

VEICHI

VH Series Hybrid Inverter

- Optimal Power &Storage
- Strong Load &Back-up
- Convenient Installation &Operation
- Flexible Design &Use





More Power & Storage

- High Power Efficiency for Enhanced ROI
- Big DC Input Current for Ideal PV Module Compatibility
- Large Capacity Charge/Discharge Current for Rapid Energy Cycling



Optimal Consumption & Back-up

- Unbalanced Output Capability for Strategic Power Optimization
- Continuous AC Overloading to Meet Intense Load Demands
- UPS-Level Switching for Ensured Operation of Uninterruptable Loads



Convenient Design & Installation

- Wide Battery Voltage Range for Customizable Storage Capacity
- Enabling Parallel Operation for Both On-Grid and Off-Grid Solutions
- Plug & Play Terminals for Easy Wiring and Installation

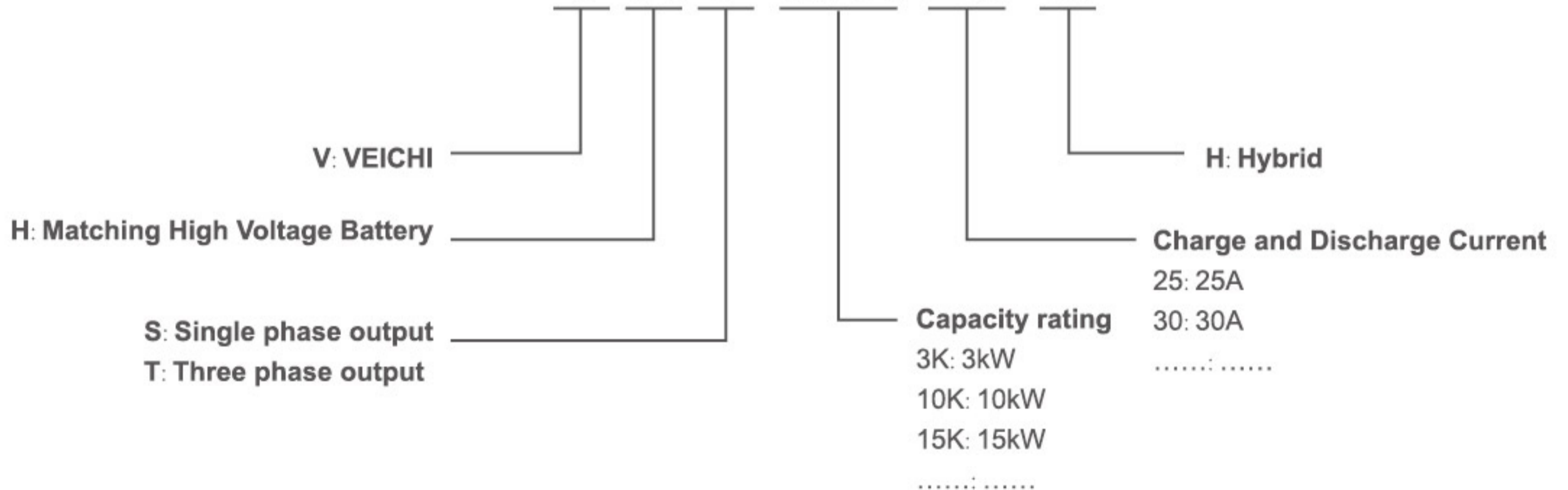


Intelligent Operation & Maintenance

- Intelligent Indicator Light for Clear Power Status and Alarm Indications
- OLED Display and App for Efficient Data Management
- VEICHI Energy Management System for Intelligent Control via App and Website

Model Description

V H T-10K-25-H



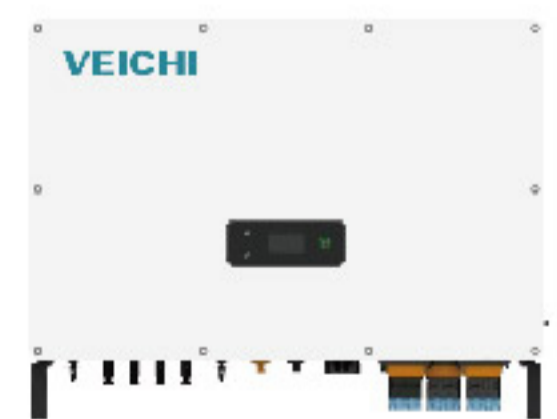
VHS-3K-30-H
(3K-8K)



VHT-4K-25-H
(4K-12K)



