

RENEWABLE SOLUTIONS

Synerji Electrical has a range of Pumps and Solar Inverters to provide a variety of solutions for domestic irrigation, swimming Pools, agriculture and domestic solar power. The **370W and 550W 220V Domestic Pumps** have an electrophoretic pump body and motor front cover with an embedded brass plate and brass impeller.

The **120W – 1000W Submersible Pumps** feature a three-phase brushless motor. The outlet, Pump & Motor Body are made of Stainless Steel. The **500W, 600W Solar Pool Pump** features a built-in 48V charge Controller, while the **1000W Solar Pool pump** has a separate 110V charge controller.

The range of Synerji inverters includes the 3KVA 3000W off grid, 5KVA 5000W off grid and 5KVA 5000W On/off grid.

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DOMESTIC WATER PUMP

370W - 220V

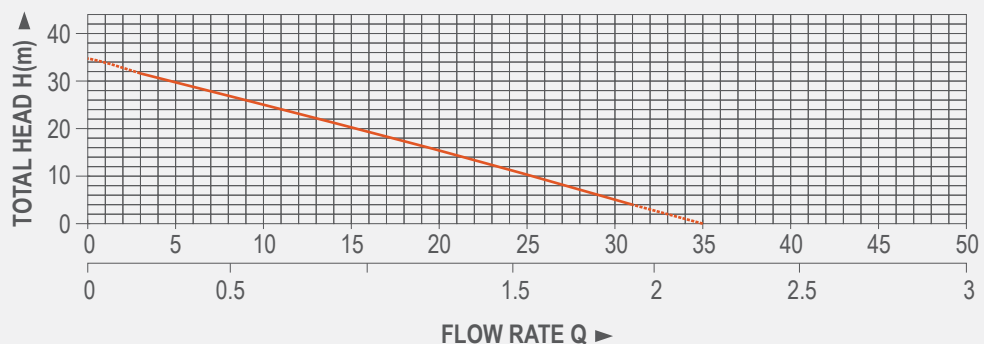
SYPDM220V35L370W



PERFORMANCE TABLE

TYPE	Q (m ³ /h)	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1
	Q (L/min)	0	5	10	15	20	25	30	35
370W	H(m)	35	27	25	18	14	11	5	2

PERFORMANCE CHART AT n=2900rpm



35L/min MAX FLOW RATE	35m MAX HEAD	1" INLET OUTLET SIZE
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DOMESTIC WATER PUMP

550W - 220V

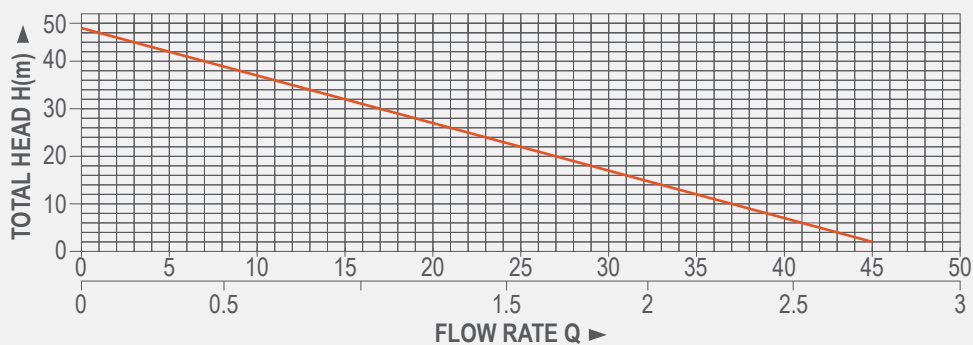
SYPDM220V45L550W



PERFORMANCE TABLE

TYPE	Q (m ³ /h)	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4
	Q (L/min)	0	5	10	15	20	25	30	35	40
550W	H(m)	48	44	40	37	31	20	16	13	2.5

