

Hybrid Energy Storage Inverter



HERF

Advantages Of Herf Hybrid Energy Storage Inverter



No cooling fan design
longer lifespan



Compatible with lead-
acid and lithium-ion
batteries



Maintain critical load
operation without mains
power

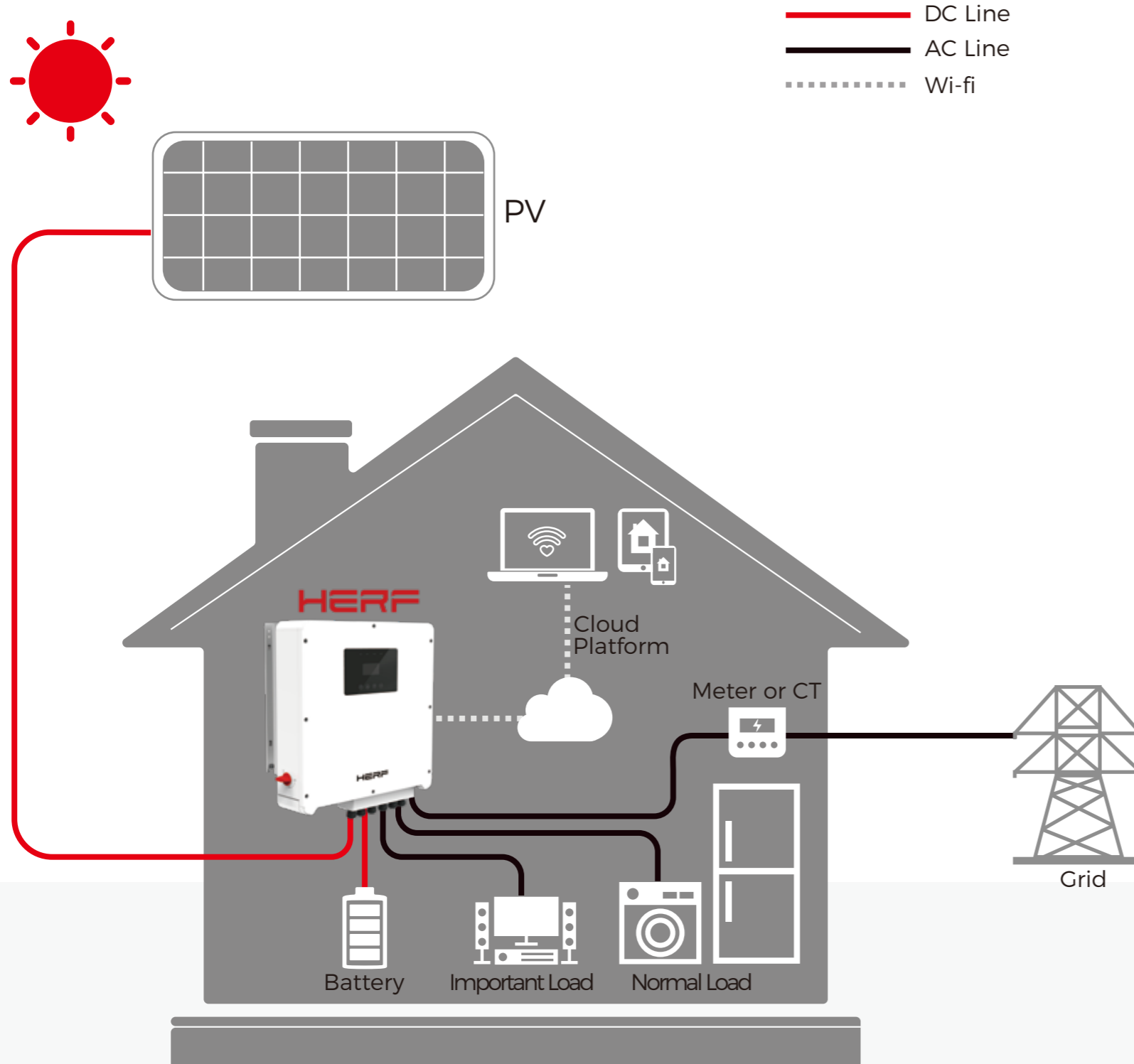


Participate in peak
shaving and valley filling
of power grid to obtain
additional economic
benefits

Herf hybrid energy storage inverter system is designed to operate perfectly with the grid to realize uninterruptible power supply for the users, and also maintain critical load operation without mains power.

