



HOME ENERGY STORAGE

Hybrid Inverter

BD3KTL / BD5KTL

All-in-one Storage Hybrid System

BD3KTL-HS / BD5KTL-HS

Energy Storage Inverter

BD3KTL-PS



On-grid & Off-grid



Support Diesel



Built-in Batteries (Optional)



Compatible With Multiple BMS

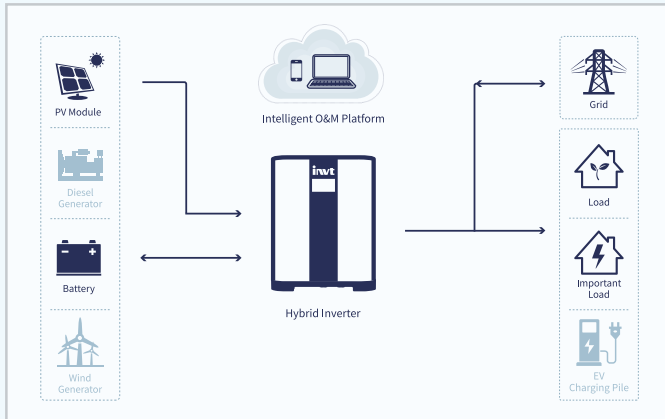


Dual-core DSP

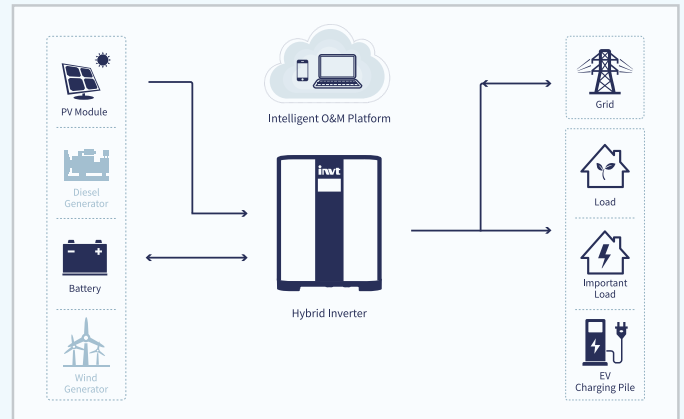


Maximize Benefits

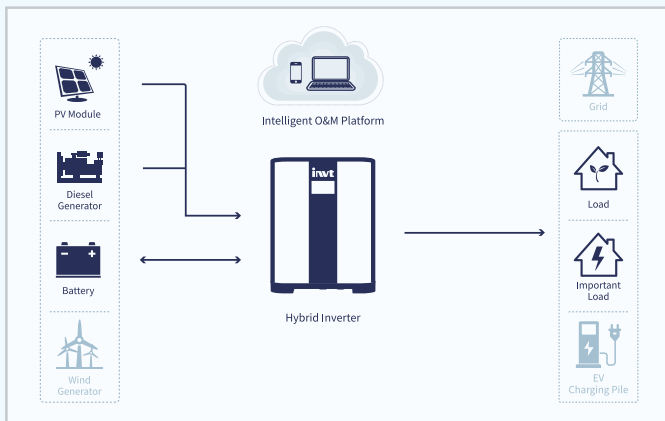
Solution



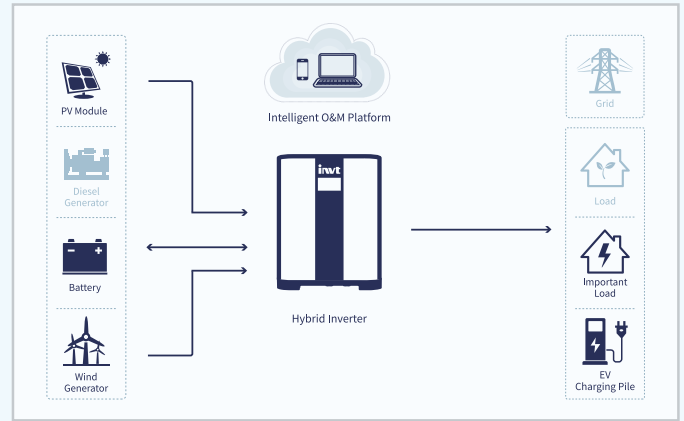
• Residential Hybrid Inverter / Applications of Purchase and Sell Electricity



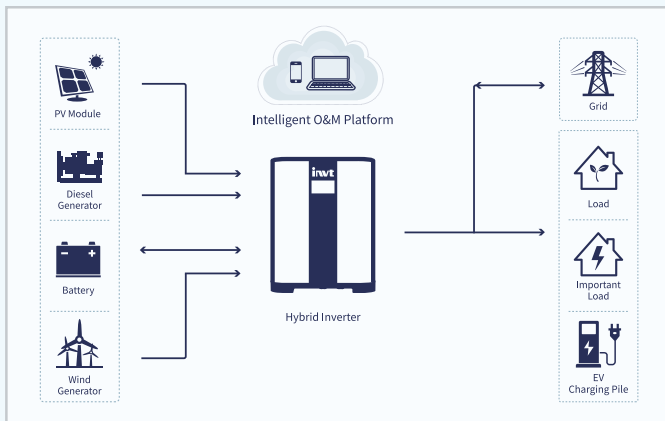
• Residential Solar-storage-charge System



