DYNESS

Discover Your Nature

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DYNESS

Dyness

Residential & Commercial Energy Storage Solutions

Discover Your Nature

www.dyness.com

About Dyness

Dyness, founded in 2017, is a global pioneering energy storage system solutions innovator. Relying on advantageous technology and robust product R&D capabilities, Dyness has established a comprehensive product portfolio for full scenarios, including C&I and residential energy storage throughout the entire lifecycle. With its global headquarters in Suzhou City, China, Dyness has provided safe, reliable, and high-quality products and services to over 500,000+ users in 100+ countries and regions.

At Dyness, customer satisfaction is always Dyness' top priority. Aligned with its mission to reduce the Earth's temperature, Dyness is collaborating with 90+ global brand partners to reduce the cost of renewable energy usage for users. As the pace of global energy transition accelerates, Dyness is committed to promoting sustainable development on a global scale through commercial deepening. It strives to work alongside the industry, market and society to build a low-carbon future worldwide.

100+
Global Markets

150+
R&D Staffs

2
Production Centres

120+
IPRs

13+
Global Branches

3GWh
Annual Capacity

500,000+
Users

Global Footprint

Main Shipping Areas
Branches

Dyness Home Energy Storage Solutions

1

DYNESS Battery:

Store excess solar and use it to balance house consumption and power supply.Provide backup power for your home during blackout.

2

Inverter:

Matching with leading inverters.

3

Solar Panel:

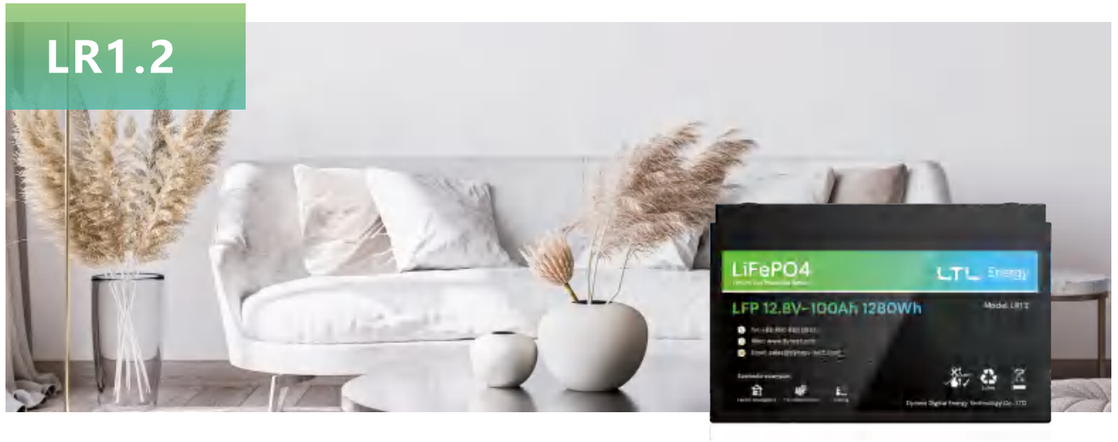
Cooperate with APP to realize Rapid Shutdown of solar panels on roof.

Product overview

Reliable Low Voltage Home Energy Storage Systems

LR1.2/DL2.5/BX51100/DL5.0C/DL5.0X/Powerbox G2 /Tower/Cygni Series/Orion System/PowerBrick /Powerbox Pro/Ultra Cube/DYNE/D8.0HS/D12.0HS

LR1.2



Dyness LR1.2 is a lead to lithium battery (lead-acid replacement battery), which can be a good substitute for lead-acid batteries in some application scenarios, with a senseless replacement experience. In addition, compared with lead-acid batteries, it also has the following characteristics: long life, the daily cost of use compared to lead-acid batteries reduced by 70%; lightweight; more environmentally friendly; highly reliable; no memory effect.

Light Weight
The weight is about 1/3 of a lead-acid battery of the same capacity.

Long Service Life
3 years lifespan, more than 3000 cycles

Flexible Module
Module design, easy expansion in series or parallel

High Protection Level
IP65

Easy Installation
<12kg, convenient for handling and can be used in various scenarios

Technical Specifications

Model	LR1.2
Battery type	LiFePO4
Nominal Battery Energy	1.28kWh
Nominal Capacity	100Ah
Nominal Voltage	10-14.8V
Max. Power Charge/Discharge Current	100A (1C)
Depth of Discharge (DOD)	100%
Net Weight	< 12kg
Dimension[W*D*H]	330mm*172mm*214mm
Charging Temp. Range	0~50℃
Discharging Temp. Range	-20~55℃
Protection level	IP65
Cycle Life [1]	≥3000 cycles
Expansion	4 in series and parallel
Certification & Safety Standard	UN38.3

[1] 3000 cycles: Test Conditions: 0.5C Discharging.@25℃, 100% DOD
4000 cycles: Test Conditions: 0.5C Discharging. @25℃, 80% DOD

DL2.5

Dyness DL2.5 is a good alternative for lead acid battery and a perfect match for off-grid applications in areas with limited or no grid access. It is scalable from 2.56kWh to 40.96kWh (up to 16 units in parallel), offering you sufficient capacity to meet different requirements.

Lead-acid battery alternative
Superior performance with longer lifespan

Module Design
Flexible expansion

Easy Installation
Small size and support wall mounting

High Discharge Rate
Support 1.3C discharge rate

Multiple Communication Methods
CAN/485/Wifi(Optional) communication

Technical Specifications

Model	DL2.5
Cell Technology	LiFePO4
Battery Module Capacity	2.56 kWh
Battery Module Voltage	25.6Vdc
Battery Module Capacity	100 Ah
Battery Module Charge Voltage	28.5Vdc
Recommended Charge/Discharge Current	50A
Max. Charge Current	75A
Max. Discharge Current	130A
Depth of Discharge (DOD)	90%
Cycle Life [1]	>6000
Dimension(W*D*H, mm)	481*221*133mm
Communication	CAN/RS485
WIFI Module	Optional
IP Grade	IP20
Weight	23kg
Charging Temp. Range	0°C~+55°C
Discharging Temp. Range	-20°C~+55°C
Compatible Inverters	Steca/Sorotec/Must/Victron/Growatt/SRNE
Certification	UN38.3/CE-EMC/IEC62619/ECE R10

[1] Test conditions: 0.2C Charging& Discharging, @25°C, 90% DOD

DL5.0C

Dyness DL5.0C adopts economic design, and is tailor-made for residential and small commercial application. This LFP battery module supports remote upgrade and APP monitoring, and provides multiple installation methods. It is scalable from 5.12kWh to 256kWh (max. 50 modules in parallel), providing various energy options to meet different requirements.

APP Monitoring (optional)
Real-time monitoring & Remote upgrade

Module Design
Flexible expansion

Various Mounting Methods
Wall-mounted, floor-standing and stacked

High Safety LFP
Cell level monitoring and balancing

Wide Compatibility
Matching with leading inverters

Technical Specifications

Model	DL5.0C
Battery Type	LiFePO4
Nominal Battery Energy	5.12 kWh
Nomina Capacity	100Ah
Nominal Voltage	51.2V
Operating Voltage	44.8~57.6V
Recomended Charge & Discharge C Rate	0.5C
Maximum Discharge Crate	1C
Recommended Charge/Discharge Current	50A
Max. Charge/Discharge Current	Charge 75A Discharge 100A
Peak Discharge Current	110A(15s)
Depth of Discharge (DOD)	90%
Net Weight	54kg
Dimension[W*D*H]	558*545*150 mm
Charging Temp. Range	0~55°C/-20~55°C (with heating function)
Discharging Temp. Range	-20~55°C
Communication	CAN/RS485/RS232
Cycle Life [1]	≥6000 Cycles
Protection Level	IP20
WIFI Module	Optional
Expansion	Up to 50 units in parallel
Certification & Safety Standard	UN38.3/CE-EMC/IEC62619/CEI-021
Compatible Inverters	SMA/Schneider/Victron energy/Ingeteam/Solis/GoodWe/Growatt/Soplanet/SOFAR/SAJ/DEYE etc.

[1]Test conditions: 0.2C Charging/Discharging, @25°C, 90% DOD

DL5.0X

DYNESS battery DL5.0X is tailor-made for residential and light C&I in the South African market.
The DL5.0X has a high discharge rate of 1.5C, providing users with greater flexibility when using high-power loads off-grid. This LFP battery supports remote software update and APP monitoring and provides multiple installation methods-wall mounted, floor-standing, and stacked. It is scalable from 5.12-256kWh (max.50 modules in parallel), providing various energy storage options to meet different requirements.

APP Monitoring (optional)
Real-time monitoring & Remote upgrade available

Module Design
Flexible expansion

Various Mounting Methods
Wall-mounted, floor-standing and stacked

High Safety LFP
Cell level monitoring and balancing

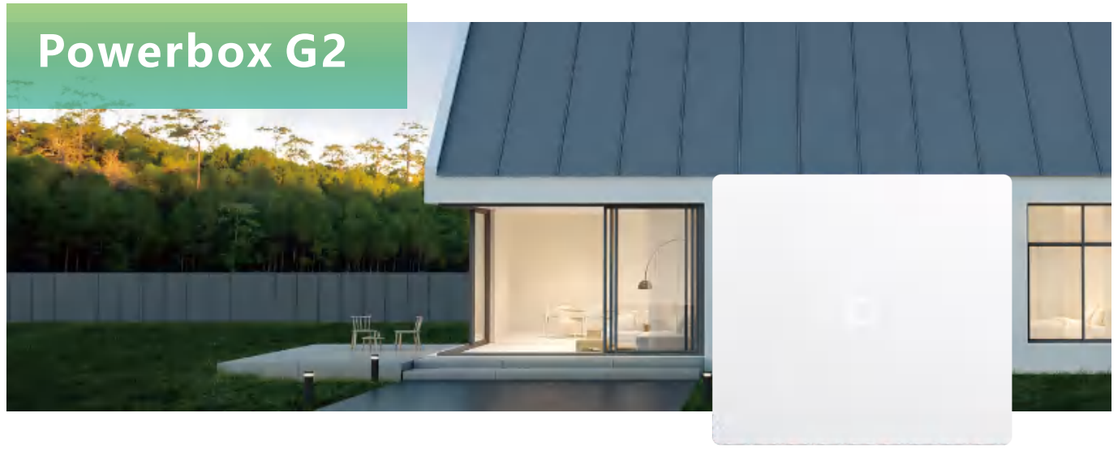
Wide Compatibility
Matching with leading inverters

Technical Specifications

Model	DL5.0X
Battery Type	LiFePO4
Nominal Battery Energy	5.12kWh
Nominal Capacity	100Ah
Nominal Voltage	51.2V
Operating Voltage	44,8~57.6V
Recommended C Rate	0.5C
Maximum Discharge C rate	1.5C
Recommend Charge/Discharge current	50A
Max. Power Charge Current	75A
Max. Power Discharge Current	150A
Peak Power Charge/Discharge Current	160A(15s)
Depth of Discharge (DOD)	90%
Net Weight	53kg
Dimension[W D*H]	558*545*150mm
Charging Temp. Range	0~55°C
Discharging Temp. Range	-20~55°C
Communication	CAN/RS485/R232
Cycle Life [1]	≥6000 Cycles
Protection Level	IP20
Expansion	Upto 50 units in parallel
Certification & Safety Standard	UN38.3
Compatible inverters	SMA/Vinctron/Ingeteam/Delios/Goodwe/Solis/Deye/SAJ/Voltronic/Sungrow etc

[1]Test conditions: 0.2C Charging/Discharging, @25°C, 90% DOD

Powerbox G2



The Powerbox G2 is a type of deep cycle and high capacity LFP battery with improved safety, long lifespan, and optimized user experience. It is especially designed with IP65 for more flexible and easier installation indoor or outdoor with wall-mounted and landed installation options. With up to 10 kWh for a single unit and max 50 units in parallel with superior performance, it can meet the household electricity demand.
Get ready with Powerbox G2 for super power storage for your life.