Residential Solution

Herf Hybrid Energy Storage Inverter



Herf residential hybrid system solutions can quickly respond to EMS dispatching instructions, and form an intelligent and friendly power supply system with rooftop PV, making electricity safer.

- ✔ Free energy can be used at night;
- ✔ Compatible with high and low voltage batteries;
- ✔ Compatible with virtual power plant instructions;
- ✔ Compatible with grid power dispatching instructions;
- ✔ Compatible with house intelligent energy management system;
- ✔ Participate in peak shaving and valley filling of power grid to obtain additional economic benefits.

Hybrid Inverter

Single Phase



HERF-3K-L1 / HERF-3.6K-L1 / HERF-4K-L1
HERF-4.6K-L1 / HERF-5K-L1 / HERF-6K-L1

	HERF-3K-L1	HERF-3.6K-L1	HERF-4K-L1	HERF-4.6K-L1	HERF-5K-L1	HERF-6K-L1
DC Input						
Max. Input power (kW)	4.6	4.6	6	6	7	7
Start-up Voltage (V)				120		
Max. PV Voltage (V)				550		
MPPT Range/Nominal (V)				125-500/360		
Max. Input Current (A)				14/14		
MPPT Tracker/Strings				2/1		
AC Output						
Rated Power (kW)	3	3.6	4	4.6	5	6
Max. Output Current (A)	13	16	17.4	20	21.7	26
Nominal Voltage/Range (V)				230/176-270		
Frequency (Hz)				50/60		
Power factor				1(0.8 lagging- 0.8 leading)		
THDi				<3%		
AC output topology				L+N+PE		
Battery						
Battery voltage range (V)				40-58		
Max. charging voltage (V)				58		
Charge/Discharge Current (A)	95/62.2	95/75	95/83.3	95/95.8	95/104.2	95/110
Communication Interface				CAN		
EPS output						
Rated power (kW)	3	3.6	4	4.6	5	6
Rated voltage (V)				230		
Rated current (A)	13	16	17.4	20	21.7	26
Rated frequency (Hz)				50/60		
Automatic switching time (ms)				<20		
THDu				<2%		
Overload capacity				110%, 60s / 120%, 30S / 150%, 10S		
General data						
Battery charge/discharge efficiency				95%		
DC Max. efficiency				97.6%		
Europe efficiency				97%		
MPPT efficiency				99.9%		
Ingress protection				IP65		
Noise emission (dB)				<35		
Operation temperature				-25°C- 60°C		
Cooling				Natural		
Relative Humidity				0- 95% (non-condensing)		
Altitude				2,000m (>2,000 Derating)		
Dimensions W* D* H (mm)				451*212*474		
Weight (kg)				18		
Inverter Topology				transformerless		
Self-consumption (W)				<3		
Display and communication						
Display				/		
Interface: RS485/Wifi/4C/CAN/DRM				Yes / Opt / Opt / Yes / Yes		



