## Production specification

PV Hybrid PCS Specification		50kW	
Product	Model code	PCS H4050-62HN2D	
	Recommend Battery	LR800 SM18S36P-M48 (100kWh)	
Functionality	Applications	PV Hybrid PCS - PV & Battery dual source	
	Comm Protocols	Modbus TCP/IP	
AC/DC Converter (PCS)	Rated (continuous) power	50 kW/ 55kVA	
	Grid side	Voltage & Frequency	3ph AC 380V ±10%, 50/60Hz
		Rated Input Current	76 Arms
	DC Link side	Voltage range	DC 580 ~ 795V (DC 720V nom)
		Rated Output Current	86 Adc
	Short time (maximum) Power	150% for 10 sec, 125% for 1 Min (% of rated power)	
	Control mode	Constant Power (CP)	
Max. conversion efficiency	> 95% at rated AC power (one-way)		
DC/DC Converter (MPPT)	Rated (continuous) power	50 kW	
	LV/Source (Input)	Voltage range	DC 350 ~ 750V
		Maximum Input Current	87 Adc
	HV/Link (Output)	Voltage range	DC 580~ 795V (DC 720V nom)
		Maximum Output Current	90 Adc
	Short time (maximum) Power	150% for 10 sec, 125% for 1 Min (% of rated power)	
Control mode	Constant Voltage (CV), Constant Current (CC)		
Max. conversion efficiency	> 95% at rated power (one-way)		
Common Chrs	Control system philosophy	Multi-layer control structure (HMI - SMU - IMC)	
	Response time for load step changes	20ms	
	Man-machine interface	7" Full color display panel with touch screen	
	Remote control interface	Modbus/TCP	
	Protective Functions	Over/Under Voltage, Over/Under Frequency, Over Current, Over Temperature, Ground Fault, Fire alarm(Ext. battery)	
	Fault-Ride Thru	HVRT, LVRT, FRT(Freq.-Ride Thru) - Under development	
	Fault current contribution	200%	
Mechanic Chrs	Dimension (W xH xD) / Weight	750 x 1500 x 700 mm <sup>3</sup> , 350kg approx.	
	Max. audible noise	< 75dB with cooling system, < 60dB as fan-less operation	
Environment	Enclosure protection rating	IP21	
	Operating ambient temperatures	-20 ~ +45 deg C	
	Storage ambient temperatures	-20 ~ +70 deg C	
	Humidity	0 ~ 95% RH (Non-condensing)	
	Vibration	< 2.0 m/s <sup>2</sup>	
	Shock	Not acceptable	
	Pollution degree	PD II (Normally only nonconductive pollution occurs)	
Compatible Standards	Max. installation altitude (from sea-level)	1000 m	
	EMC	IEC/KN 61000-6-2, CISPR/KN 11	
	Safety	IEC/KN 62477-1 (2011-12)	
Performance	SPS-SGSF-025-4-1972: 2019		

Creating, Leading, Evolving a New Energy paradigm