Lighter and Smaller
15% weight reduction, 30% volume reduction

Build in Active fire protection system

8000Cycles

-20 degrees low temperature charging function
Battery low temperature heating function (optional)

Technical Specifications

Model	Poweerbox G2
Battery Type	LiFePO4
Nominal Battery Energy	10.24kWh
Usable Energy	9.728kWh
Operating Voltage	44.8-57.6V
Nominal Voltage	51.2V
Nominal Capacity	200Ah
Nominal Charge or Discharge Power	5.12kW
Max Discharge Power	10.24kW
Recomended Charge & Discharge C Rate	0.5C
Max Discharge C Rate	1C
Recommended Charge/Discharge Current	100A
Max Discharge Current	200A
Peak Discharge Current	300A (2mins, 25°C)
Depth of Discharge (DOD)	95%
Net Weight	95kg without glass front panel; 98Kg with glass front panel
Dimension[W*D*H]	710*165*640mm
Charging Temp. Range	0 ~ 55℃/-20 ~ 55℃ (optional:with heating function)
Discharging Temp. Range	-20~55℃
Communication	CAN/RS485
Cycle Life [1]	≥8000 Cycles
Protection Level	IP65
Expansion	Up to 50 units in parallel
Color	White
WIFI Module	Built-in WIFI module; APP, OTA function
Battery low temperature heating function	Optional
Active fire protection system	Built-in aerosol fire extinguisher
Certification & Safety Standard	UN38.3/CE-EMC/62619/IEC62040/CE-RED
Compatible Inverters	SMA/Victron/Ingeteam/Delios/Goodwe/Solis /Deye/SAJ/Voltronic/Sungrow etc.

[1]Test conditions: 0.2C Charging/Discharging, @25°C, 95% DOD

PowerBrick

The DYNESS battery PowerBrick module is widely used in energy storage sector. It adopts modular design and can be used for residential applications. The reliable LiFeP04 technology ensures maximum safety and a longer life cycle.

- Compared to the previous generation ,the size is reduced by 24%, and the capacity increases by 40%
- Continuous discharge current 200A, maximum continuous discharge power 10kW
- Fire Protection System: Optional Aerosol fire extinguisher
- 8000Cycles
- Maximum can be expanded to 716.8kWh (no HUB)

Technical Specifications

Model	PowerBrick
Battery Type	LiFePO4
Nominal Battery Energy	14.336kWh
Nominal Voltage/Capacity	51.2V/280Ah
Recommended Charge/Discharge Current	140A (0.5C)
Max. Charge Current	200A
Max. Discharge Current	200A
Depth of Discharge	95%
Communication	CAN/RS485
Cycle Life [1]	≥8000 cycles
Protection Level	IP20
Net Weight	114Kg
Dimension[W*D*H]	435*233*857mm (No wall -mounted bracket)
Maximum Parallel Modules	50
Top Cover/Wheel	Optional
Charging Temp. Range	0~55°C
Discharging Temp. Range	-20~55°C
WIFI Module	Built-in WIFI module; APP OTA function
Fire Protection System	Optional Aerosol fire extinguisher
Certification & Safety Standard	UN38.3/CE-EMC/IEC62619
Compatible Inverters	SMA/Schneider/Victron energy/Ingeteam/Solis/GoodWe/Growatt/Soplanet/SOFAR/SAJ/DEYE etc.

[1]Test conditions: 0.2C Charging/Discharging, @25°C, 95% DOD

Powerbox Pro

The Powerbox Pro is a type of deep cycle and high capacity LFP battery with improved safety, long lifespan, and optimized user experience. It is especially designed with IP65 for more flexible and easier installation indoor or outdoor with wall-mounted and landed installation options. With up to 10 kWh for a single unit and max. 5 units in parallel with superior performance, it can meet the household electricity demand. Get ready with Powerbox Pro for super power storage for your life.

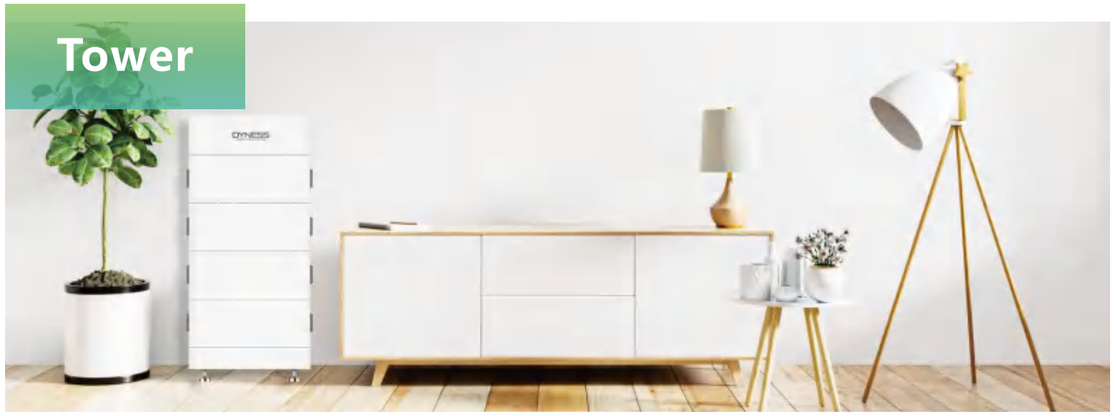
- **APP Monitoring (optional)**: Real-time monitoring & Remote upgrade
- **High protection level**: Indoor & outdoor options
- **Various Mounting Methods**: Wall-mounted or floor-standing installations
- **High Safety LFP**: LFP & smart BMS
- **Wide Compatibility**: Matching with leading inverters

Technical Specifications

Model	Powerbox Pro
Battery Type	LiFePO4
Nominal Battery Energy	10.24 kWh
Operating Voltage	44.8~57.6V
Nominal Voltage	51.2V
Nominal Capacity	200Ah
Nominal Power	5.12kW
Peak Power	10.24kW
Recomended Charge & Discharge C Rate	0.5C
Recommended Charge/Discharge Current	100A
Recommended Depth of Discharge (DOD)	90%
Net Weight	103kg
Dimension[W*D*H]	555*210*928 mm
Charging Temp. Range	0~55°C
Discharging Temp. Range	-20~55°C
Communication	CAN/RS485
WIFI Module	Built-in WIFI module; APP OTA function
Cycle Life [1]	≥6000 Cycles
Protection Level	IP65
Expansion	Up to 10 units in parallel
Certification & Safety Standard	UN38.3/CE-EMC/IEC62619/IEC62040/UKCA/CEC
Compatible Inverters	SMA/Schneider/Victron energy/Ingeteam/Solis/GoodWe/Growatt/Soplanet/SOFAR/SAJ/DEYE etc.

[1]Test conditions: 0.2C Charging/Discharging, @25°C, 90% DOD

Tower



The upgraded Tower Series is tailor-made for large residential application. Stackable design with self-adaptive modules, five energy choices of up to 21.31kWh with parallel connection available, advanced LiFePO4 technology, remote upgrade, high waterproof level and good cooling function... Whatever you need, Dyness Tower Series is there to meet your requirements.

APP Monitoring (build-in wifi)
Real-time monitoring & Remote upgrade

Self-adaption
Auto configuration

Easy Installation
Stackable design, wireless connection

High Protection Level
Indoor & outdoor installations

Wide Compatibility
Matching with leading inverters

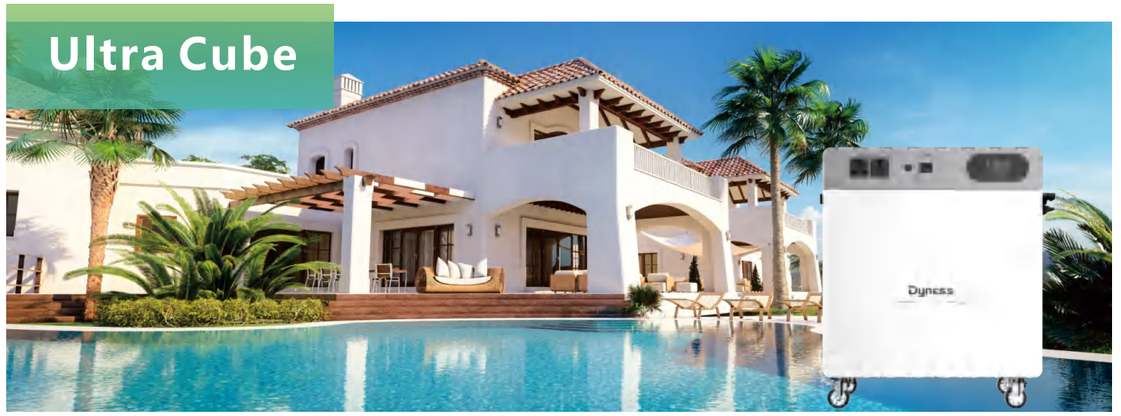
Technical Specifications

Model	Tower T7	Tower T10	Tower T14	Tower T17	Tower T21
Battery Module Type	LiFePO4	LiFePO4	LiFePO4	LiFePO4	LiFePO4
Battery Module Quantity	2	3	4	5	6
Nominal Energy	7.10 kWh	10.66 kWh	14.21 kWh	17.76 kWh	21.31 kWh
Usable Energy	6.745kWh	10.127kWh	13.499kWh	16.872kWh	20.245kWh
Operating Voltage	168 ~219V	252 ~ 328V	336 ~ 438V	420 ~ 547V	504 ~ 657V
Nominal Voltage	192V	288V	384V	480V	576V
Nominal Capacity	37Ah	37Ah	37Ah	37Ah	37Ah
Max. On-grid Continuous Charge/Discharge Power	4.26 kW	6.39 kW	8.52 kW	10.65 kW	12.78 kW
Max. Off-grid Continuous Charge/Discharge Power[1]	4.26 / 7.1 KW	6.39 / 10.66 KW	8.52 / 14.21 kW	10.65 / 17.76 kW	12.78 / 21.31 kW
Depth of Discharge (DOD)	95%	95%	95%	95%	95%
Dimensions [W*D*H](mm)	504*380*700	504*380*900	504*380*1100	504*380*1300	504*380*1500
Net Weight [kg]	105 kg	146 kg	187 kg	228 kg	269 kg
Charging Temperature Range	0~50°C				
Discharging Temperature Range	-10~50°C				
Communication	CAN/RS485				
Cycle life [2]	≥6000 Cycles				
Protection Level	IP54				
Color	White				
Alarms	Overcharge/Overdischarge/Overcurrent/Overtemperature/Short Circuit				
Pros	Can be used in both off-grid and hybrid setups, compact design, modular expansion				
Battery Module Name	HV9637				
Expansion	Max. 12 towers can be connected in parallel				
Certification	UL1973/EMC/IEC62040/IEC62619/IEC62477/IEC63056/UKCA/ROHS/ VDE2510-50/ISO14067/CE-REDU/N38.3				
Compatible Inverters	Ingeteam/Kostal/Goodwe/Solis/SAJ/Sinexcel/Atess/Deye/Sunways/Ecactus etc.				

[1]Maximum off-grid continuous charge/discharge power is 0.6C/0.6C when communicating with Solis and Magerevo inverter ; 0.6C/0.72C when communicating with Deye inverter ; 0.6C/1C when communicating with Dyness and ATESS inverter

[2]Test conditions: 0.2C Charging& Discharging. @25°C, 95% DOD
Note: This specification only suitable for South Africa

Ultra Cube



Ultra Cube is an o-grid all-in-one ESS grandly launched by Dyness, focusing on the urgent need for backup power in areas with unstable power grids. Battery Capacities of 2.4 kWh and 4.8 kWh..., dual-channel MPPT to easily track PV power input, and LCD screen to clearly display the ESS' operating status. Ultra Cube has two sockets that can be connected to household loads directly, and its wheels can be pushed or fixed. Highly integrated and no installation required.

All-in-one design, no installation required.

Dual MPPT design

LCD display

Uninterruptible power supply output, less than 20ms switching.

The grid input voltage range is 180~264V, easily coping with unstable grid conditions.