PERFORMANCE CHART AT n=2900rpm



45L/min
MAX FLOW RATE

48m
MAX HEAD

1"
INLET
OUTLET
SIZE

SOLAR POOL PUMP

500W



SYPSOP48V12MF500W



PUMP SPECIFICATIONS

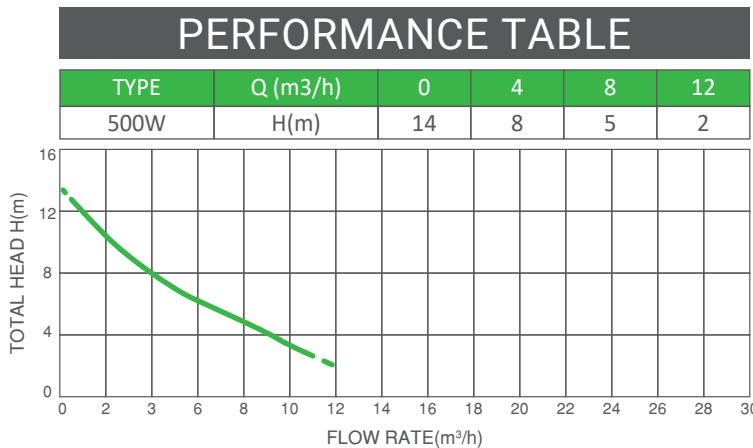
- 48V | 500W
- 10m³/h Max flow rate
- 11m head (Max) @ 1m³/h
- 3m head @ 10m³/h
- 2 X 2" (50mm) Inlet/Outlet size

CONTROLLER SPECIFICATIONS

- Max. 100VDC
- Min. VOC: 68VDC
- Rate Current: 10A
- Max. Current: 12A

PV SOLAR PANEL SPECIFICATIONS (RECOMMENDED)

- 2 x 330W
- Min. 1.3x load in Watts
- <100 VOC



WHATS IN THE BOX

- 500W Solar Pool Pump
- Built-in 100VDC Solar Charge Controller
- 1x Heat Shrinkable tube
- 1.5m cable with MC4 connector

WHAT ELSE IS NEEDED

- Cable (< 50m use 4mm² cable, > 50m use 6mm² cable)

SOLAR POOL PUMP 600W



SYPSOP48V15MF600W



PUMP SPECIFICATIONS

- 48V | 600W
- 11m³/h Max flow rate
- 12m head (Max) @ 1.3m³/h
- 3m head @ 11m³/h
- 2 X 2" (50mm) Inlet/Outlet size

CONTROLLER SPECIFICATIONS

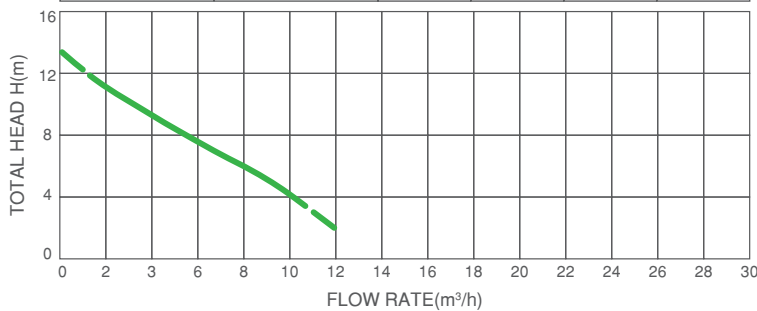
- Max. 100VDC
- Min. VOC: 68VDC
- Rate Current: 10A
- Max. Current: 10A

PV SOLAR PANEL SPECIFICATIONS (RECOMMENDED)

- 2 x 395W
- Min. 1.3x load in Watts
- <100 VOC

PERFORMANCE TABLE

TYPE	Q (m ³ /h)	0	4	8	12
600W	H(m)	14	8	6	2



WHATS IN THE BOX

- 600W Solar Pool Pump
- Built-in 100VDC Solar Charge Controller
- 1x Heat Shrinkable tube
- 1.5m cable with MC4 connector