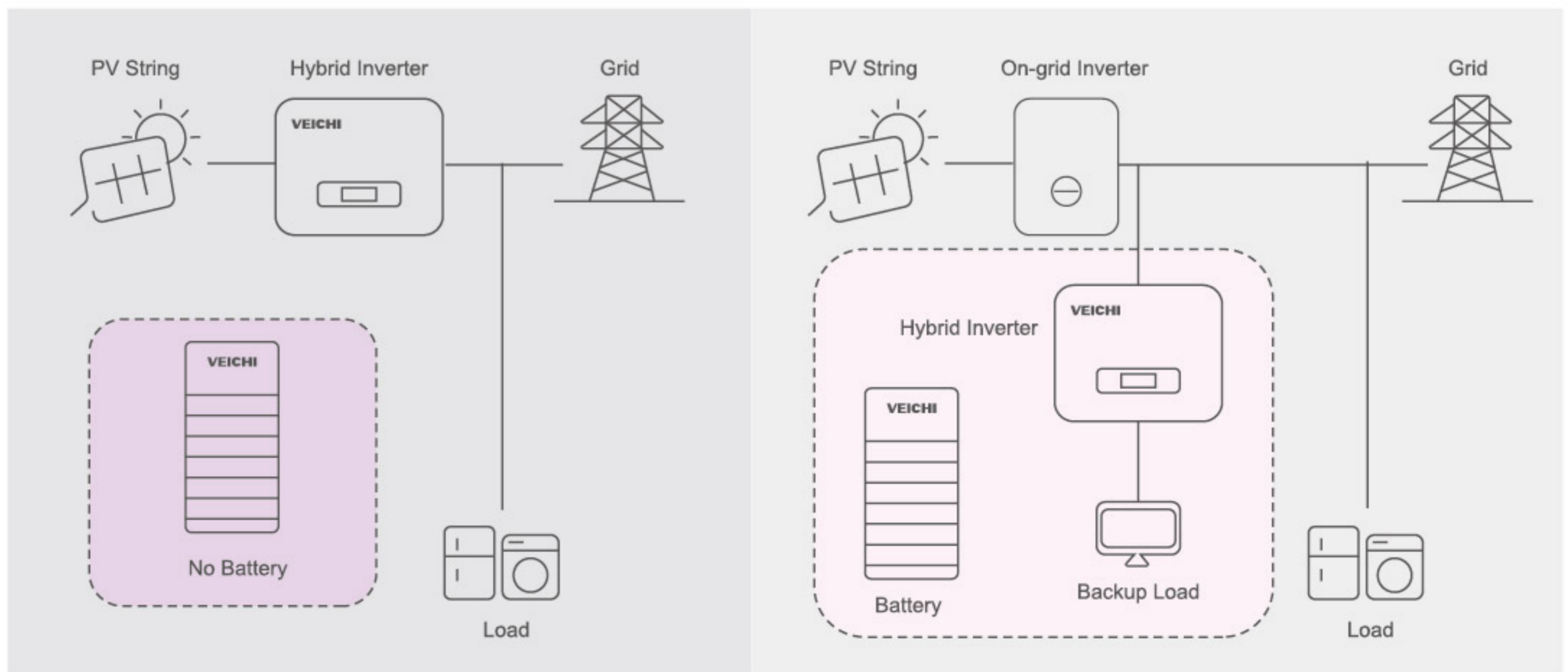
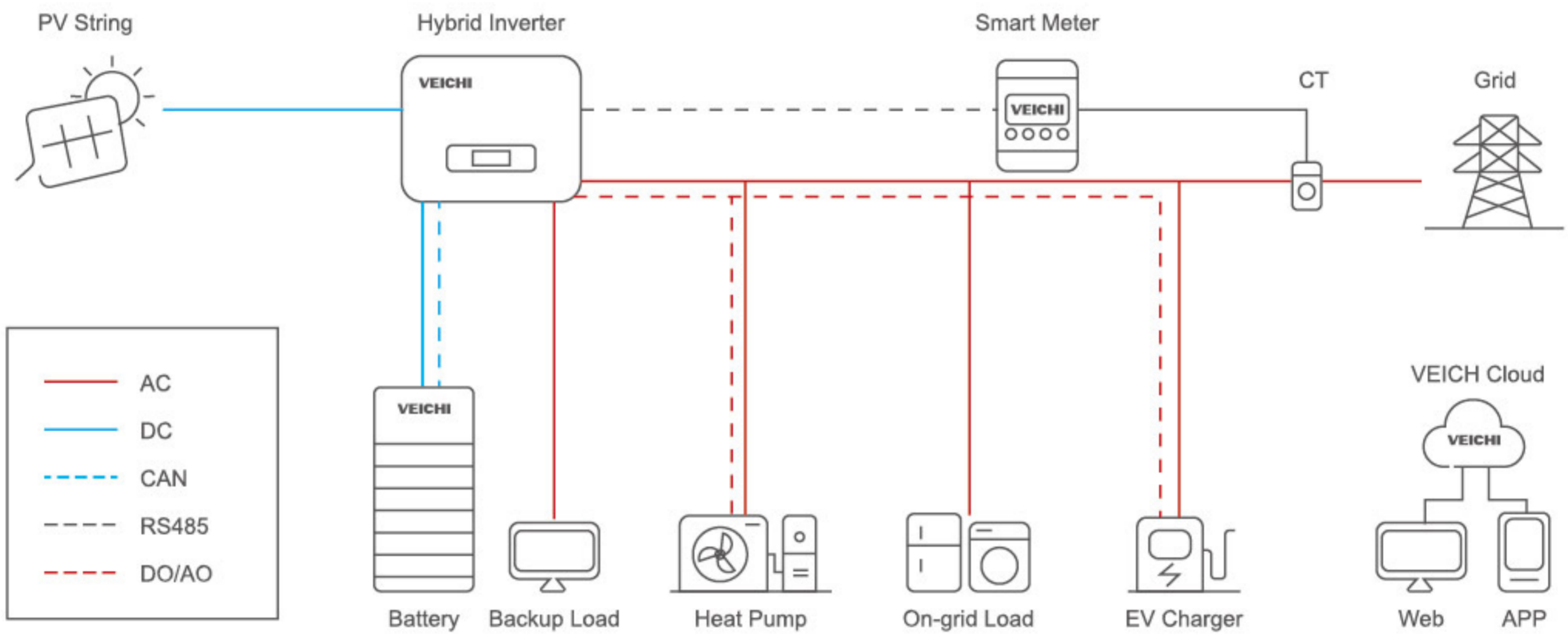
VHT-10K-40-H
(10K-20K)



