

 **Expandable Capacity**
9.9kWh - 19.9kWh

 **Backup Solution**
Whole Backup & Essential Backup

 **Easy Installation & Maintenance**

 **Hybrid Inverter**
5kW-11.4kW



Orion Series

 UL1973/UL9540A/UL9540

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



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
Normal Battery System Charge/Discharge Current	26A	26A	26A
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 (when used in communication with the inverter)	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	10 Years		
Cycle Life	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
Rated Current	25A
Maximum Continuous Current	52A
Dimension [W*D*H, inch]	21.26*12.44*6.54
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	Lithium battery				
Battery Voltage Range (V)	80~490				
Max.Charge/Discharge Current(A)	40/40				
Max.Charge/Discharge Power(W)	5500	6600	8360	11000	12540
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 Current(A)	15				
Max.Short Current(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 Output To Grid (VA) *	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)**	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 transformer)				
Nominal Output Frequency (Hz)	60				
Output THDv (@Linear Load)	<3%				
Whole Home Back-up	YES				
Efficiency					
MPPT efficiency	99.9%	99.9%	99.9%	99.9%	99.9%
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				
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				
EV Charger	RS485(Reserved)				
E-Stop	YES(DI)				
Dry-Point	YES(DO)				
Cloud	Wi-Fi, Bluetooth; Optional: 4G, LAN				
Display/User Interface	LED/APP				

Model	TX5K-HM	TX6K-HM	TX7.6K-HM	TX9.6K-HM	TX11.4K-HM
General Data					
Operating Temperature Range(°F)	-13-140(-25-60°C)				
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)				
Certifications&Standards					
Grid Regulation	UL1741 SA,California rule 21,HECO Rule 14,IEEE1547,IEEE1547.1				
Safety Regulation	UL1741,CSA 22.2No.107-01, UL 1998,UL1699B				
EMC	FCC Part15 CLASS B				

* According to the local grid redgulation

** 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 Reqluation	UL1741,CSA 22.2 No.107-01
EMC	FCC part15 CLASS B