WHAT ELSE IS NEEDED

- Cable (< 50m use 4mm² cable, > 50m use 6mm² cable)

SOLAR POOL PUMP 1000W



SYPSOP110V25MF1000W



PUMP SPECIFICATIONS

- 110V | 1000W
- 25m³/h Max flow rate
- 15m Max head
- 2 X 3" (80mm) Inlet/Outlet size

CONTROLLER SPECIFICATIONS

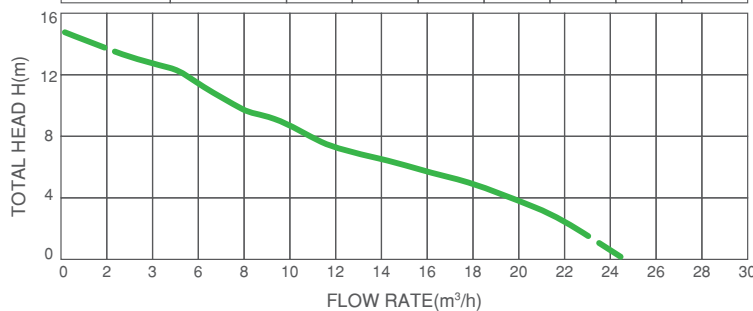
- Rated Voltage: 110VDC
- Rated Current: 12.5A
- Maximum Open Circuit Voltage (VOC): 200VDC
- Maximum Power: 1200W
- Ambient Temperature: -20°C ~ + 50°C

PV SOLAR PANEL SPECIFICATIONS (RECOMMENDED)

- 4 x 330W
- Min. 1.3x load in Watts
- <200 VOC

PERFORMANCE TABLE

TYPE	Q (m ³ /h)	0	4	8	12	16	20	24
1000W	H(m)	15	13	10	8	6	4	1



WHATS IN THE BOX

- 1000W Solar Pool Pump
- Built-in 110VDC Solar Charge Controller
- 1x Heat Shrinkable tube
- 1.5m cable with MC4 connector

WHAT ELSE IS NEEDED

- Cable (< 50m use 4mm² cable, > 50m use 6mm² cable)

SOLAR SUBMERSIBLE PUMP

120W 0.76m³h

SYPSOS24V0.76MF120W



PUMP SPECIFICATIONS

- 24V | 120W
- 0.76m³h Max flow rate
- 55m Max head
- 3/4" Outlet size
- 3" Diameter

CONTROLLER SPECIFICATIONS

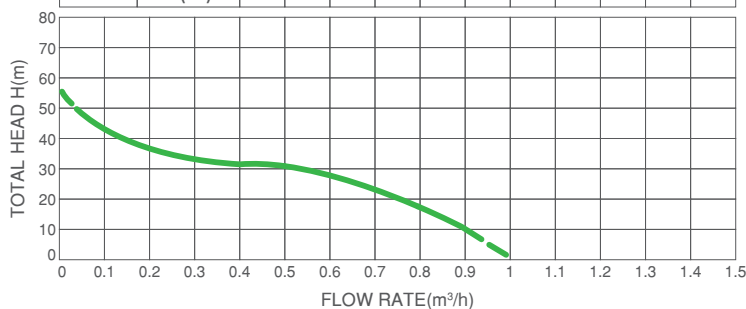
- Rated Voltage: 24VDC
- Rated Current: 10A
- Maximum Open Circuit Voltage (VOC): 50 VDC
- Maximum Power: 200W
- Ambient Temperature: -20°C ~ + 50°C

PV SOLAR PANEL SPECIFICATIONS (RECOMMENDED)

- 1x 160W
- Min. 1.3x load in Watts
- <50 VOC

PERFORMANCE TABLE

TYPE	Q (m ³ /h)	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
120W	H(m)	55	41	35	33	31	30	25	22	15	10	1