IP65
Choose the place you want to install



Full power discharge



Support multi-machine parallel connection



Intelligent energy management system for home

Hybrid Inverter Three Phase



HERF-6K-H3 / HERF-8K-H3 / HERF-10K-H3 HERF-12K-H3 / HERF-15K-H3



IP65
Choose the place you want to install



Full power discharge



Automatic management of battery charge and discharge



It is more economical to support multiple operating modes

	HERF-6K-H3	HERF-8K-H3	HERF-10K-H3	HERF-12K-H3	HERF-15K-H3
Input (PV)					
Max. power (kW)	9	12	15	18	22.5
Max. DC voltage (V)	1,000				
MPPT voltage range (V)	180-850				
Max. Input Current of single MPPT (A)	13				
MPPT Tracker/Strings	2/1	2/1	2/1	2/1	2/1
AC Output					
Rated output power (kVA)	6	8	10	12	15
Max. Output Current (A)	9.5	12.7	15.9	19.1	23.8
Grid voltage /range (V)	400/360- 440				
Frequency (Hz)	50/60				
Power Factor	0.8 lagging- 0.8 leading				
THDi	<3%				
AC output topology	3W+N+PE				
Battery					
Battery voltage range (V)	125-600				
Max. charging voltage (V)	600				
Full battery voltage (V)	200	250	300	350	400
Rated charge/discharge current (A)	40	40	40	40	40
Battery type	Lithium/Lead-acid				
Communication interface	CAN/RS485				
EPS output					
Rated power (kVA)	6.6	8.8	11	13.2	16.5
Rated output voltage (V)	400				
Max. output current (A)	9.5	12.7	15.9	19.1	23.8
Rated frequency (Hz)	50/60				
Automatic switching time (ms)	<20				
THDu	<2%				
Overload capacity	110%, 30S/120%, 10s / 150%, 0.02S				
General data					
Battery charge/Discharge efficiency	96.4%	96.6%	96.7%	96.8%	96.8%
DC Max. efficiency	97.7%	97.9%	98.2%	98.2%	98.2%
Europe efficiency	97.0%	97.2%	97.5%	97.5%	97.5%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%	99.5%
Ingress protection	IP 65				
Noise emission (dB)	<35				
Operation temperature	-25°C- 60°C				
Cooling	Natural				
Relative Humidity	0- 95% (non-condensing)				
Altitude	2,000m (>2,000 Derating)				
Dimensions W* D* H (mm)	530*200*600				
Weight (kg)	29				
Isolation transformer	NO				
Self-consumption (W)	<3				
Display and communication					
Display	LCD				
Interface: RS485/Wifi/4G/CAN/DRM	Yes / Opt / Opet / Yes / Yes				
Safety standard	IEC/EN62109-1/-2, IEC/ EN62477-1				
EMC	IEC/EN61000-6-1, IEC/ EN61000-6-3				
On-grid	Europe: EN50549-1, Germany: VDE4105/ 0124, UK: G99, South Africa: NRS097-2-1: 2017				

Hybrid Inverter

American Split Phase



HERF-5K-LS / HERF-6K-LS / HERF-8K-LS HERF-10K-LS



IP65
Choose the place you want to install



Support 100% unbalanced load capacity



Higher system efficiency



Support parallel SOC balanced control and parallel current sharing control

	HERF-5K-LS	HERF-6K-LS	HERF-8K-LS	HERF-10K-LS
Input (PV)				
Max. power (kW)	7.5	9	12	13
Max. DC voltage (V)	500			
MPPT voltage range (V)	120-500			
Max. Input Current of single MPPT (A)	12			
MPPT Tracker/Strings	4/1			
AC Output				
Rated output power (kVA)	5	6	8	10
Max. Output Current (A)	24	28.8	38.3	47.8
Ac output voltage (V)	120/240 (split phase), 208(2/3 phase), 230(single phase)			
Frequency (Hz)	50/60			
PF	0.8 lagging- 0.8 leading			
THDi	<3%			
AC output topology	Split phase, 2/3 phase, single phase			
Battery				
Battery voltage range (V)	40-58			
Max. charging voltage (V)	58			
Max. Charge/Discharge Current (A)	120/120	135/135	190/190	210/210
Battery type	Lithium/Lead-acid			
Communication interface	CAN/RS485			
EPS output				
Rated power (kVA)	5	6	8	10
Rated output voltage (V)	120/240 (split phase), 208(2/3 phase), 230 (single phase)			
Rated output current (A)	24	28.8	38.3	47.8
Rated frequency (Hz)	50/60			
Automatic switching time (ms)	<20			
THDu	<2%			
Overload capacity	125%, 60s / 150%, 10s			
General data				
Max. efficiency	≥98.2%			
North American efficiency	≥97.2%			
Ingress protection	IP 65 / NEMA 3R			
Noise emission (dB)	<25	<29	<29	<29
Operation temperature	-25°C- 60°C			
Cooling	Natural			
Relative Humidity	0- 95% (non-condensing)			
Altitude	2,000m (>2,000 Derating)			
Dimensions W* D* H (mm)	430*220*710			
Weight (kg)	41			
Isolation transformer	NO			
Self-consumption (W)	<3			
Display and communication				
Display	LCD, touch screen			
Interface: RS485/Wifi/4G/CAN/DRM	Yes			
Safety standard	UL1741SA all options, UL 1699B, CSA 22.2			
EMC	FCC Part 15, Class B			
On-grid	IEEE 1547, IEEE 2030.5, Hawaii Rule 14H, Rule 21 Phase I,II,III,NRS			