Technical Specifications

Series Name	Ultra Cube			
Model Name	D2.4XC-2.4		D2.4XC-4.8	
Battery Data				
Battery Type	Li-Ion			
Single Cell Rated Energy (kWh)	2.4			
Single Cell Nominal Capacity (Ah)	50			
Number of modules	1		2	
System capacity(kWh)	2.4		4.8	
Rated Voltage (V)	48			
Maximum Input power of the battery system (W)	1200		2400	
Maximum Output power of the battery system (W)	1200		2000	2400
Cycle Life	≥6000 Cycles			
Max Grid Charging Power (W)	1200		1680	
Max Grid Continuous Charging Current (A)	25		30	
Max PV Charging Power (W)	1200		2400	
Max PV Continuous Charging Current (A)	25		50	

Model Name	Ultra Cube			
PV String Input Data				
Max.PV Input Power（W）	1200		2400	
Number of DC input	4			
Number of MPP Trackers	2			
Max. Input Voltage（V）	65			
MPPT Range(V)	18-60			
Max.Input Currrent(A)	28			
Off-grid Output Data				
Nominal Output Voltage (V)	120	230	120	230
Nominal Apparent Power (VA)	1200		2000	2400
Nominal Output Frequency (Hz)	50/60			
THDv	≤3%			
Overvoltage Protection	Integrated			
Short Circuit Protection	Integrated			
Overtemperature Protection	Integrated			
AC Input Data (On-grid)				
Input Voltage Range (V)	90-132	180-264	90-132	180-264
Nominal AC Grid Frequency (Hz)	50/60			
Max. AC Current From Utility Grid (A)	18	12	18	12
Grid Input Overload Current (A)	20	12	20	12
Power Factor	≥0.97			
Grid To Off-grid Transfer Time (ms)	≤20			
Off-grid To Grid Transfer Time (ms)	≤10			
General Data				
Dimension (W×H×D mm)	540*560*252			
Weight (kg)	43.5		65.5	
Ingress Protection Rating	IP20			
User Interface	LCD			
Communication with BMS	CAN			
Cooling Method	Fan Cooling			
Certification	UN38.3/CE-EMC			

Cygni Series

Dyness Cygni Series is a brand-new all-in-one residential system especially designed for Australian market for both new installation and retrofft scenario. This product offers 8kW and 10kW capacity options, which ensures higher energy independence and more bill-savings. Starring with 7.68kWh, it is expandable up to 15.36kWh if required. Wiring-free stack design makes the system installation easier than ever. LFP cell type and optional AFCI function ensure the safety of the whole system. Cygni also offers an optimized user experience with UPS function, ultra-rapid charge (1C), LCD display, and over-the-air updates & 24/7 monitoring.

Easy Installation
Wiring-free stack design

VPP Ready
Quick Demand Response

Ultra-rapid Charge
One hour to fully charge the battery

Intelligent Monitoring & Control
Real-time Data and Smart Load Control

Ensured Safety & Reliability
AI-motivated AFCI, LiFePO4 Cell Type

Technical Specifications

System Type	Cygni Hybrid		Cygni AC	
Inverter Model	Cygni 8.0HS	Cygni 10.0HS	Cygni 8.0AS	Cygni 10.0AS
Batterr Input Data				
Batterr Type	LiFePO4			
Batterr Module	Cygni BAT-3.8			
Expandable Quantity	2~4			
Usable Energy (kWh)	7.68~15.36			
Operating Voltage (V)	168~438			
Nominal Voltage (V)	192~384			
Max.Charge/Discharge Power (kW)	7.68~11			
Max. DOD (Depth of Discharge)	95%			
Charging/Discharging Temperature Range (℃)	0~50 / -10~50			
Cycle Life	≥6000 Cycles			
PV String Input Data				
Max. PV Input Power (W)	12000	15000		-
Max. PV Input Voltage (V)	600			-
MPPT Range (V)	60~550			-
Start-up Voltage(V)	60			-
Nominal PV Input Voltage (V)	390			-
Max. Input Currrent / Max. Shorr Currrent (A)	16 / 23			-
No. of MPP Trackers / Strings per MPP Tracker	3 / 1			-

System Type	Cygni Hybrid		Cygni AC	
AC Output Data (On-grid)				
Nominal Power Output To Grid (VA)	8000	9999	8000	9999
Max Power Outpur To Grid (VA)	8000	9999	8000	9999
Max Power From Grid (VA)	8000	9999	8000	9999
Nominal Output Voltage (V)	230			
Nominal Output Frequency (Hz)	50			
Output Power Factor	Adjustable from 0.8 leading to 0.8 lagging			
Output THDi (Nominal Power)	< 3%			
AC Output Data (Back-up)				
Nominal Output Power (VA)	8000	10000	8000	10000
Max. Output Power (VA)	9600	12000	9600	12000
Nominal Output Voltage (Vac)	230			
Nominal Output Frequency (Hz)	50			
Output THDv (@Linear Load)	< 3%			
Backup UPS (ms)	< 10			
Inverter Efficiency				
Max. Efficiency	97.5%			
European Efficiency	97.0%			
Protection				
Anti-island Protection	Integrated			
Battery Reverse Protection	Integrated			
Residual Current Monitoring Unit	Integrated			
Over Current/Voltage Protection	Integrated			
AC Short Circuit Current Protection	Integrated			
DC Switch (PV Ⅱ)	Integrated			
AFCI	Optional			
Surge Protection	DC Type Ⅱ/AC Type Ⅲ			
General Data				
Topology	Non-Isolated			
Operating Temperature Range (℃)	-10-50			
Relative Humidity (%)	0-100%			
Operating Altitude (m)	3000			
Cooling	Natural Convection			
Noise (dB)	<35			
Inverter / Battery Module Weight (kg)	27.5 / 41.5			
System Weight (kg)	117.5or159or200.5 (Depending on the module number)			
Inverter / Battery Module Size (W*H*D mm)	650*450*180 / 650*300*180			
System Size (W*H*D mm)	650*1130*180or650*1430*180or650*1730*180 (Depending on the module number)			
Installation Methods	Wall-Mounted & Floor-standing			
Communication	CAN, RS485, Wi-Fi, Bluetooth, Ethernet			
Display	LCD Screen; APP; Web			
Enclosure Type	IP66			
Certifications & Standards	UN38.3 CE-EMC / IEC 62619 / IEC62109 / AS4777.2			

Orion System

Dyness Orion series is an all-in-one system with safe performance and flexible capacity. Equipped with an external HM inverter, it helps users to realize power sufficiency.

Expandable Capacity
9.9kWh -19.9kWh

Backup Solution
Whole Backup & Essential Backup

Easy Installation
Plug & Play Design

Hybrid Inverter
5kW-11.4kW

Technical Specifications

Model	ORION9.9	ORION14.9	ORION19.9
Module Type	LFP	LFP	LFP
Module Number	2	3	4
System Nominal Capacity	52Ah	52Ah	52Ah
System Nominal Battery Energy	9.98kWh	14.98kWh	19.97kWh
System Max. Discharge Power	7.68kW	11.52kW	15.36kW
System Nominal Voltage	192V	288V	384V
System Size	Different combinations, different sizes		
System Voltage Range	168~219V	252~328.8V	336~438V
Battery System Charge Voltage	219V	328.8V	438V
Max Battery System Charge/Discharge Current	40A	40A	40A
Battery System Discharge lower-Voltage	168V	252V	336V
System Configuration	2 Series	3 Series	4 Series
Battery System Max. Charge& Discharge Current	40A	40A	40A
System Recommend Depth of Discharge	90%		
System Max Depth of Discharge	90%		
System Discharge Temp. Range	14°F~122°F		
System Charge Temp. Range	32°F~122°F		
Short Circuit Current	1.5kA		
Warranty	12 Years		
Cycle Life [1]	10000 Cycles		
Enclosure Protection	NEMA 4X		
Battery Module Name	HV9652		
Battery Module Energy	4.99KWh		
Battery Module Voltage	96V		
Battery Module Capacity	52Ah		
Battery Module Weight	127.9lbs(58kg)		
Battery Module Dimension [W*H*D, inch]	21.3*24.3*6.5 in(540*616*165mm)		
System Certification	UN38.3/UL1973/UL9540A/UL9540		

[1]Test conditions:0.2C Charging/Discharging,@77 F,90% DOD

Model	Orion BDU
Operating Voltage	80~750V
Maximum Continuous Current	52A
Dimension [W*D*H, inch]	21.3*12.4*6.5 in (540*316*165mm)
Weight	39.7lbs (18kg)
Enclosure Protection	NEMA 4X

Model	TX5K-HM	TX6K-HM	TX7.6K-HM	TX9.6K-HM	TX11.4K-HM
Battery Input Data					
Battery Type	Orion Battery				
Battery Voltage Range（V）	80~490				
Max.Charge/Discharge Current(A)	40/40				
Max.Charge/Discharge Power(W)	5500	6600	8360	11000	12540

Model	TX5K-HM	TX6K-HM	TX7.6K-HM	TX9.6K-HM	TX11.4K-HM
PV String Input Data					
Max.PV Input Power（W）	7500	9000	11400	15000	17100
Max.PV Input Voltage（V）	600				
MPPT Range(V)	60~550				
SPS Start-up Voltage（V）	60				
MPPT Range For Nominal Power（V）	180~500	210~500	150~500	170~500	200~500
Nominal PV Input Voltage（V）	390				
Max.Input Currrent(A)	15				
Max.Short Currrent(A)	20				
No.of MPP Trackers	2	2	3	4	4
Strings per MPP Tracker	1				
AC Output Data（On-grid）					
Nominal Power Output To Grid（VA）	5000	6000	7600	9600	11400
Max.Power Outpur To Grid（VA） [1]	5000	6000	7600	9600	11400
Max.Power From Grid (VA)	5000	6000	7600	9600	11400
Nominal Output Voltage（V）	120/240				
Nominal Output Frequency（Hz）	60				
Max.AC Current To Grid（A）	20.8	25	31.7	40	47.5
Max.AC Current From Grid（A）	20.8	25	31.7	40	47.5
Output Power Factor	Adjustable from 0.8 leading to 0.8 lagging				
Output THDi (Nominal Power)	<3%				
AC Output Data (Back-up)					
Max.Output Power(VA)	5000	6000	7600	10000	11400
Peak Output Power(VA) [2]	9120,60sec	9120,60sec	9120,60sec	13680,60sec	13680,60sec
Max.Output Current(A)	20.8	25	31.7	40	47.5
Nominal Output Voltage（Vac）	120/240(without transfomer)				
Nominal Output Frequency（Hz）	60				
Output THDv (@Linear Load)	<3%				
Whole Home Back-up	Yes, With SCD				
Efficiency					
MPPT efficiency	99%	99%	99%	99%	99%
Max.efficiency	97.5%	97.5%	97.6%	97.7%	97.7%
CEC-efficiency	97.0%	97.0%	97.0%	97.0%	97.0%
Protection					
Anti-island Protection	Integrated				
PV&Battery AFCI	Integrated				
Rapid Shut Down	Integrated				
PV Reverse Protection	Integrated				
Battery Reverse Protection	Integrated				
Residual Current Monitoring Unit	Integrated				

Model	TX5K-HM	TX6K-HM	TX7.6K-HM	TX9.6K-HM	TX11.4K-HM
Over Current/Voltage Protection	Integrated				
DC Switch(PV)	Integrated				
Surge Protection	DC TypeⅡ/AC TypeⅢ				
Communication Interface					
Battery BMS	CAN				
EMS	RS485				
Meter	RS485				
Dry Contact	YES(DO)				
Cloud	Wi-Fi, Bluetooth, LAN				
Display/User Interface	LED/APP				
Certifications&Standards					
Grid Regulation	UL1741 SB, California Rule 21, Hawaiian Electric Co. SRD-V2.0, IEEE 1547, IEEE 1547a, IEEE 1547.1				
Safety Regulation	UL1741, CSA-C22.2 No.107.1-16, UL1998, UL 1699B				
EMC	FCC Part15 CLASS B				
General Data					
Operating Temperature Range(□)	-13-140(-25-60℃)				
Relative Humidity(%)	0-100%				
Operating Altitude(ft)	≤9843ft(3000m)				
Cooling	Natural Cooling				
Noise(dB)	<35				
Weight(lbs)	59.5lbs(27kg)				
Size(W/H/D)(inch)	19.1*28.7*8.7(486*730*221.5mm)				
Installation	Wall-Mounted				
Enclosure Type	NEMA 4X(IP66)				

[1]According to the local grid redgulation
[2]Can be reached only if PV and battery power is enough

Smart Control Device(SCD)

Model	SCD-200-63
Electrical Data	
Nominal Output Voltage (V)	240
Output Voltage Range (V)	211~264
Feed-in Type	Split Phase
Nominal AC Voltage of Line Conductor (V)	120/240
Nominal AC Frequency (Hz)	60
AC Frequency Range (Hz)	58.5~61.2
Current Rating (From Grid) (A)	200
"Max.Continuous Current FromInverter (A)"	47.5
"Maximum Overcurrent Protection of Main Breaker (A)"	200
Maximum Overcurrent Protection of Circuit Breaker ofInverter (A)	63
General Data	
Operating Temperature Range (°F)	-13°F~+140°F(-25°C~+60°C)
Max.Operating Altitude (ft)	9842ft (3000m)
Cooling Method	Natural Cooling
Communication with Inverter	RS485
Weight (lb)	35.3lbs (16kg)
Dimension (WxHxD in)	22.2*25.5*6.0(564*648*153mm)
Mounting Method	Wall Mounted
Ingress Protection Rating	Type 3R(IP44)
Certification	
Safety Regulation	UL1741,CSA 22.2 No.107-01
EMC	FCC part15 CLASS B

DYNE 3.6/5.0/6.0/8.0L-1P-A

The DYNE 3.6/5.0/6.0/8.0L-1P-A series is designed for residential hybrid systems. The inverter can work with Dyness low-voltage lithium-ion battery DL5.0X/DL5.0C/ Powerbox Pro to maximize self-consumption and provide backup power if the grid fails and there is not enough PV power to cover load demand.