VHT-25K-100-H
(25K-50K)



Residential Energy Storage Solution



Battery Ready Scenario

AC Retrofit Scenario

Mode		VHS-3K-30-H	VHS-3.6K-30-H	VHS-4.2K-30-H	VHS-5K-30-H	VHS-6K-30-H	VHS-8K-30-H
PV Input							
Recommended Max.input power	[kW]	4.80	5.76	6.72	8.00	9.60	12.80
Start-up voltage	[V]	80	80	80	80	80	80
Max.DC input voltage*	[V]	600*	600*	600*	600*	600*	600*
Rated DC input voltage	[V]	360	360	360	360	360	360
MPPT voltage range*	[V]	100-550*	100-550*	100-550*	100-550*	100-550*	100-550*
No.of MPP trackers		1	1	2	2	2	2
No.of DC inputs per MPPT		1	1	1/1	1/1	1/1	1/1
Max.input current	[A]	15	15	15/15	15/15	15/15	15/15
Max.short-circuit current	[A]	20	20	20/20	20/20	20/20	20/20
Battery Side							
Battery type		Lithium Battery (with BMS)					
Battery voltage range	[V]	85-450					
Maximum charging/discharge current	[A]	30/30					
Grid Side							
Rated output power	[kW]	3.00	3.60	4.20	5.00 ³⁾	6.00	8.00
Max.output apparent power	[kVA]	3.30	3.96 ¹⁾	4.60	5.50 ⁴⁾	6.60	8.00
Max.input apparent power**	[kVA]	6.00	7.20	8.40	10.00	10.00	12.00
Max.charging power of battery	[kW]	3.00	3.60	4.20	5.00	6.00	8.00
Rated AC voltage		L/N/PE;220/230/240V					
Rated AC frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Max.output current	[A]	15.00	18.00 ²⁾	21.00	25.00 ⁵⁾	28.70	36.30
Power factor		0.8 leading...0.8 lagging					
Max.total harmonic distortion		<3%@Rated output power					
DCI		<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In
Back-up Side							
Rated output power	[kW]	3.00	3.60	4.20	5.00	6.00	8.00
Max.output apparent power	[kVA]	3.30	3.96	4.60	5.50	6.60	8.00
Max.output current	[A]	15.00	18.00	21.00	25.00	28.70	36.30
UPS switching time		<10ms	<10ms	<10ms	<10ms	<10ms	<10ms
Rated output voltage		L/N/PE;220/230/240V					
Rated output frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Voltage harmonic distortion		<3%@Linear load					
Efficiency							
Max.efficiency		97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
European efficiency		97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Protection							
DC reverse polarity protection		Integrated					
Battery input reverse connection protection		Integrated					
Insulation resistance protection		Integrated					
Surge protection		Integrated					
Over-temperature protection		Integrated					
Residual current protection		Integrated					
Islanding protection		Integrated					
AC over-voltage protection		Integrated					
Overload protection		Integrated					
AC short-circuit protection		Integrated					
General Data							
Over voltage category		PV:II Main:III					
Dimensions	[W×H×D mm]	534×418×210					
Weight	[KG]	27.0					
Protection degree		IP65					
Standby self-consumption	[W]	<15					
Topology		Transformerless					
Operating Temperature Range	[°C]	-30~60					
Relative Humidity	[%]	0~100					
Operating Altitude	[m]	3000 (>3000m derating)					
Cooling		Natural Convection					
Noise Level	[dB]	<25					
Display		OLED & LED					
Communication		CAN,RS485,WiFi/LAN (Optional)					