Storage Battery

Low-voltage



HERF-LV-5KWH / HERF-LV-10KWH / HERF-LV-15KWH / HERF-LV-20KWH / HERF-LV-25KWH / HERF-LV-30KWH

HERF -LV -5KWH HERF -LV -10KWH HERF -LV -15KWH HERF -LV -20KWH HERF -LV -25KWH HERF -LV -30KWH



Number of modules	1	2	3	4	5	6
Battery Module Type	HERF-LV-5KWH					
Rated Voltage (V)	51.2					
Voltage Range (V)	44.8~ 56					
Rated Energy (Wh)	5120	10240	15360	20240	25600	30720
Max. Discharge Current (A)	100	200	200	200	200	200
Dimension:W*H*D (mm)	674*170 *470	674*170 *1100	674*170 *1520	1348*170 *1310	1348*170 *1520	1348*170 *1520
Weight (kg)	55	124	176	228	280	332
Environment Parameter						
IP	IP55					
Charge Temperature Range (°C)-105kg	0°C ~45°C					
Discharge Temperature Range (°C)	-20~60					
Installation Method	Floor-mounted					
Service Life						
Cycle Life (Time)	>6000 (0.5C @25°C, 80% DOD)					
Design Life (Year)	15					
Certification						
Safety & Certification	CE, EMC, TUV (IEC62619), UL1973					
Transportation	UN38.3					



SIMPLE
Easily installation and capacity expansion,maintenance-free (15Y design life).



INTELLIGENT
Real-time monitoring and control,passive balance, matching mainstream inverters.



SAFE
LFP cell & system safety design.



PERFORMANCE
High energy density, excellent service life & wide operation temperature range.