- Generator connectivity with multiple input methods and automatic generator On/Off control
- 6 customizable charge/discharge time settings
- Automatic UPS switching(<4ms)
- 10 second 200% surge power backup overload capability
- Supports peak shaving control in both "self-use" and "generator" mode
- Supports 1ph and 3ph flexible connection with max 36kW(3.6/5.0/6.0K) and 48kW(8.0K) in parallel
- Up to 135A(3.6/5.0/6.0K) and 190A(8.0K) max charge/discharge current

Technical Specifications

Model	3.6 L-1P-A	5.0L-1P-A	6.0L-1P-A	8.0L-1P-A
Input DC (PV side)				
Recommended max. PV power	5.76 kW	8 kW	9.6 kW	12.8 kW
Max. input voltage	600 V			
Rated voltage	330 V			
Start-up voltage	90 V			
MPPT voltage range	90 - 520 V			
Max. input current	16 A / 16 A			32A/20A
Max. short circuit current	24 A / 24 A			36A/30A
MPPT number/Max. input strings number	2/2			2/3
Battery				
Battery type	Li-ion			
Battery voltage range	40-60 V			
Max. charge / discharge power	3.6 kW	5 kW	6 kW	8kW
Max. charge / discharge current	80 A	112 A	135 A	190A
Communication	CAN/RS485			
Output AC (Grid side)				
Rated output power	3.6 kW	5 kW	6 kW	8kW
Max. apparent output power	4 kVA	5.5 kVA	6.6 kVA	8.8kVA
Operation phase	1/N/PE			
Rated grid voltage	220 V / 230 V			
Rated grid frequency	50 Hz / 60 Hz			
Rated grid output current	16.4 A / 15.7 A	22.7 A / 21.7 A	27.3 A / 26.1 A	36.4 A / 34.8 A
Max. output current	20 A	25 A	30 A	40A
Power factor	>0.99 (0.8 leading - 0.8 lagging)			
THDi	<2%			

Input AC (Grid side)				
Input voltage range	187-253 V			
Max. input current	25 A	32 A	40 A	50A
Frequency range	45-55 Hz / 55-65 Hz			
Output AC (Back-up)				
Rated output power	3.6 kW	5 kW	6 kW	8kW
Max. apparent output power	2 times of rated power, 10s			
Back-up switch time	<4ms			
Rated output voltage	1/N/PE, 220 V / 230 V			
Rated frequency	50 Hz / 60 Hz			
Max. output current	20 A	25 A	30 A	40A
THDv (@linear load)	<2%			
Efficiency				
Max. efficiency	> 96.9%			
EU efficiency	> 96.5%			
Protection				
DC reverse-polarity protection	Yes			
Ground fault monitoring	Yes			
Integrated AFCI (DC arc-fault circuit protection)	Yes			
Protection class/Over voltage category	I/II (PV and BAT), III (MAINS and BACKUP and GEN)			
General Data				
Dimensions (W*H*D)	406*560*205 mm			406*560*215 mm
Weight	24 kg			26kg
Topology	High frequency isolation (for battery)			
Operating ambient temperature range	-40 ~ 60°C			
Ingress protection	IP66			
Cooling concept	Natural convection			Intelligent redundant fan-cooling
Max. operation altitude	4000 m			
Certification & Standard	NRS 097-2-1, IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-2/-3/-4			
Features				
DC connection	MC4 plug (PV port) / Terminal Block (BAT port)			
AC connection	Terminal Block			
Display	LED + APP			
Communication	RS485, CAN, Optional: Wi-Fi, LAN			

D8.0HS/D12.0HS

The D8.0HS/D12.0HS is specially designed for hybrid system. The inverter can work with Dyness high voltage lithium-ion battery HV series and Tower series to maximize self-consumption and provide backup power when there is power outage.

- Integrated 4 MPPTs for multiple array orientations
- Automatic UPS switching (< 10ms)
- Supports 150% PV oversizing
- Max charge/discharge current of 40A
- Remote monitoring, control&upgrade function
- Multiple operation modes available to maximize self-consumption, increase benefit

Technical Specifications

Model	D8.0HS	D12.0HS
Battery Input Data		
Battery Type	Lithium battery	
Battery Voltage Range (V)	80~490	
Max.Charge/Discharge Current (A)	40/40	
Max.Charge/Discharge Power (W)	8800	13200
PV String Input Data		
Max.PV Input Power (W)	12000	18000
Max.PV Input Voltage (V)	600	
MPPT Range (V)	60~550	
SPS Start-up Voltage (V)	60	
MPPT Range For Nominal Power (V)	180~500	210~500
Nominal PV Input Voltage (V)	390	
Max.Input Currrent (A)	16	
Max.Short Crrrent (A)	23	
No.of MPP Trackers	3	4
Strings per MPP Tracker	1	
AC Output Data (On-grid)		
Nominal Power Output To Grid (VA)	8000	12000
Max.Power Output To Grid (VA) *	8000	12000
Max.Power From Grid (VA)	8000	12000
Nominal Output Voltage (V)	230	
Nominal Output Frequency (Hz)	50	
Nominal.AC Current To Grid (A)	34.8	52.2
Max.AC Current From Grid (A)	34.8	52.2

Output Power Factor	Adjustable from 0.8 leading to 0.8 lagging	
Output THDi (Nominal Power)	<3%	
AC Output Data (Back-up)		
Norminal.Output Power(VA)	8000	12000
Rated. Output Current(A)	34.8	52.2
Nominal Output Voltage (Vac)	230	
Nominal Output Frequency (Hz)	50	
Output THDv (@Linear Load)	<3%	
Backup ups	<10ms	
Generator input	Yes	
Efficiency		
MPPT effciency	99.9%	99.9%
Max.effciency	97.5%	97.5%
Protection		
Anti-island Protection	Integrated	
PV&Battery AFCI	Integrated	
PV Reverse Protection	Integrated	
Battery Reverse Protection	Integrated	
Residual Current Monitoring Unit	Integrated	
Over Current/Voltage Protection	Integrated	
DC Switch(PV)	Integrated	
Surge Protection	DC Type II / AC Type III	
Communication Interface		
Battery BMS	CAN	
EMS	RS485	
Meter	RS485	
E-Stop	YES (DI)	
Dry-Point	YES (DO)	
Cloud	Wi-Fi,Bluetooth	
Display/User Interface	LED/APP	
General Data		
Operating Tenperature Range (F)	-13-140 (-25-60℃)	
Relative Humidity (%)	0-100%	
Operating Altitude (m)	3000m	
Cooling	Nature Cooling	
Noise (dB)	<35	
Weight (kg)	30	
Size(W/H/D) (mm)	486*730*210	
Installation	Wall-Mounted	
Enclosure Type	NEMA 4X (IP65, can outdoor use)	
Certifications&Standards		
Grid Regulation	NRS 097	
Safety Regulation	IEC/EN 62109-1， IEC/EN 62109-2	
EMC	IEC/EN 61000-6-1/2/3/4	

Dyness Tower Matching Guide
(Dyness D12.0HS Single Phase Hybrid Inverter)

Tower – T7

Dyness Tower Matching Guide				
Inverter	D12.0HS			
Quantity of Tower	2	3	4	5
Max. charging power (kW)	7.68	7.68	7.68	7.68
Max. discharging power (kW)	7.68	7.68	7.68	7.68
Max. charging/discharging current(A)	40	40	40	40
Nominal battery energy (kWh)	14.2	21.3	28.4	35.5

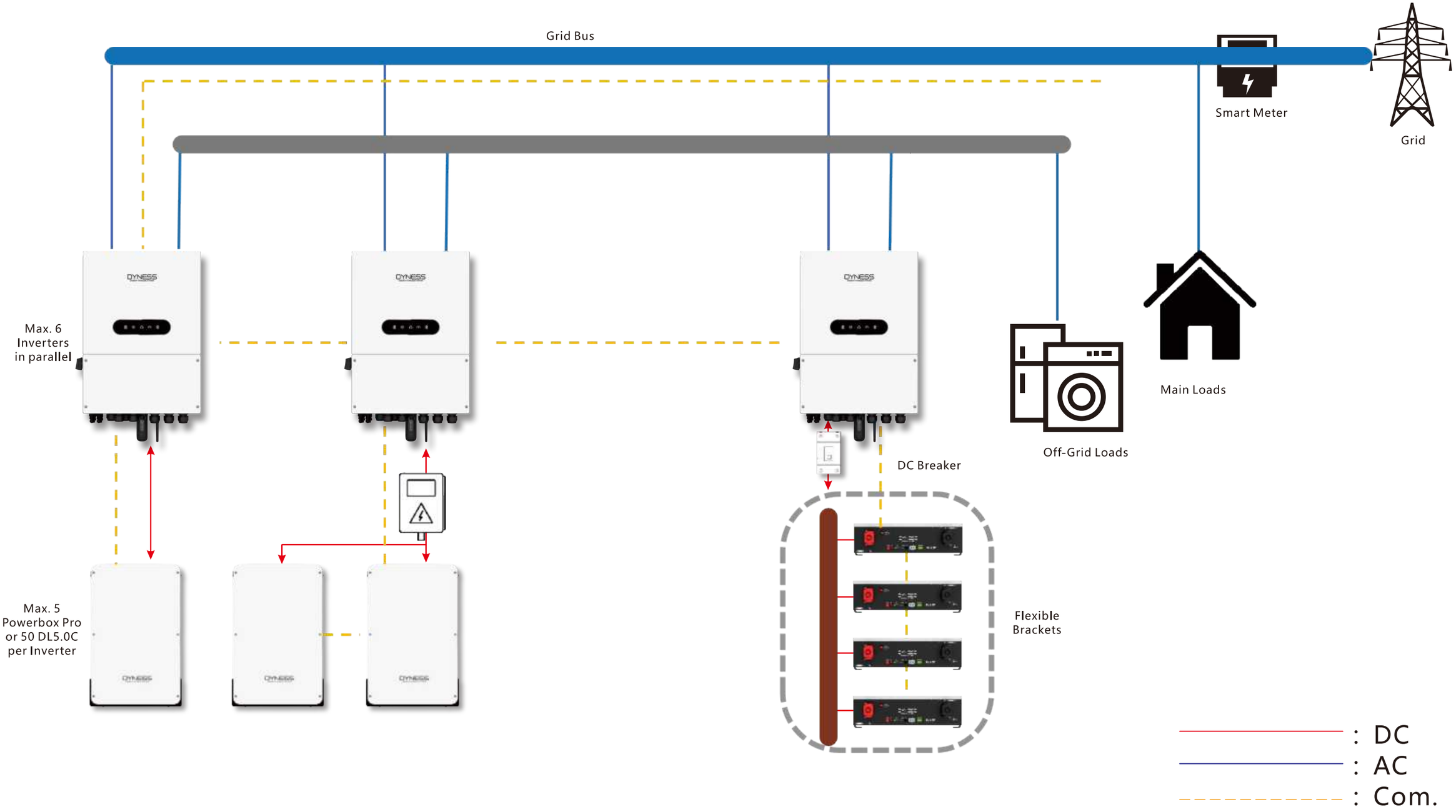
Tower – T10

Dyness Tower Matching Guide				
Inverter	D12.0HS			
Quantity of Tower	2	3	4	5
Max. charging power (kW)	11.5	11.5	11.5	11.5
Max. discharging power (kW)	11.5	11.5	11.5	11.5
Max. charging/discharging current(A)	40	40	40	40
Nominal battery energy (kWh)	21.3	31.98	42.6	53.25