*PV Max.Input voltage is 550V without battery,or 500V with battery,otherwise inverter will be waiting;

**Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery;

1)G98:3.68kVA;2)G98:16.00A;3)AS 4777.2:5.0kW,VDE-AR-N 4105:4.6kW;4)AS 4777.2:5.0kVA,VDE-AR-N 4105:4.60kVA,C10/11:5.0kVA;

5)AS 4777.2:21.7A,VDE-AR-N 4105:21.0A,C10/11:21.7A

Mode		VHT-4K-25-H	VHT-5K-25-H	VHT-6K-25-H	VHT-8K-25-H	VHT-10K-25-H	VHT-12K-25-H
PV Input							
Recommended Max.input power	[kW]	6.0	7.5	9.0	12.0	15.0	18.0
Start-up voltage	[V]	135	135	135	135	135	135
Max.DC input voltage*	[V]	1000*	1000*	1000*	1000*	1000*	1000*
Rated DC input voltage	[V]	620	620	620	620	620	620
MPPT voltage range*	[V]	120-950*	120-950*	120-950*	200-950*	200-950*	200-950*
No.of MPP trackers		2	2	2	2	2	2
No.of DC inputs per MPPT		1/1	1/1	1/1	1/1	1/1	1/1
Max.input current	[A]	15/15	15/15	15/15	15/15	15/15	15/15
Max.short-circuit current	[A]	20/20	20/20	20/20	20/20	20/20	20/20
Battery Side							
Battery type		Lithium Battery (with BMS)					
Battery voltage range	[V]	135-750					
Maximum charging/discharge current	[A]	25/25					
Grid Side							
Rated output power	[kW]	4.0	5.0	6.0	8.0	10.0	12.0
Max.output apparent power	[kVA]	4.4	5.5	6.6	8.8	11.0 ¹⁾	13.2
Max.input apparent power**	[kVA]	8.0	10.0	12.0	16.0	16.5	16.5
Max.charging power of battery	[kW]	4.0	5.0	6.0	8.0	10.0	12.0
Rated AC voltage		3L/N/PE;220/380V;230/400V;240/415V					
Rated AC frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Max.output current	[A]	6.7	8.3	10.0	13.3	16.5 ²⁾	20.0
Power factor		0.8 leading...0.8 lagging					
Max.total harmonic distortion		<3%@Rated output power					
DCI		<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In
Back-up Side							
Rated output power	[kW]	4.0	5.0	6.0	8.0	10.0	12.0
Max.output apparent power	[kVA]	4.4	5.5	6.6	8.8	11.0	13.2
Max.output current	[A]	6.7	8.3	10.0	13.3	16.5	20.0
UPS switching time		<10ms	<10ms	<10ms	<10ms	<10ms	<10ms
Rated output voltage		3L/N/PE;220/380V;230/400V;240/415V					
Rated output frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Voltage harmonic distortion		<3%@Linear load					
Efficiency							
Max. efficiency		98.1%	98.1%	98.1%	98.2%	98.2%	98.2%
European efficiency		97.3%	97.3%	97.3%	97.4%	97.4%	97.4%
Protection							
DC reverse polarity protection		Integrated					
Battery input reverse connection protection		Integrated					
Insulation resistance protection		Integrated					
Surge protection		Integrated					
Over-temperature protection		Integrated					
Residual current protection		Integrated					
Islanding protection		Integrated					
AC over-voltage protection		Integrated					
Overload protection		Integrated					
AC short-circuit protection		Integrated					
General Data							
Over voltage category		PV:II Main:III					
Dimensions	[W×H×D mm]	534×418×210					
Weight	[KG]	26.0					
Protection degree		IP65					
Standby self-consumption	[W]	<15					
Topology		Transformerless					
Operating Temperature Range	[°C]	-30~60					
Relative Humidity	[%]	0~100					
Operating Altitude	[m]	3000 (>3000m derating)					
Cooling		Natural Convection					
Noise Level	[dB]	<25					
Display		OLED & LED					
Communication		CAN,RS485,WiFi/LAN (Optional)					