Hybrid Inverter Single Phase System



**HERF-3K-L1-5KWH/HERF-3.6K-L1-5KWH/
HERF-4K-L1-5KWH/HERF-4.6K-L1-5KWH/
HERF-5K-L1-5KWH/HERF-6K-L1-5KWH**



IP65
Choose the place you
want to install



Full power discharge



**Support multi-machine
parallel connection**



**Intelligent energy
management system
for home**

	HERF-3K-L1 -5KWH	HERF-3.6K-L1 -5KWH	HERF-4K-L1 -5KWH	HERF-4.6K-L1 -5KWH	HERF-5K-L1 -5KWH	HERF-6K-L1 -5KWH
DC Input						
Max. Input power (kW)	4.6	4.6	6	6	7	7
Start-up Voltage (V)				120		
Max. PV Voltage (V)				550		
MPPT Range/Nominal (V)				125-500/360		
Max. Input Current (A)				14/14		
MPPT Tracker/Strings				2/1		
AC Output						
Rated Power (kW)	3	3.6	4	4.6	5	6
Max. Output Current (A)	13	16	17.4	20	21.7	26
Nominal Voltage/Range (V)				230/176-270		
Frequency (Hz)				50/60		
Power factor				1 (0.8 lagging- 0.8 leading)		
THDi				<3%		
AC output topology				L+N+PE		
Battery Model						
HERF-LV-5KWH						
Nominal Capacity (KWH)				5.12		
Nominal Battery Voltage (V)				51.2		
Battery Voltage Range (V)				44.8-56		
Max. Charge Current (A)	95	95	95	95	95	95
Max. Discharge Current (A)	62.2	75	83.3	95.8	100	100
Communication Interface				RS485		
EPS output						
Rated power (kW)	3	3.6	4	4.6	5	6
Rated voltage (V)				230		
Rated current (A)	13	16	17.4	20	21.7	26
Rated frequency (Hz)				50/60		
Automatic switching time (ms)				<20		
THDu				<2%		
Overload capacity				110%, 60s / 120%, 30S / 150%, 10S		
General data						
Battery charge/discharge efficiency				95%		
DC Max. efficiency				97.6%		
Europe efficiency				97%		
MPPT efficiency				99.9%		
Ingress protection				IP65		
Noise emission (dB)				<35		
Operation temperature				-25°C- 60°C		
Cooling				Natural		
Relative Humidity				0- 95% (non-condensing)		
Altitude				2,000m (>2,000 Derating)		
Dimensions W* D* H (mm)				451*212*474		
Weight (kg)				18		
Inverter Topology				transformerless		
Self-consumption (W)				<3		
Display and communication						
Display				/		
Interface: RS485/Wifi/4G/CAN/DRM				Yes / Opt / Opt / Yes / Yes		

Hybrid Inverter Single Phase System



**HERF-3K-L1-10KWH/HERF-3.6K-L1-10KWH/
HERF-4K-L1-10KWH/HERF-4.6K-L1-10KWH/
HERF-5K-L1-10KWH/HERF-6K-L1-10KWH**



IP65
Choose the place you
want to install



Full power discharge



**Support multi-machine
parallel connection**



**Intelligent energy
management system
for home**

	HERF-3K-L1 -10KWH	HERF-3.6K-L1 -10KWH	HERF-4K-L1 -10KWH	HERF-4.6K-L1 -10KWH	HERF-5K-L1 -10KWH	HERF-6K-L1 -10KWH
DC Input						
Max. Input power (kW)	4.6	4.6	6	6	7	7
Start-up Voltage (V)				120		
Max. PV Voltage (V)				550		
MPPT Range/Nominal (V)				125-500/360		
Max. Input Current (A)				14/14		
MPPT Tracker/Strings				2/1		
AC Output						
Rated Power (kW)	3	3.6	4	4.6	5	6
Max. Output Current (A)	13	16	17.4	20	21.7	26
Nominal Voltage/Range (V)				230/176-270		
Frequency (Hz)				50/60		
Power factor				1 (0.8 lagging- 0.8 leading)		
THDi				<3%		
AC output topology				L+N+PE		
Battery Model						
HERF-LV-10KWH						
Nominal Capacity (KWH)				10.24		
Nominal Battery Voltage (V)				51.2		
Battery Voltage Range (V)				44.8-56		
Max. Charge Current (A)	95	95	95	95	95	95
Max. Discharge Current (A)	62.2	75	83.3	95.8	104.2	110
Communication Interface				RS485		
EPS output						
Rated power (kW)	3	3.6	4	4.6	5	6
Rated voltage (V)				230		
Rated current (A)	13	16	17.4	20	21.7	26
Rated frequency (Hz)				50/60		
Automatic switching time (ms)				<20		
THDu				<2%		
Overload capacity				110%, 60s / 120%, 30S / 150%, 10S		
General data						
Battery charge/discharge efficiency				95%		
DC Max. efficiency				97.6%		
Europe efficiency				97%		
MPPT efficiency				99.9%		
Ingress protection				IP65		
Noise emission (dB)				<35		
Operation temperature				-25°C- 60°C		
Cooling				Natural		
Relative Humidity				0- 95% (non-condensing)		
Altitude				2,000m (>2,000 Derating)		
Dimensions W* D* H (mm)				451*212*474		
Weight (kg)				18		
Inverter Topology				transformerless		
Self-consumption (W)				<3		
Display and communication						
Display				/		
Interface: RS485/Wifi/4G/CAN/DRM				Yes / Opt / Opt / Yes / Yes		

Storage Battery High-voltage



HERF-HV-15KWH / HERF-HV-20KWH / HERF-HV-25KWH / HERF-HV-30KWH



SIMPLE
Easily installation and capacity expansion, maintenance-free (15Y design life).