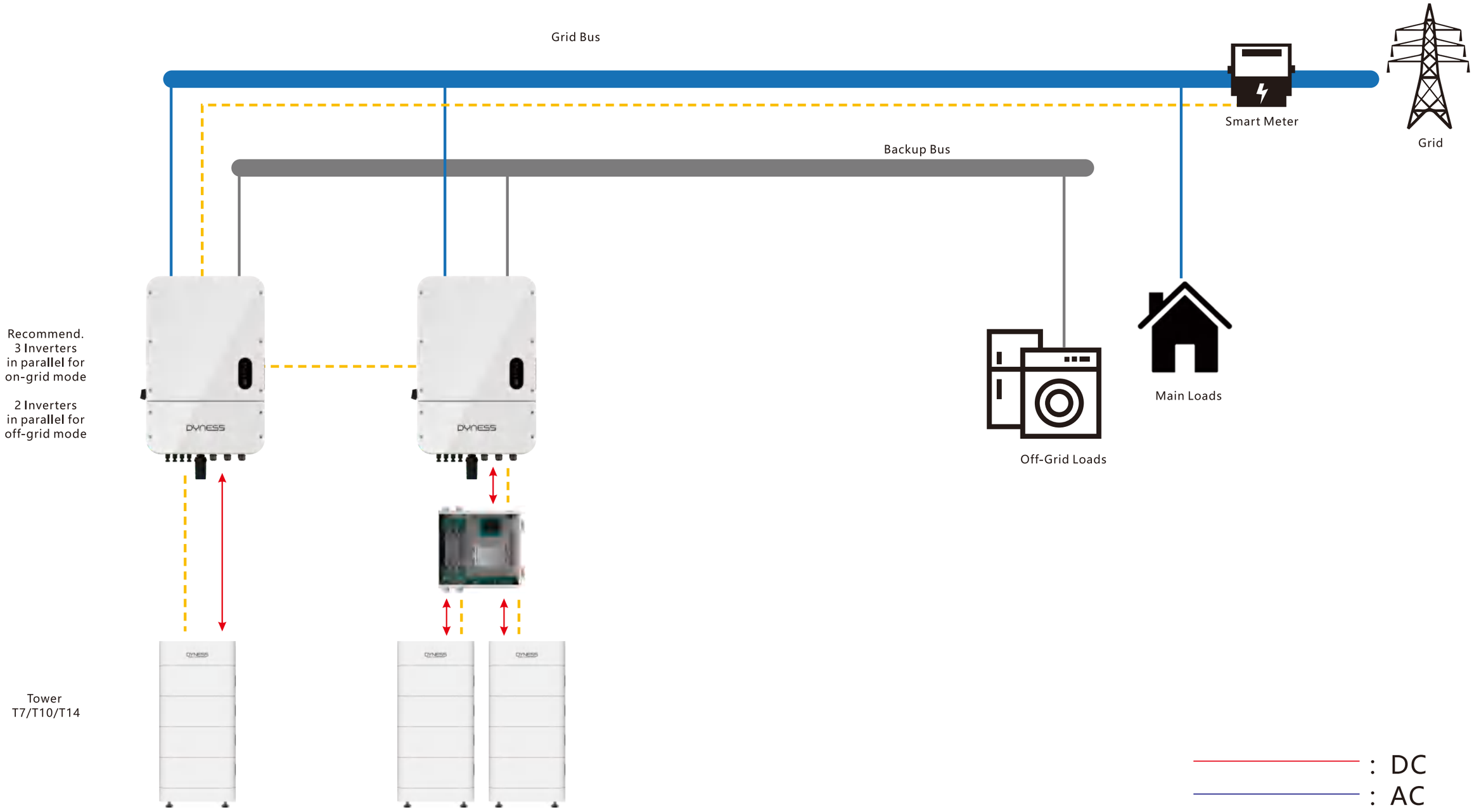
Tower-T14

Dyness Tower Matching Guide				
Inverter	D12.0HS			
Quantity of Tower	2	3	4	5
Max. charging power (kW)	12	12	12	12
Max. discharging power (kW)	12	12	12	12
Max. charging/discharging current(A)	40	40	40	40
Nominal battery energy (kWh)	28.4	42.63	56.8	71

Dyness Energy Storage System
Parallel Connections



Dyness Energy Storage System
Parallel Connections

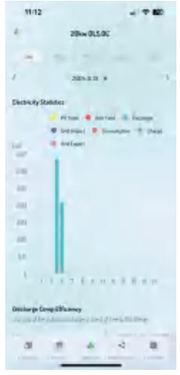


Why Choose Dyness Energy System?

Monitor Your System with Dyness Smart APP and Website

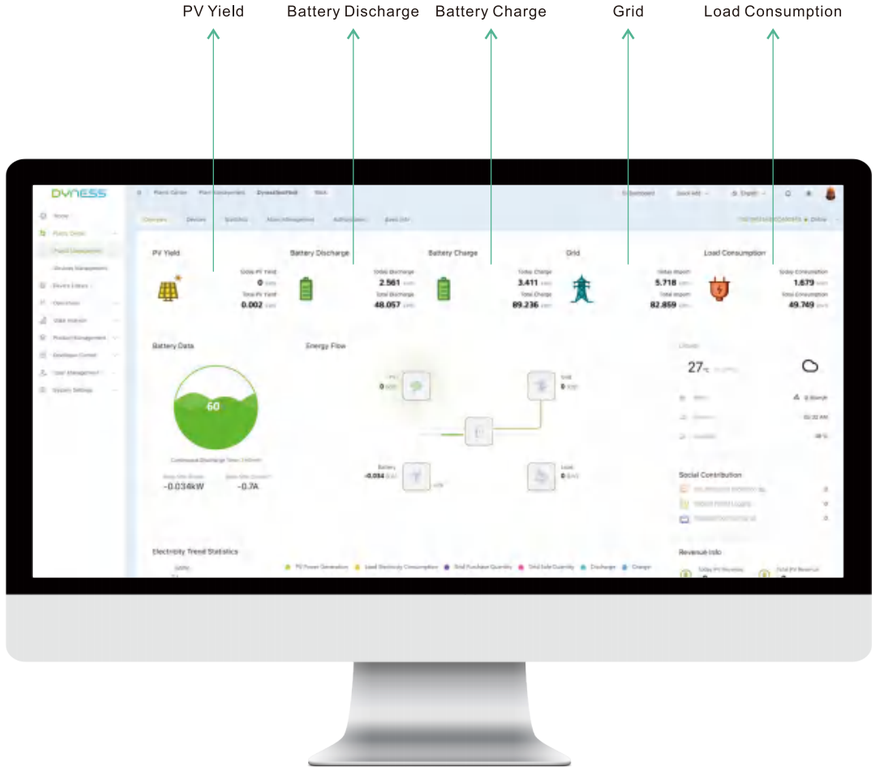
Monitor Your System with Dyness APP

Download the Dyness Smart App in App Store or Google Play, User can monitor battery SOC, energy, etc. in real-time.

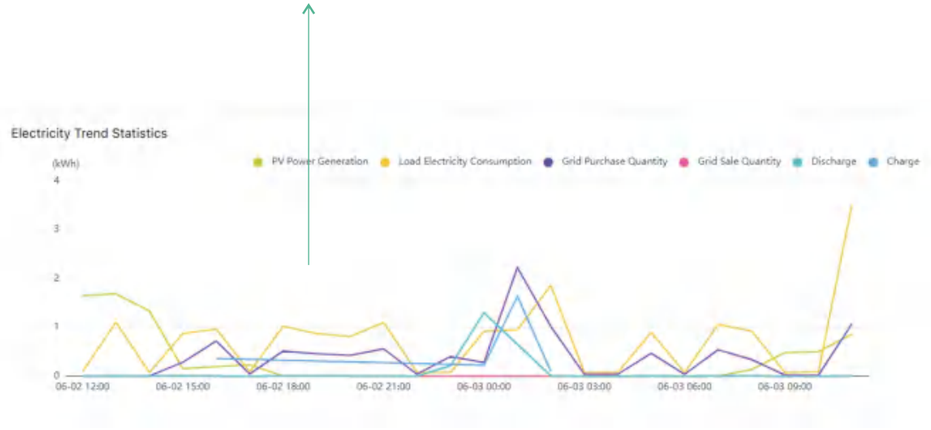


Monitor Your System with Dyness Website

User can monitor battery SOC, energy, etc. in real-time via website as well.



Energy Trend in the Past 24 Hours

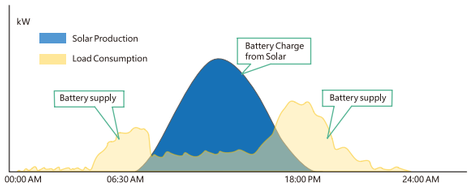


Plant Energy and Revenue Statistics

Enhance Self-Sufficiency, Reduce Electricity Bills

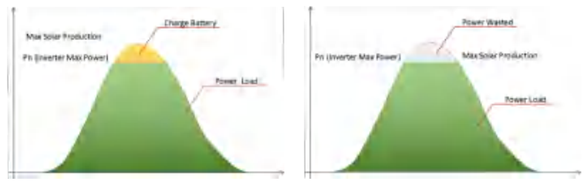
Self-Consumption Mode

Dyness battery system integrates a smart self-control logic to maximize solar energy self-consumption, thus to reduce grid consumption. Solar powers house loads first, and keep its production ability to charge battery, which will be used to supply home when solar is weak.



Solar Maximization: Solar Overloading

Solar Overloading ability allows solar produce higher power than inverter capacity. Users could put much more panels on his roof to support load on AC side and charge battery on DC side together, thus to reduce the waste of exceeded solar capacity during a sunny day.

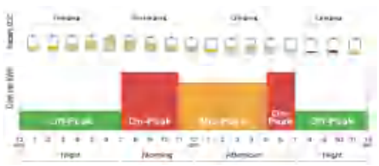


With Solar Overloading Ability

Without Solar Overloading Ability

Time-Of-Use Mode: Battery Makes Your Solar Worth More

Used in TOU mode, battery supports solar power be stored during Off-Peaks and discharge during On-Peaks, which makes solar power a higher value.



Battery Operation Examples in Time-of-Use Mode

Storage Contribution

Battery is an essential path to reduce home electricity bills by reducing power consumption from utility, as well to provide a cheaper power source during On-Peaks.

On-Peak House Power Contribution

Protections From Power Shortage or Blackouts

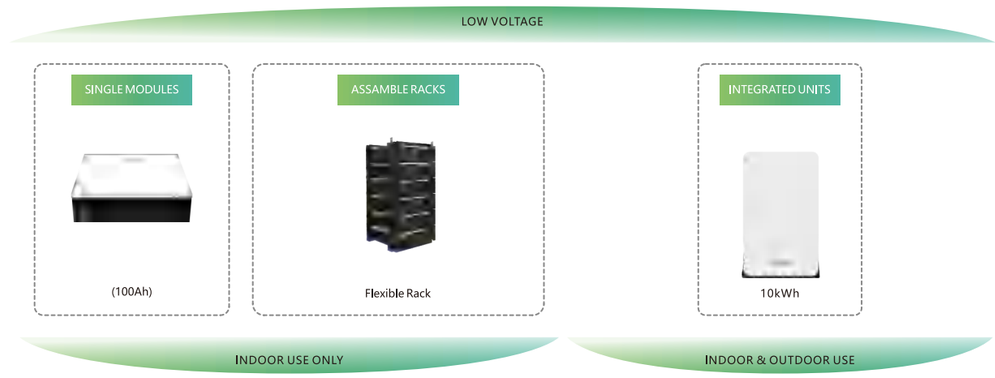
Dyness battery system store solar energy, to provide power supply during blackouts. Fit for specific house consumption demand start from 1.28kWh for low voltage battery system.