WHATS IN THE BOX

- 120W Solar Submersible Pump
- Separate 24V Solar Charge controller
- 1x Heat Shrinkable tube
- 1.5m cable with MC4 connector

WHAT ELSE IS NEEDED

- Cable (< 50m use 4mm² cable, > 50m use 6mm² cable)

SOLAR SUBMERSIBLE PUMP

210W 1.25m³h

SYPSOS36V1.25MF210W



PUMP SPECIFICATIONS

- 36V | 210W
- 1.25m³h Max flow rate
- 90m Max head
- 3/4" Outlet size
- 3" Diameter

CONTROLLER SPECIFICATIONS

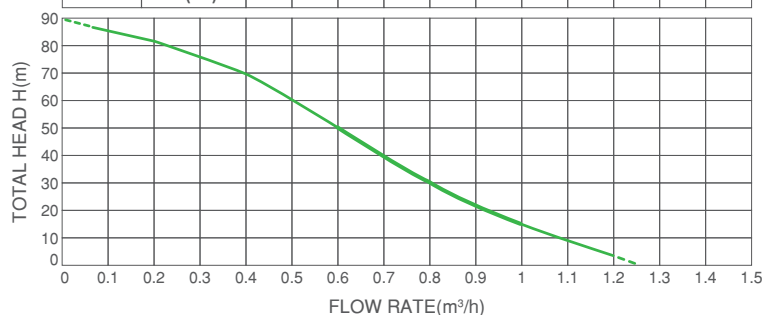
- Rated Voltage: 48VDC
- Rated Current: 10A
- Maximum Open Circuit Voltage (VOC): 100 VDC
- Maximum Power: 500W
- Ambient Temperature: -20°C ~ + 50°C

PV SOLAR PANEL SPECIFICATIONS (RECOMMENDED)

- 1 x 320W
- Min. 1.3x load in Watts
- <100 VOC

PERFORMANCE TABLE

TYPE	Q (m ³ /h)	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
210W	H(m)	90	85	82	75	70	60	50	42	30	17	15



WHATS IN THE BOX

- 210W Solar Submersible Pump
- Separate 48V Solar Charge controller
- 1x Heat Shrinkable tube
- 1.5m cable with MC4 connector

WHAT ELSE IS NEEDED

- Cable (< 50m use 4mm² cable, > 50m use 6mm² cable)

SOLAR SUBMERSIBLE PUMP

500W 1.4m³h

SYPSOS48V1.4MF500W



PUMP SPECIFICATIONS

- 48V | 500W
- 1.4m³h Max flow rate
- 120m Max head
- 3/4" Outlet size
- 3" Diameter

CONTROLLER SPECIFICATIONS

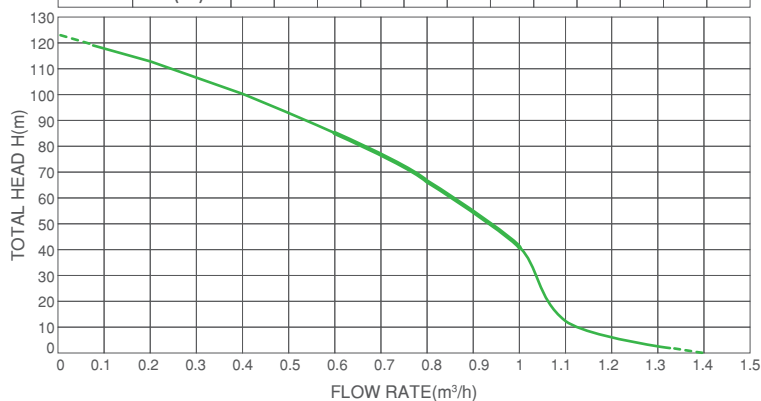
- Rated Voltage: 48VDC
- Rated Current: 10A
- Maximum Open Circuit Voltage (VOC): 100 VDC
- Maximum Power: 500W
- Ambient Temperature: -20°C ~ + 50°C