INTELLIGENT
Real-time monitoring and control, passive balance, matching mainstream inverters.



SAFE
LFP cell & system safety design.



PERFORMANCE
High energy density, excellent service life & wide operation temperature range.

HERF -HV-15KWH HERF -HV-20KWH HERF -HV-25KWH HERF -HV-30KWH

System Schematic



Number of modules	3	4	5	6
Battery Module Type	HERF-HV-5KWH			
Rated Voltage (V)	153.6	204.8	256	307.2
Voltage Range (V)	134.4-168	179.2-224	224-280	268.8-336
Rated Energy (Wh)	15360	20240	25600	30720
Standard Discharge Current (A)	100			
Dimension:W*H*D (mm)	674*170 *1620	1348*170 *1310	1348*170 *1620	1348*170 *1620
Weight (kg)	176	228	280	332
Environment Parameter				
IP	IP55			
Charge Temperature Range (°C)-105kg	0°C -45°C			
Discharge Temperature Range (°C)	-20-60			
Installation Method	Floor-mounted			
Service Life				
Cycle Life (Time)	>6000 (0.5C @25°C, 80% DOD)			
Design Life (Year)	15			
Certification				
Safety & Certification	CE, EMC, TUV (IEC62619), UL1973			
Transportation	UN38.3			

Hybrid Inverter Three Phase System



**HERF-6K-H3-15kWH / HERF-8K-H3-15kWH
HERF-10K-H3-15kWH / HERF-12K-H3-15kWH
HERF-15K-H3-15kWH**

	HERF-6K-H3 -15KWH	HERF-8K-H3 -15KWH	HERF-10K-H3 -15KWH	HERF-12K-H3 -15KWH	HERF-15K-H3 -15KWH
Input (PV)					
Max. power (kW)	9	12	15	18	22.5
Max. DC voltage (V)	1,000				
MPPT voltage range (V)	180-850				
Max. Input Current of single MPPT (A)	13				
MPPT Tracker/Strings	2/1	2/1	2/1	2/1	2/1
AC Output					
Rated output power (kVA)	6	8	10	12	15
Max. Output Current (A)	9.5	12.7	15.9	19.1	23.8
Grid voltage /range (V)	400/360- 440				
Frequency (Hz)	50/60				
Power Factor	0.8 lagging- 0.8 leading				
THDi	<3%				
AC output topology	3W+N+PE				
Battery Model					
HERF-HV-15KWH					
Nominal Capacity	15.36KWH				
Typical Capacity	100Ah				
Nominal Battery Voltage (V)	153.6				
Battery Voltage Range (V)	134.4-168				
Rated Charge/Discharge Current (A)	40				
Communication Interface	RS485				
EPS output					
Rated power (kVA)	6.6	8.8	11	13.2	16.5
Rated output voltage (V)	400				
Max. output current (A)	9.5	12.7	15.9	19.1	23.8
Rated frequency (Hz)	50/60				
Automatic switching time (ms)	<20				
THDu	<2%				
Overload capacity	110%, 30S/120%, 10s / 150%, 0.02S				
General data					
Battery charge/Discharge efficiency	96.4%	96.6%	96.7%	96.8%	96.8%
DC Max. efficiency	97.7%	97.9%	98.2%	98.2%	98.2%
Europe efficiency	97.0%	97.2%	97.5%	97.5%	97.5%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%	99.5%
Ingress protection	IP 65				
Noise emission (dB)	<35				
Operation temperature	-25°C- 60°C				
Cooling	Natural				
Relative Humidity	0- 95% (non-condensing)				
Altitude	2,000m (>2,000 Derating)				
Dimensions W* D* H (mm)	530*200*600				
Weight (kg)	29				
Isolation transformer	NO				
Self-consumption (W)	<3				
Display and communication					
Display	LCD				
Interface: RS485/Wifi/4G/CAN/DRM	Yes / Opt / Opet / Yes / Yes				
Safety standard	IEC/EN62109-1/-2, IEC/ EN62477-1				
EMC	IEC/EN61000-6-1, IEC/ EN61000-6-3				
On-grid	Europe: EN50549-1, Germany: VDE4105/ 0124, UK: G99, South Africa: NRS097-2-1: 2017				