Dyness batteries are designed for power backup operations and off-grid solutions.

Dyness Solution Features

Various Options

DYNESS solutions covers various scenarios, including indoor & outdoor use, low voltage and various capacity options from 1.28kWh to 256kWh etc., by the way to diversify battery pack design. DYNESS has the ambition to be able to provide storage solutions for all houses.



Flexible Energy Extension

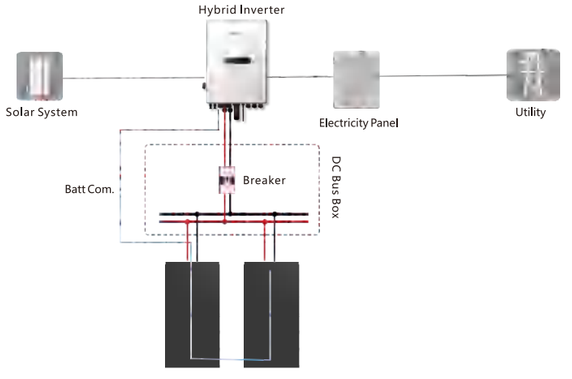
DYNESS battery modules are designed to allow users extend his system capacity as house power demand might increase, or as you have the plan to use more clean energy by increase house solar self-consumption rate. You will have easy access to the details of energy extension on user manuals or contact DYNESS.

System Paralleling

DYNESS DC BUS Box is designed for battery system paralleling, by which the battery capacity could be extended further.

DC BUS Box are designed for different battery modules:

Battery	DC BUS Box	Max Battery Units
Flexible bracket	Customized	≤50 Modules
Powerbox Pro	Customized	5



Reduce Soft Cost - Installer Friendly

Installation contributes a big part of system soft cost. An easy installation design helps much to reduce whole system costs. DYNESS battery is designed to reduce installation & commissioning time, and prevent fault installations as well.

Easy Energy Extension

DYNESS provides a flexible rack solution for 100Ah low voltage battery modules, which makes system layout flexible and energy extension easier.

Considerate Design - User Friendly

House Fit-In

DYNESS select white color for its outdoor-used battery packs and have a good control on battery size to make sure they are able to fit in most house styles and suitable for various installation areas like in garage or under basement.

Convenient User Interface

DYNESS battery has OTA function to allow users to check battery operations on smart phone and laptop both locally and remotely.

Remote Monitor

Dyness C&I Energy Storage Solutions

BF100/Tower/Power Rack HV4/DH100F/DH200F /DH200Y/BY5000

Tower

Dyness Tower Series is designed for small and medium sized C&I energy storage applications to increase PV self-consumption,provide backup power and peak-shaving,etc. Stackable design with up to 21.31kWh per cluster with max 12 clusters up to 255.6kWh parallel connection available, over-the-air updates, high waterproof level and good heat dissipation... Whatever you need, DYNESS Tower Series is there to meet more of your requirements.

Features and Advantages

APP Monitoring(build-in wifi)
Real-time monitoring & Remote upgrade

Self-adaption
Auto configuration

Easy Installation
Stackable design, wireless connection

High Protection Level
Indoor & outdoor installations

Wide Compatibility
Matching with leading inverters

Inverter/PCS		Dyness Tower configuration	Baery Energy (kWh)	Dyness Tower configuration	Baery Energy (kWh)	Dyness Tower configuration	Baery Energy (kWh)
Deye	20kW	2–5T21+1 DC combiner box	42.6–106.5	6–10T21+1 DC combiner box+1 Hub	127.8–213		
	30kW	2–5T21+1 DC combiner box	42.6–106.5	6,8,10T21+2 DC combiner box	127.8,170.4, 213	7&9T21+1DC combiner box+1 Hub	149.1 and 191.7
	50kW	4–5T21+1 DC combiner box	85.2–106.5	6,8,10T21+2 DC combiner box	127.8,170.4,213	7&9T21+1DC combiner box+1 Hub	149.1 and 191.7
Solis	30kW	3–5T21+1 DC combiner box	85.2–106.5	6,8,10T21+2 DC combiner box	127.8,170.4,213	7&9T21+1DC combiner box+1 Hub	149.1 and 191.7
	50kW	4–5T21+1 DC combiner box	85.2–106.5	6,8,10T21+2 DC combiner box	127.8,170.4,213	7&9T21+1DC combiner box+1 Hub	149.1 and 191.7
Megarevo	100kW	8–10T21+1 DC combiner box+1 Hub	170.4–213				
Goodwe	40kW	4–5T21+1 DC combiner box	85.2–106.5	6–10T21+1 DC combiner box+1 Hub	127.8–213		
	50kW	4–5T21+1 DC combiner box	85.2–106.5	6–10T21+1 DC combiner box+1 Hub	127.8–213		

Technical Specifications

Model	Tower T14	Tower T17	Tower T21
Battery Module Type	LiFePO4	LiFePO4	LiFePO4
Battery Module Quantity	4	5	6
Nominal Energy	14.21 kWh	17.76 kWh	21.31 kWh
Usable Energy	13.499 kWh	16.872 kWh	20.245 kWh
Operating Voltage	336 ~ 438V	420 ~ 547V	504 ~ 657V
Nominal Voltage	384V	480V	576V
Nominal Capacity	37Ah	37Ah	37Ah
Max. On-grid Continuous Charge/Discharge Power	8.52 kW	10.65 kW	12.78 kW
Max. Off-grid Continuous Charge/Discharge Power [1]	8.52/14.21 kW	10.65/17.76 kW	12.78/21.31 kW
Recommended Depth of Discharge (DOD)	95%	95%	95%
Dimensions [W*D*H]	504*380*1100 mm	504*380*1300 mm	504*380*1500 mm
Net Weight [kg]	187 kg	228 kg	269 kg
Charging Temperature Range	0~50°C		
Discharging Temperature Range	-10~50°C		
Communication [2]	CAN/RS485		
Cycle life	≥6000 Cycles		
Protection Level	IP54		
Color	White		
Alarms	Overcharge/Overdischarge/Overcurrent/Overtemperature/Short Circuit		
Pros	Can be used in both off-grid and hybrid setups, compact design, modular expansion		
Battery Module Name	HV9637		
Expansion	Max. 12 towers can be connected in parallel		
Certification	UN38.3/CE-EMC/IEC62040/IEC62619/IEC62477/IEC63056/UKCA/UL1973/ ROHS/VDE2510-50/ISO14067/CE-RED		
Compatible Inverters	Dyness/Ingeteam/Kostal/Goodwe/Solis/SAJ/Sinexcel/Atess/Deye/Sunways/Megarevo etc.		

[1]Maximum off-grid continuous charge/discharge C-rate is 0.6C/0.6C when communicating with Solis and Megarevo inverter ; 0.6C/0.72C when communicating with Deye inverter ; 0.6C/1C when communicating with Dyness and ATESS inverter

[2]Test conditions: 0.2C Charging& Discharging. @25°C, 80% DOD
Note: This specification only suitable for South Africa

STACK100

The DYNESS STACK100 energy storage system is widely used in energy storage sector. It adopts modular design and can be used for residential and C&I applications. The reliable LiFeP04 technology ensures maximum safety and a longer life cycle.

Features and Advantages

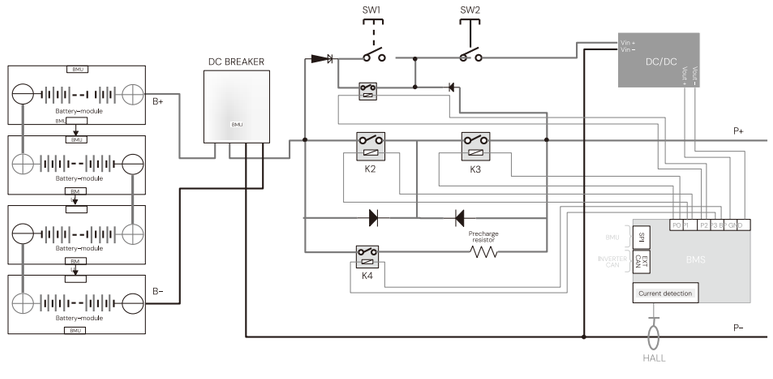
- **Each PACK has an independent fire extinguishing device.**
- **1C discharge, built-in air-cooling system**
- **Single system capacity**
  15.36-76.8kwh, expandable to a maximum of 921.6kWh in parallel
- **Convenient installation and Total installation time ≤1h**
- **Flexible space layout ability**

Technical Parameters of STACK100

Model	STACK100
Battery Type	LiFePO4
Module Voltage/Capacity	51.2V/100Ah
Single Module Weight	47Kg
System Modules Serial Number	3~15
System Energy Range	15.36-76.8kWh
Operating Voltage	134-864V
Recommended Charge/Discharge Current	50A (0.5C)
Max.Charge/Discharge Current	100A (1C)
Peak Discharge Current(2min 25°C)	125A(1.25C)
Depth of Discharge	95%
Communication	CAN/RS485
Cycle Life [1]	≥6000 Cycles
Max. Single Cluster Dimension[W*D*H]	591*390*1700mm-11 module
Charging Temp. Range	0~55°C
Discharging Temp. Range	-20~55°C
Protection Level	IP20
Fire Protection System	Aerosol fire extinguisher
Installation method	Stack type
Cooling method	Forced wind cooling
WIFI Module	Built-in WIFI module; APP OTA function
Certification & Safety Standard	CE-EMC/CE-RED/62619/63056/62477/62040/UN38.3
Compatible Inverters	Ingeteam/Solis/GoodWe/Growatt/Solplanet/SAJ/DEYE/Hoymiles/SOLINTEG etc.

[1]Test conditions: 0.2C Charging/Discharging, @25°C, 95% DOD

Topology



PowerRack HV4 Rack Energy Storage System

Dyness HV4 rack system is also designed for indoor use high-voltage systems, with a larger capacity of each module to fit medium C&I scenarios, to increase solar self-consumption, provide backup power or peak-shavings, etc

Features and Advantages

High Safety LFP
LFP & smart BMS

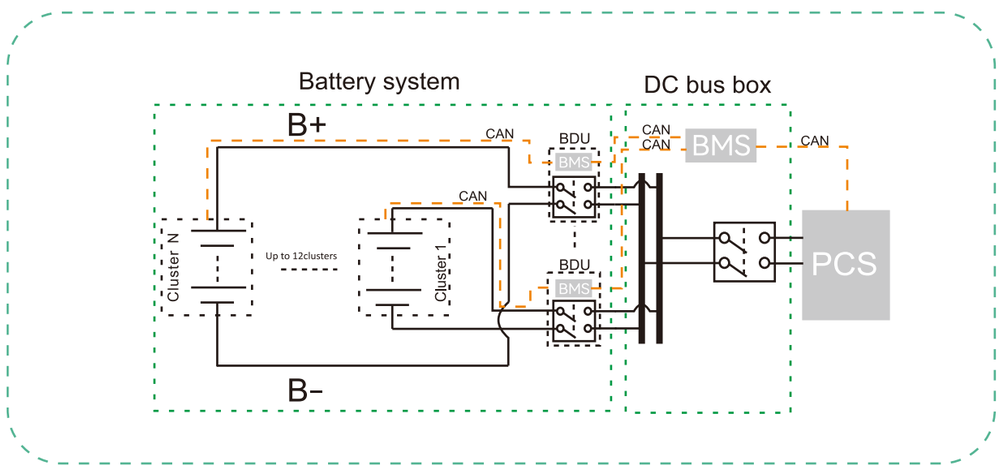
Expandable
Capacity up to 76.8kWh per cluster