PV SOLAR PANEL SPECIFICATIONS (RECOMMENDED)

- 2 x 330W
- Min. 1.3x load in Watts
- <100 VOC

PERFORMANCE TABLE

TYPE	Q (m ³ /h)	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1
500W	H(m)	120	115	110	105	98	90	82	75	65	55	40	12



WHATS IN THE BOX

- 500W Solar Submersible Pump
- Separate 48V Solar Charge controller
- 1x Heat Shrinkable tube
- 1.5m cable with MC4 connector

WHAT ELSE IS NEEDED

Cable (< 50m use 4mm² cable,
> 50m use 6mm² cable)

SOLAR SUBMERSIBLE PUMP

500W 2.5m³h

SYPSOS48V2.5MF500W



PUMP SPECIFICATIONS

- 48V | 500W
- 2.5m³h Max flow rate
- 70m Max head
- 1" Outlet size
- 4" Diameter

CONTROLLER SPECIFICATIONS

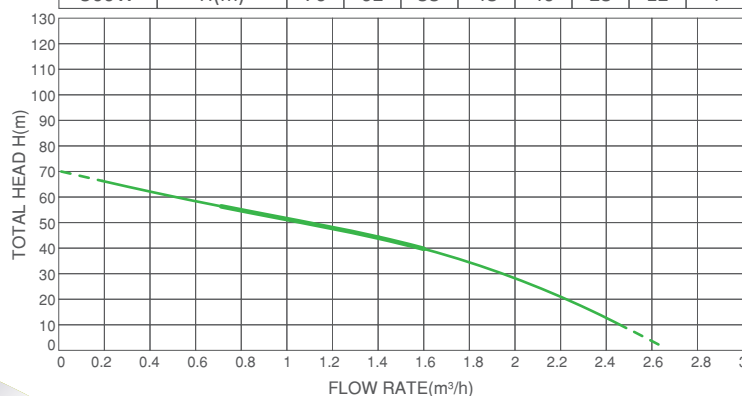
- Rated Voltage: 48VDC
- Rated Current: 10A
- Maximum Open Circuit Voltage (VOC): 100 VDC
- Maximum Power: 500W
- Ambient Temperature: -20oC ~ + 50oC

PV SOLAR PANEL SPECIFICATIONS (RECOMMENDED)

- 2 x 330W
- Min. 1.3x load in Watts
- <100 VOC

PERFORMANCE TABLE

TYPE	Q (m ³ /h)	0	0.4	0.8	1.2	1.6	2	2.4	2.6
500W	H(m)	70	62	55	48	40	28	12	4



WHATS IN THE BOX

- 500W Solar Submersible Pump
- Separate 48V Solar Charge controller
- 1x Heat Shrinkable tube
- 1.5m cable with MC4 connector

WHAT ELSE IS NEEDED

- Cable (< 50m use 4mm² cable, > 50m use 6mm² cable)

SOLAR SUBMERSIBLE PUMP

1000W 2.5m³h

SYPSOS110V2.5MF1000W



PUMP SPECIFICATIONS

- 110V | 1000W
- 2.5m³h Max flow rate
- 125m Max head
- 1" Outlet size
- 4" Diameter