IP65
Choose the place you
want to install



Full power discharge



Automatic management
of battery charge and
discharge



It is more economical to
support multiple operating
modes

Hybrid Inverter Three Phase System



HERF-6K-H3-20kWH / HERF-8K-H3-20kWH
HERF-10K-H3-20kWH / HERF-12K-H3-20kWH
HERF-15K-H3-20kWH

	HERF-6K-H3 -20KWH	HERF-8K-H3 -20KWH	HERF-10K-H3 -20KWH	HERF-12K-H3 -20KWH	HERF-15K-H3 -20KWH
Input (PV)					
Max. Power (kW)	9	12	15	18	22.5
Max. DC Voltage (V)	1,000				
MPPT Voltage Range (V)	180-850				
Max. Input Current of single MPPT (A)	13				
MPPT Tracker/Strings	2/1	2/1	2/1	2/1	2/1
AC Output					
Rated Output Power (kVA)	6	8	10	12	15
Max. Output Current (A)	9.5	12.7	15.9	19.1	23.8
Grid Voltage /Range (V)	400/360- 440				
Frequency (Hz)	50/60				
Power Factor	0.8 lagging- 0.8 leading				
THDi	<3%				
AC Output Topology	3W+N+PE				
Battery Model					
HERF-HV-20KWH					
Nominal Capacity	20.24KWH				
Typical Capacity	100Ah				
Nominal Battery Voltage (V)	204.8				
Battery Voltage Range (V)	179.2-224				
Rated Charge/Discharge Current (A)	40				
Communication Interface	RS485				
EPS output					
Rated power (kVA)	6.6	8.8	11	13.2	16.5
Rated output voltage (V)	400				
Max. output current (A)	9.5	12.7	15.9	19.1	23.8
Rated frequency (Hz)	50/60				
Automatic switching time (ms)	<20				
THDu	<2%				
Overload capacity	110%, 30S/120%, 10s / 150%, 0.02S				
General data					
Battery charge/Discharge efficiency	96.4%	96.6%	96.7%	96.8%	96.8%
DC Max. efficiency	97.7%	97.9%	98.2%	98.2%	98.2%
Europe efficiency	97.0%	97.2%	97.5%	97.5%	97.5%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%	99.5%
Ingress protection	IP 65				
Noise emission (dB)	<35				
Operation temperature	-25°C- 60°C				
Cooling	Natural				
Relative Humidity	0- 95% (non-condensing)				
Altitude	2,000m (>2,000 Derating)				
Dimensions W* D* H (mm)	530*200*600				
Weight (kg)	29				
Isolation transformer	NO				
Self-consumption (W)	<3				
Display and communication					
Display	LCD				
Interface: RS485/Wifi/4G/CAN/DRM	Yes / Opt / Opet / Yes / Yes				
Safety standard	IEC/EN62109-1/-2, IEC/ EN62477-1				
EMC	IEC/EN61000-6-1, IEC/ EN61000-6-3				
On-grid	Europe: EN50549-1, Germany: VDE4105/ 0124, UK: G99, South Africa: NRS097-2-1: 2017				



IP65
Choose the place you want to install



Full power discharge



Automatic management of battery charge and discharge



It is more economical to support multiple operating modes

| Global Applications

🌐 Europe



Residential Project in Sweden 12kW



Residential Project in Germany 10kW



Residential Project in Estonia 8kW



Residential Project in Poland 10kW



Residential Project in Germany 10kW

🌐 America



Residential Project in the United State 10kW



Residential Station Project in Utah 8kW



Residential Project in the United State 6kW