Tailor-made Cabinet
Suitable for multi-module installation

High Voltage
High system effeiciency

Wide Application
Cover all needs in commercial fields

Topology



Technical Parameters of PowerRack HV4

Model	HV51100
Battery Type	LiFePO4
Nominal Battery Energy	5.12kWh
Nominal Capacity	100Ah
Nominal Voltage	51.2V
Net Weight	43.5kg
Dimension(W*D*H)	481*535*140mm
Charging Temp. Range	0-55oC
Discharging Temp. Range	-20-55°C
Communication	CAN
Cycle Life [1]	≥6000 Cycles
Protection Level	IP20
Expansion	Up to 15 units in series
Compatible Inverters	Ingeteam/Solis/Goodwe/Solplanet/SAJ/DEYE/Hoymiles/SOLINTEG/SINENG/Sinexcel/TBB power
Certification & Safety Standard	UN38.3/CE-EMC

[1]Test conditions: 0.2C Charging/Discharging, @25°C, 95% DOD

Rack Type	PowerRack Hv4		
Rack System Control unit Type[2]	BDU100		
Battery Module Type	Hv51100		
Battery Module Quantity	4~7 units	8~11 units	12~15 units
Nominal Battery Energy	5.12kWh×n(n=4~7)	5.12kWh×n(n=8~11)	5.12kWh×n(n=12~15)
Nominal Capacity	100Ah	100Ah	100Ah
Nominal Voltage	51.2V×n(n=4~7)	51.2V×n(n=8~11)	51.2V×n(n=12~15)
Nominal Power Output	3.07kW×n(n=4~7)	3.07kW×nA(n=8~11)	3.07kW×n(n=12~15)
Max.Power Output	5.12kW×n(n=4~7)	5.12kW×n(n=8~11)	5.12kW×n(n=12~15)
Recommend Charging Current	50A	50A	50A
Recommend Discharging Current	50A	50A	50A
Net Weight	62+12+43.5kg×n(n=4~7	86+12+43.5kg×n(n=8~11)	62×2+12+43.5kg×n(n=12~15)
Dimension(W*D*H)	601*610*1392mm	601*610*2012mm	601*610*1392mm*2(Two clusters)
Module Quantity and Configuration	4~7 Units in series	8~11 Units in series	12~15 Units in series

[2]HV51100 battery module need to be used with BDU100 control unit

BF100 Series Battery storage system

BF100 is an outdoor DC battery cabinet with air-cooling system, flexible capacity of 71/86/100kWh, which can be equipped with hybrid inverter to realize AC output.

Features and Advantages

Ultimate security

Preventative fire strategy with three-level detection and TMG which ensure active firefighting remains effective in the event of a power outage.

Flexible expansion

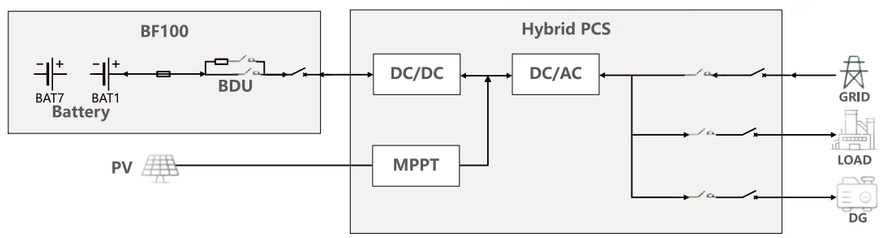
71~100kWh capacity available for single unit.

Highly efficient

280Ah LFP battery with high energy density;

Self-developed EMS to reduce system energy consumption, and improve charging & discharging efficiency.

Topology



Technical Specifications of BF100

Model	BF100-C70	BF100-C80	BF100-C100
Battery			
Battery Type	LFP (LiFePO4)		
Battery Capacity	280Ah		
Rated Current	140A		
Max. Current	160A		
PACK Configuration	1P16S		
PACK Quantity	5 PACK/Cluster	6 PACK/Cluster	7 PACK/Cluster
Voltage Range	232~288Vdc	278.4~345.6Vdc	324.8~403.2Vdc
Nominal Capacity	71kWh	86kWh	100kWh
System			
Weight	1100±100kg	1200±100kg	1100±100kg
Dimension (W*D*H)	725*1224*2258mm		
Max. Efficiency	≥94% (TBD)		
Air Conditioner Power	2kW (Cooling), 1kW (Heating)		
Temperature	-20~50℃ (Derating above 45℃)		
Humidity	0~95%RH (Non-condensing)		
Ingress Protection	IP55		
Anti-corrosion Grade	C3/C5		
Cooling Method	Air-cooling		
Noise	≤65dB (TBD)		
Display	Touch screen		
Elevation	3000m (Derating above 2000m)		
Fire Protection	Aerosol/Perfluorohexanone		
Communication	Ethernet/4G/RS485		
Certification	CE		

DH100F Series All-in-one PV+ESS

All-in-one air cooling energy storage system with 71~100kWh available for a single unit, suitable for big house and small commercial and industrial applications. Supports full scenario with functions like timed scheduling, peak shaving, PV self generation and consumption and so on.

Features and Advantages

Full-scenario

All-in-one multifunctional integration, supporting PV and generator access, grid-to-off-grid switching.

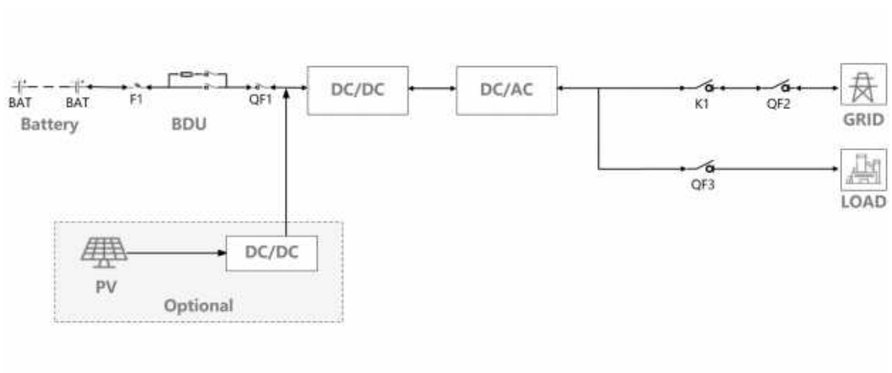
Flexible expansion

Single cabinet capacity of 71/86/100kWh optional;
Reserved DC expansion interface and support AC expansion

Highly efficient and low-cost

280Ah LFP battey with high energy density.
EMS Intelligent control;
Modular design, backward and bottom output, reduce infrastructure cost

Topology



Technical Specifications of DH100F

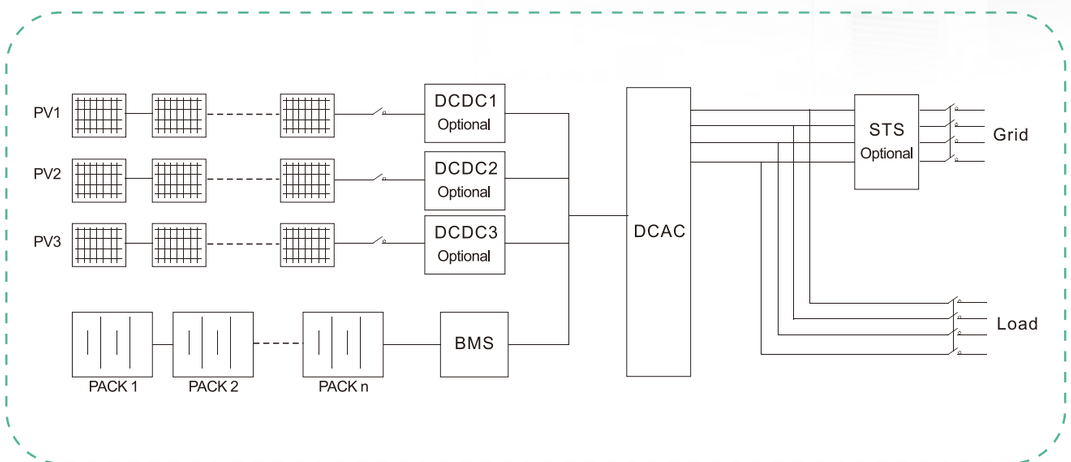
Model	DH100F-71kWh	DH100F-86kWh	DH100F-100kWh
Battery			
Battery Type	LFP (LiFePO4)		
Battery Capacity	280Ah		
Rated Current	140A		
Max. Current	160A		
PACK Configuration	1P16S		
PACK Quantity	5 PACK/Cluster	6 PACK/Cluster	7 PACK/Cluster
Voltage Range	232~288Vdc	278.4~345.6Vdc	324.8~403.2Vdc
Nominal Capacity	71kWh	86kWh	100kWh
AC (On-grid)			
Rated Power	35kW	40kW	50kW
AC Maximum Current	60A	74A	86A
AC Rated Voltage	400Vac		
Wiring Method	3P4L+PE		
Frequency	50Hz/60Hz		
Power Factor	0.8 (Leading)~0.8 (Lagging)		
THDi	< 5% (Rated power)		
AC (Off-grid)			
Rated Power	35kVA	40kVA	50kVA
AC Maximum Current	60A	74A	86A
AC Rated Voltage	400Vac		
Wiring Method	3P4L+PE		
Frequency	50Hz/60Hz		
Unbalanced Load	100%		
THDv	< 3% (Liner load)		
Photovoltaic			
Max. Input Power	25kW*2	30kW*2	35kW*2
Max. Input Current	80A*2		
Short-circuit Current	100A*2		
Max. Voltage	1000Vdc		
Input Voltage	300~1000Vdc	350~1000Vdc	400~1000Vdc
MPPT Path	2		
System			
Weight	1500±100kg	1600±100kg	1700±100kg
Dimension (W*D*H)	1200*1224*2258mm		
Max. Efficiency	≥84% (TBD)		
Temperature	-20~50℃ (Derating above 45℃)		
Humidity	0~95%RH (Non-condensing)		
Ingress protection	IP55		
Anti-corrosion Grade	C3		
Cooling Method	Air cooling		
Noise	≤70dB (TBD)		
Elevation	3000m (Derating above 2000m)		
Fire Protection	Aerosol/Perfluorohexanone		
Communication	Ethernet/4G/RS485		
Certification	CE, TUV		

DH200F All-in-one PV+ESS

All-in-one integrated system design inside the Cabinet to fulfill C&I scenarios.

Features and Advantages

- Overall solar+storage solution
- All-in-one design concept
- High-level safety design
- Convenient outdoor setup
- Allow flexible system design
- Capacity expandable to megawatts



Technical Specifications of DH200F

Model	DH200F
Battery	
Battery Type	LFP (LiFePO4)
Battery Capacity	280Ah
PACK Configuration	1P16S
PACK Quantity	15 PACK/Cluster
Rated Current	140A
Max. Current	160A
Voltage Range	672~864Vdc
Nominal Capacity	215kWh
AC (On-grid):	
Rated Power	100kW
AC Maximum Current	167A
AC Rated Voltage	400Vac
Wiring Method	3P4L+PE
Frequency	50Hz/60Hz
Power Factor	1(Leading)~1(Lagging)
THDi	≤3% (Rated power)
Max. Number Of Parallel Expansions	12
AC(Off-grid):	
Rated Power	100kW
AC Rated Voltage	400Vac
AC Maximum Current	167A
Wiring method	3P4L+PE
Frequency	50Hz/60Hz
Unbalanced Load	100%
THDv	< 3% (Liner load)
Max. Number Of Parallel Expansions	5
Photovoltaic	
Max. Input Power	50kW (Power 1.1 times overload)
Max. Input Current	100A
Short-circuit Current	150A
Max. Voltage	670Vdc
Input Voltage	200-670Vdc
MPPT Path	0~3
System	
Weight	2800±100kg
Dimension (W*D*H)	1850*1265*2250mm
Max. Efficiency	≥87% (TBD)
Air Conditioner Power	3kW (Cooling), 1kW (Heating)
Temperature	-20~50℃(Derating above 40℃)
Humidity	0~95%RH (Non-condensing)
Ingress protection	IP55
Anti-corrosion Grade	C3
Cooling method	Air cooling
Noise	≤75dB
Elevation	3000m (Derating above 2000m)
Display	Touch screen
Fire Protection	Aerosol/Perfluorohexanone
Communication	Ethernet/4G/RS485
Certification	CQC, CE, TUV

DH200Y All-in-one Liquid Cooling System

Dyness' first high security, high energy density DC1000V liquid cooling all-in-one energy storage system, compact structure design reduces space, 232kWh in a single cabinet, supports AC and DC side expansion at any time, zero parallel capacity loss.