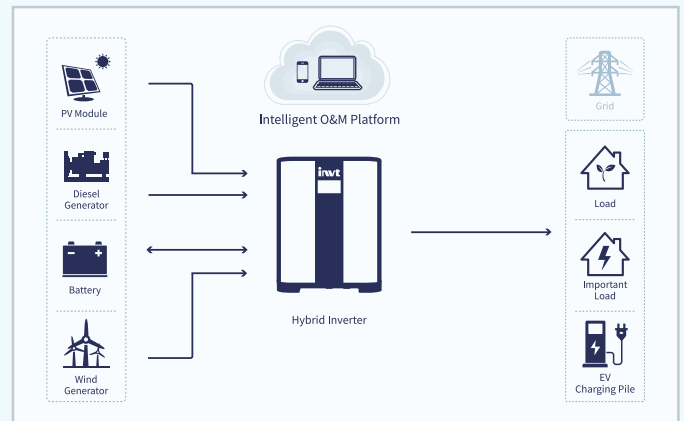
• Diesel Generators + Hybrid System



• Wind Generators + Hybrid System



• Micro-grid (With Grid)



• Individual Micro-grid (Without Grid)

Configuration table

Inverter	Solar Panel								Mounting Structure	PV Cable	
	60 Cells				72 Cells					4mm ²	6mm ²
	260W	275W	280W	290W	310W	315W	320W	330W			
3KW	12	11	11	11	10	10	10	9	1 set	200M	100M
5KW	20	18	18	18	16	16	16	16			

iMars BD Introduction

Efficient

- Support on-grid charge/discharge and off-grid mode.
- 10ms seamless switching.

Smart

- Friendly HMI, large LCD display.
- Optional diesel engine communication interface.
- Integrated global monitor management, APP with one-button registration.
- Intelligent charging and discharging to extend battery life.

Reliable

- Integrated professional BMS.
- Compatible with lead-acid and lithium battery.

Simple

- Small size, light weight, convenient for installation.



Specification

	BD3KTL	BD5KTL
DC input (PV)		
Max. DC input power (W)	3300	6600
Max. DC input voltage (V)	550	
MPPT range (V)	120~450	
Max. input current (A)	13	13x2
AC output 1 (Grid)		
Rated power (W)	3000	4600
Rated grid voltage (V) / Frequency (Hz)	208/220/230/240(single phase) / 50/60	
Rated output current (A)	13	20
THDi	≤3%(at rated power)	
Max. efficiency / Euro-efficiency	97.2%/96.5%	97.7%/97%
AC output 2 (Load)		
Rated output power (VA)	3000	4600
Rated output voltage (V) / frequency (Hz)	208/220/230/240(±2%) / 50/60(±0.2%)	
Off-network switching time (ms)	≤10	
Battery		
Rated voltage(V) / range (V)	48/42-58	
Battery type	Lithium battery or Lead-acid battery	
Max.charging (A) / discharging current (settable) (A)	60/60	100/100
Max. efficiency	94%	
Others		
Range of working temperature	-10°C~+40°C	
Cooling method	Air cooling	
Degree of protection / Altitude (m)	IP20/<1000m	
Relative humidity	0~95%, no condensation	
Dimension (H x W x D mm) / Weight (kg)	610x425x190/19	
Ground fault alarm	Built-in buzzer	
Grid qualification	VDE-AR-N4105, AS/NZS 4777.2:2015, NB/T 32004-2013	
Safety certificate / EMC certificate	IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005	
Factory warranty (years)	3/5	

iMars BD-PS Introduction

Efficient

- Professional BMS, three charging stage, lead-acid battery and lithium iron are compatible.
- Voltage and current charging setup are available.
- Charge and discharge time is adjustable, Maximizing the peak cutting and valley filling performance.

Smart

- RS485*2, CAN*1 (lithium battery), WiFi (optional).
- Multiple monitoring modes: APP, website.
- 50Hz/60Hz auto adaptation.

Reliable

- IP65 protection.
- Use international top brand components, with perfect protection function.

Simple

- Small in size, light in weight, easy to install.
- Friendly HMI, 4.3-inch LCD display.