*PV Max.Input voltage is 950V without battery,or 850V with battery,otherwise inverter will be waiting;

**Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery;

1)G98:10.5kVA;2)G98:16.00A

Mode		VHT-10K-40-H	VHT-12K-40-H	VHT-15K-40-H	VHT-20K-40-H
PV Input					
Recommended Max.input power	[kW]	15.0	18.0	22.5	30.0
Start-up voltage	[V]	135	135	135	135
Max.DC input voltage*	[V]	1000*	1000*	1000*	1000*
Rated DC input voltage	[V]	620	620	620	620
MPPT voltage range*	[V]	200-950*	200-950*	200-950*	200-950*
No.of MPP trackers		2	2	2	2
No.of DC inputs per MPPT		2/2	2/2	2/2	2/2
Max.input current	[A]	30/30	30/30	30/30	30/30
Max.short-circuit current	[A]	40/40	40/40	40/40	40/40
Battery Side					
Battery type		Lithium Battery (with BMS)			
Battery voltage range	[V]	135-750			
Maximum charging/discharge current	[A]	40/40			
Grid Side					
Rated output power	[kW]	10.0	12.0	15.0	20.0
Max.output apparent power	[kVA]	11.0 ¹⁾	13.2	16.5 ³⁾	22.0
Max.input apparent power**	[kVA]	20.0	24.0	30.0	30.0
Max.charging power of battery	[kW]	10.0	12.0	15.0	20.0
Rated AC voltage		3L/N/PE;220/380V;230/400V;240/415V			
Rated AC frequency	[Hz]	50/60	50/60	50/60	50/60
Max.output current	[A]	16.5 ²⁾	20.0	25.0 ⁴⁾	33.5
Power factor		0.8 leading...0.8 lagging			
Max.total harmonic distortion		<3%@Rated output power			
DCI		<0.5%In	<0.5%In	<0.5%In	<0.5%In
Back-up Side					
Rated output power	[kW]	10.0	12.0	15.0	20.0
Max.output apparent power	[kVA]	11.0	13.2	16.5	22.0
Max.output current	[A]	16.5	20.0	25.0	33.5
UPS switching time		<10ms	<10ms	<10ms	<10ms
Rated output voltage		3L/N/PE;220/380V;230/400V;240/415V			
Rated output frequency	[Hz]	50/60	50/60	50/60	50/60
Voltage harmonic distortion		<3%@Linear load			
Efficiency					
Max. efficiency		98.4%	98.4%	98.4%	98.4%
European efficiency		97.5%	97.5%	97.5%	97.5%
Protection					
DC reverse polarity protection		Integrated			
Battery input reverse connection protection		Integrated			
Insulation resistance protection		Integrated			
Surge protection		Integrated			
Over-temperature protection		Integrated			
Residual current protection		Integrated			
Islanding protection		Integrated			
AC over-voltage protection		Integrated			
Overload protection		Integrated			
AC short-circuit protection		Integrated			
General Data					
Over voltage category		PV:II Main:III			
Dimensions	[W×H×D mm]	534×418×210			
Weight	[KG]	28.0(10-12kW)/31.0(15-20kW)			
Protection degree		IP65			
Standby self-consumption	[W]	<15			
Topology		Transformerless			
Operating Temperature Range	[°C]	-30~60			
Relative Humidity	[%]	0~100			
Operating Altitude	[m]	3000 (>3000m derating)			
Cooling		Smart fan			
Noise Level	[dB]	<40			
Display		OLED & LED			
Communication		CAN,RS485,WiFi/LAN (Optional)			

*PV Max.Input voltage is 950V without battery,or 850V with battery,otherwise inverter will be waiting;

**Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery;

1)G98:10.5kVA;2)G98:16.00A;3)AS 4777.2:15.0kVA;4)AS 4777.2:21.7A

Mode		VHT-25K-100-H	VHT-30K-100-H	VHT-36K-100-H	VHT-40K-100-H	VHT-50K-100-H
PV Input						
Recommended Max.input power	[kW]	37.5	45.0	54.0	60.0	75.0
Start-up voltage	[V]	135	135	135	135	135
Max.DC input voltage*	[V]	1000*	1000*	1000*	1000*	1000*
Rated DC input voltage	[V]	620	620	620	620	620
MPPT voltage range*	[V]	200-850*	200-850*	200-850*	200-850*	200-850*
No.of MPP trackers		4	4	4	4	4
No.of DC inputs per MPPT		2	2	2	2	2
Max.input current	[A]	30x4	30x4	30x4	30x4	30x4
Max.short-circuit current	[A]	40x4	40x4	40x4	40x4	40x4
Battery Side						
Battery type		Lithium Battery (with BMS)				
Battery voltage range	[V]	135-750				
Maximum charging/discharge current	[A]	100/100				
Grid Side						
Rated output power	[kW]	25.0	30.0	36.0	40.0	50.0
Max.output apparent power	[kVA]	27.5	33.0 ¹⁾	39.6	44.0	55.0
Max.input apparent power**	[kVA]	30.0	36.0	43.5	48.0	60.0
Max.charging power of battery	[kW]	25.0	30.0	36.0	40.0	50.0
Rated AC voltage		3L/N/PE;220/380V;230/400V;240/415V				
Rated AC frequency	[Hz]	50/60	50/60	50/60	50/60	50/60
Max.output current	[A]	42.0	50.0 ²⁾	60.0	66.0	83.0
Power factor		0.8 leading...0.8 lagging				
Max.total harmonic distortion		<3%@Rated output power				
DCI		<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In
Back-up Side						
Rated output power	[kW]	25.0	30.0	36.0	40.0	50.0
Max.output apparent power	[kVA]	27.5	33.0	39.6	44.0	55.0
Max.output current	[A]	42.0	50.0	60.0	66.0	83.0
UPS switching time		<20ms	<20ms	<20ms	<20ms	<20ms
Rated output voltage		3L/N/PE;220/380V;230/400V;240/415V				
Rated output frequency	[Hz]	50/60	50/60	50/60	50/60	50/60
Voltage harmonic distortion		<3%@Linear load				
Generator Side						
Max.intput apparent power**	[kVA]	30.0	36.0	43.5	48.0	60.0
Max.charging power of battery	[kW]	25.0	30.0	36.0	40.0	50.0
Rated AC voltage		3L/N/PE;220/380V;230/400V;240/415V				
Pated AC frequency	[Hz]	50/60	50/60	50/60	50/60	50/60
Efficiency						
Max.efficiency		98.8%	98.8%	98.8%	98.8%	98.8%
European efficiency		98.3%	98.3%	98.3%	98.3%	98.3%
Protection						
DC reverse polarity protection		Integrated				
Battery input reverse connection protection		Integrated				
Insulation resistance protection		Integrated				
Surge protection		Integrated				
Over-temperature protection		Integrated				
Residual current protection		Integrated				
Islanding protection		Integrated				
AC over-voltage protection		Integrated				
Overload protection		Integrated				
AC short-circuit protection		Integrated				
General Data						
Over voltage category		PV:II Main:III				
Dimensions	[W×H×D mm]	800×620×300				
Weight	[KG]	72.0				
Protection degree		IP65				
Standby self-consumption	[W]	<15				
Topology		Transformerless				
Operating Temperature Range	[°C]	-30~60				
Relative Humidity	[%]	0~100				
Operating Altitude	[m]	3000 (>3000m derating)				
Cooling		Smart fan				
Noise Level	[dB]	<50				
Display		OLED & LED				
Communication		CAN,RS485,WiFi/LAN (Optional)				

*PV Max.Input voltage is 850V,otherwise inverter will be waiting

**Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery;

1)AS 4777.2,VDE-AR-N 4105:30.0kVA;2)AS 4777.2,VDE-AR-N 4105:43.5A



Compatibility list of battery

VEICHI



Suzhou Veichi Electric Co.,Ltd

NO.1000 Songjia Road,Guoxiang street, Wuzhong Economic and Technological Development Zone,Suzhou

Email: overseas@veichi.com

[Https: //www.veichi.com/](https://www.veichi.com/)