Features and Advantages

Safe and Reliable
Triple-level fire suppression, active discharge, and explosion-proof design

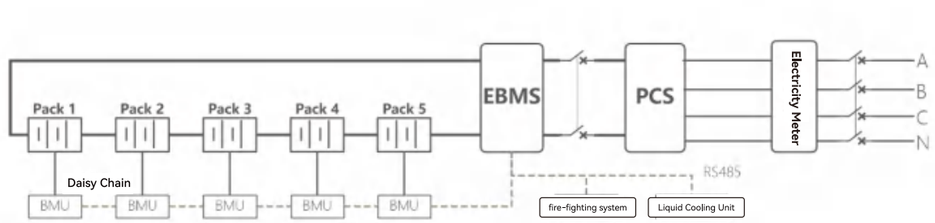
High Energy Density
Occupies an area of 1.58 m², energy density up to 147kWh/m²

Intelligent and Efficient
Intelligent Precision Liquid Cooling with Cluster-Level Temperature Difference Under 3°C

High-level Protection
C3/C5 Anti-corrosion grade optional, PACK+PCS IP65 Ingress protection

Minimalist O & M
Pre-maintenance plan, fully modular design, minimalist operation and maintenance

Flexible Expansion
Single-unit reserved expansion interface, Flexibly support DC expansion;
Supports up to 10 units in parallel, expandable to 2.3MWh



Technical Specifications of DH200Y

Model	DH200Y
Battery	
Battery Type	LFP (LiFePO4)
Battery Capacity	280Ah
PACK Configuration	1P52S
PACK Quantity	5 PACK/Cluster
Rated Current	140A
Max. Current	160A
Voltage Range	754~936Vdc
Nominal Capacity	232kWh
AC (On-grid)	
Rated Power	100kW
AC Maximum Current	145A
AC Rated Voltage	400Vac
Wiring Method	3P4L+PE
Frequency	50Hz
Power Factor	1(Leading)~1(Lagging)
THDi	≤3% (Rated power)
Max. Number Of Parallel Expansions	10
System	
Weight	2600±100kg
Dimension (W*D*H)	1055*1645*2398mm
Max. Efficiency	≥90% (TBD)
Liquid-cooling Power	2.5kW (Cooling), 2kW (Heating)
Temperature	-20~50℃ (Derating above 45℃)
Humidity	0~95%RH (Non-condensing)
Ingress Protection	IP55
Anti-corrosion Grade	C3/C5
Cooling Method	PACK Liquid-cooling + PCS Air-cooling
Noise	≤75dB
Elevation	3000m (Derating above 2000m)
Display	Touch screen
Fire Protection	Aerosol/Perfluorohexanone
Communication	Ethernet/4G/RS485
Certification	CQC, CE, TUV

BY5000 Liquid Cooling Container

BY5000 is a 20ft container energy storage product, which adopts 375Ah cell and has a better temperature field. The system adopts intelligent liquid-cooling temperature control technology, featuring higher efficiency and longer life.

Features and Advantages

Ultimate Security

Three-stage fire protection + active venting + explosion-proof design;
Cell pressure detection, three-stage fuse,real-time insulation check

Highly Efficient and Flexible

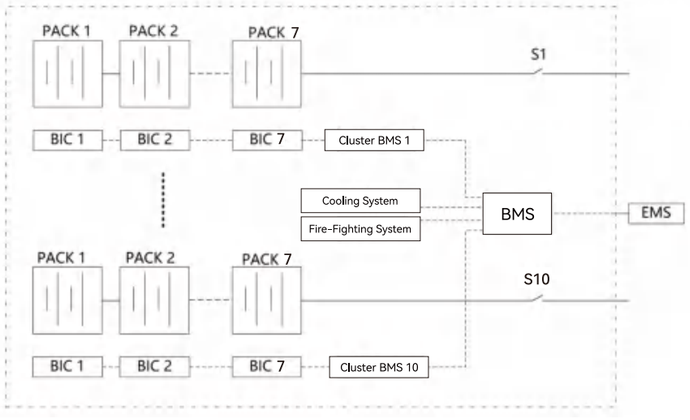
Intelligent Precision Liquid Cooling with Cluster-Level Temperature Difference of 1.5°C;
One cluster, one management string design, zero parallel connection loss

High Energy Density

Large battery, up to 5MWh in a 20ft container

Minimalist O & M

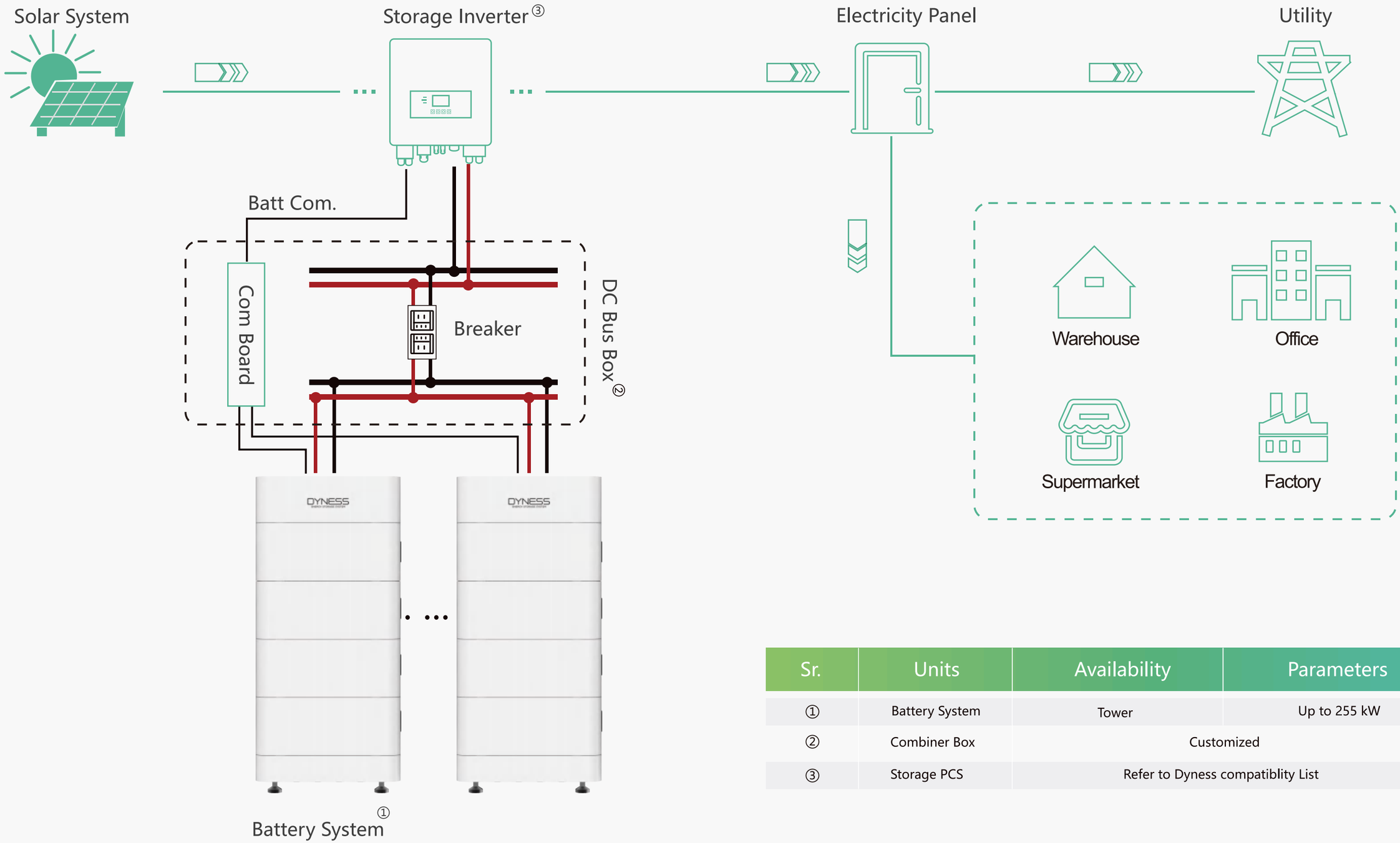
Modular & non-walk-in design, pre-assembled, intelligent minimalist operation and maintenance



Technical Specifications of BY5000

Model	BY5000
Battery	
Battery Type	LFP (LiFePO4)
Battery Capacity	375Ah
Rated Current	1880A
Max. Current	2120A
PACK Configuration	1P60S
PACK Quantity	7 PACK*10 Cluster
Voltage Range	1176~1500Vdc
Nominal Capacity	5.04MWh
System	
Weight	43t (TBD)
Dimension (W*D*H)	6058*2438*3400mm (TBD)
Max. Efficiency	≥93% (TBD)
Liquid-cooling Power	60kW (Cooling) (TBD)
Temperature	-20~50℃ (Derating above 45℃)
Humidity	0~95%RH (Non-condensing)
Ingress Protection	IP55
Anti-Corrosion Grade	C5
Cooling Method	Liquid-cooling
Elevation	3000m (Derating above 2000m)
Display	Touch screen
Fire Protection	PACK/System/Water fire protectionVentilation & Explosion protection system
Communication Protocol	4G, Modbus RTU, Modbus TCP/IP
Standards-compliant	GB/T36276, GB/T34131, IEC62619, IEC63056, IEC60730, EN61000-6-2/4, IEC 62933, UL9540A

Product topology diagram



Sr.	Units	Availability	Parameters
①	Battery System	Tower	Up to 255 kW
②	Combiner Box	Customized	
③	Storage PCS	Refer to Dyness compatiblity List	

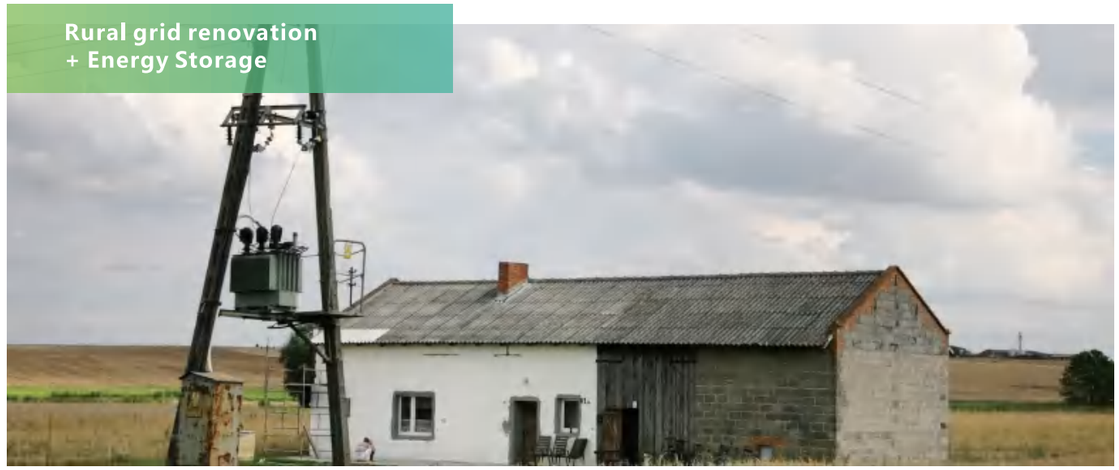
Typical Application Scenarios

High Energy Consumption Industry + Energy Storage

Photovoltaic Storage Charging Station

Data Center + Energy Storage Project

Rural grid renovation + Energy Storage



Zero-carbon Smart Park + Energy Storage

Energy Storage + Microgrid