Specification

BD3KTL-PS	
AC grid parameters	
Rated output power (W)	3000
Max. output current (A)	13
Rated output voltage (V) / frequency (Hz)	230 (L+N+PE), 50/60
Power factor	≥0.99 (±0.95adjustable)
THDi	≤3% (at rated power)
Max. output fault current (A)	50
Battery	
Battery type	Lithium/Lead-acid
Rated voltage (V)	48
Max.charging current (settable) (A)	60
Max. discharging current (settable) (A)	65
charging curves	Three stage
Max. efficiency	93%
Protection	
Protection	DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc.
Others	
Isolation method (battery side)	High-frequency isolation
Degree of protection	IP65
Dimension (H x W x D mm)	360x150x507
Range of working temperature	-25°C~+60°C
Cooling method topology	Air cooling
Relative humidity	0~95%, no condensation
Display	LCD
Communication interface	RS485(standard); WiFi(optional), CAN-BUS
Grid Qualification	VDE-AR-N4105, AS4777/3100
Factory warranty (years)	5

iMars BD-HS Introduction



Efficient

- Battery and grid priority.
- 10ms seamless switching.
- Built-in lithium battery, and the capacity of 2.4-14.4kwh is optional.

Smart

- On-grid and off-grid automatically detect, maximize peak-shaving and valley-filling or self-use performance.
- RS485*3, CAN*2(with lithium battery), WiFi (optional).
- Charging and discharging time is settable.
- Grid-tied output power is adjustable (0~100%).

Reliable

- Professional BMS, intelligent charging function.
- Compatible with lead-acid and lithium battery.
- Charging current is settable according to different battery types.

Simple

- Friendly interface, 4.3 inch LCD display.
- Inverter and battery in one case, easy to operate.

Specification

	BD3KTL-HS	BD5KTL-HS
DC input (PV)		
Max. DC input power (W)	3300	6600
Max. DC input voltage (V)	550	
MPPT range (V)	120~450	
Max. input current (A)	13	13x2
Number of MPPT / String per MPPT	1/1	2/1
AC output 1 (Grid)		
Rated power (W)	3000	4600
Rated grid voltage (V)	208/220/230/240(single phase)	
Rated grid frequency (Hz)	50/60	
Grid voltage range (V)	180~270	
Grid voltage frequency (Hz)	45~55/55~65	
Rated output current (A)	13	20
Power factor	≥0.99 (±0.95adjustable)	
THDi	≤3%(at rated power)	
Max. efficiency	97.20%	97.70%
Euro-efficiency	96.50%	97%
AC output 2 (Load)		
Rated output power (VA)	3000	4600
Rated output voltage (V)	208/220/230/240(±2%)	
Rated output frequency (Hz)	50/60(±0.2%)	
Battery		
Rated voltage (V)	48	
Voltage range (settable) (V)	40-60	
Battery type	Lithium/Lead-acid	
Max.charging current (settable) (A)	60	100
Protection		
Protection	DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc.	
Others		
Isolation method (photovoltaic side)	None	
Cooling method	Air cooling	
Degree of protection / Altitude (m)	IP20/<1000	
Communication interface	RS485(standard); WiFi(optional), Ethernet(optional), CAN-BUS(internal communication), USB, Genset	
Dimension (H x W x D mm)	1043.5x654x605	
Grid qualification	VDE-AR-N4105, AS/NZS 4777.2:2015, NB/T 32004-2013	
Safety certificate / EMC certificate	IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005	
Factory warranty (years)	3/5	

US2000B Lithium Iron Phosphate Battery



- Support parallel application;
- The maximum charge and discharge rate reaches 2C;
- Awarded by TUV (IEC62619),CE, and UN38.3;
- With various communication modules: RS-485, CAN. And we can know of the station of battery whenever through such monitoring modes;
- Real-time monitoring, providing short circuit protection, reverse connection protection, high voltage protection, low voltage protection, charge over current protection, discharge over current protection, over charge protection and over discharge protection, high temperature protection as so on.

Specification

Items	Specification	Remarks
Standard voltage (V)	48	
Rated capacity	50Ah	
Charging ways	0.2C constantly charging to stop value 0.01C	
Size (mm)	440*410*89	
Weight (kg)	24	
Rated discharging value (A)	25	
Discharge voltage (V)	45~54	
Charge Voltage (V)	52.5~54	
Discharging protection current (A)	100	Delay 15s protection, delay 1min after protection and recovery of charging current immediately
Rated charging current (A)	25	
Charging protection current (A)	100	Delay 15s protection, delay 1min after protection and recovery of discharging current immediately
Charge max voltage poing (V)	54±0.1	Suggest charging voltage 53.5±0.5
Charge min voltage (V)	44.5±0.1	
Work temperature	Charge	-10℃~60℃
	Discharge	-10℃~60℃
Commnication	RS232,RS485,Can	
Certification	TUV/CE/Un38.3/TLC	
Life	>10years (25℃/77F)	
Humidity	5%~95%	
Storage temperature	-25℃~60℃	
Circles	6000	

Applications



• Armenia 10KW



• Cambodia 20KW



• China 10KW



• China 5KW



• Australia 5KW



• Thailand 5KW



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