CONTROLLER SPECIFICATIONS

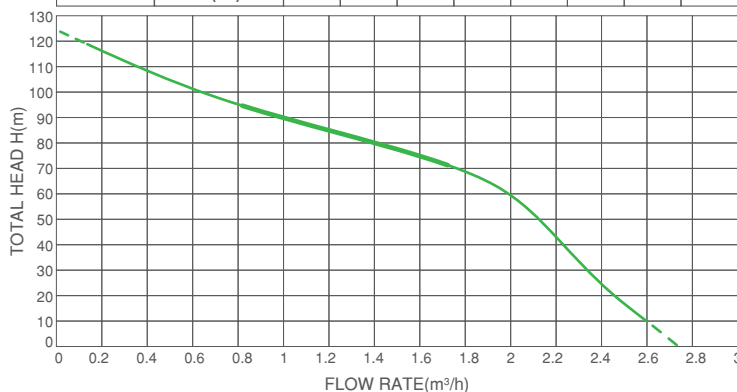
- Rated Voltage: 110VDC
- Rated Current: 12.5A
- Maximum Open Circuit Voltage (VOC): 200 VDC
- Maximum Power: 1200W
- Ambient Temperature: -20°C ~ + 50°C

PV SOLAR PANEL SPECIFICATIONS (RECOMMENDED)

- 4 x 330W
- Min. 1.3x load in Watts
- <200 VOC

PERFORMANCE TABLE

TYPE	Q (m ³ /h)	0	0.4	0.8	1.2	1.6	2	2.4	2.6
1000W	H(m)	125	108	95	85	75	58	24	8



WHATS IN THE BOX

- 1000W Solar Submersible Pump
- Separate 110V Solar Charge controller
- 1x Heat Shrinkable tube
- 1.5m cable with MC4 connector

WHAT ELSE IS NEEDED

- Cable (< 50m use 4mm² cable, > 50m use 6mm² cable)

OFF GRID SOLAR INVERTER 3KVA HIGH FREQUENCY



SYSV18-3K PK



FEATURES

- Rated power 3KVA
- Nominal Battery System Voltage 24VDC
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc.)
- Built-in PWM 50A solar charge controller
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- WIFI/GPRS remote monitoring (optional)
- Support USB, RS458 monitoring function with free CD
- Compatible with generator
- IP20 Rating

INVERTER OUTPUT	
Rated Power	24VDC / 3000VA / 3000W
Surge Power	6000VA
AC Voltage Regulation (Batt. Mode)	220VAC-240VAC
Inverter Efficiency (Peak)	>93%
Transfer Time	10ms (FST, APL) , 20ms (SLO)

AC CHARGER	
AC Input	230VAC / 50Hz / 17.7A
DC Output	27VDC 20A / 30A

BATTERY	
Normal Voltage	24VDC
Floating Charge Voltage	27VDC
Overcharge Protection	31VDC

Output Protection
requires 16Amp Circuit Breaker

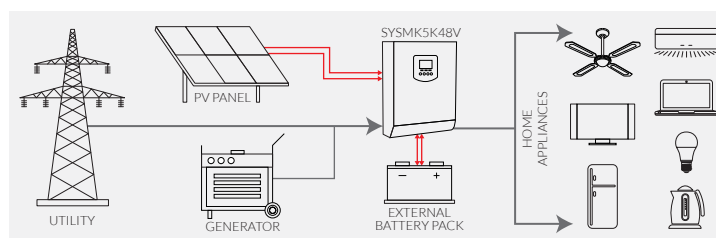
SOLAR CHARGER	
Rated Current	50A
System Voltage	24VDA
Operating Voltage	30 - 32VDC
Max. Solar Voltage	70VDC
Max. Charge Current	80A

MECHANICAL SPECIFICATIONS	
Dimensions (W*H*D)	272*355*100mm
Packaging Dimensions (W*H*D)	465*373*231mm
Net Weight (kg)	7.8
Gross Weight (kg)	10.3

OTHER	
Humidity	5% to 95% Relative Humidity (Non-condensing)
Operating Temperature	0°C -50°C
Storage Temperature	-15°C -60°C

APPROXIMATE BACK-UP TIME TABLE

MODEL	LOAD (VA)	BACK-UP TIME@24V 100Ah(min)	BACK-UP TIME@24V 200Ah(min)
3KVA	300	449	1100
	1500	68	164
	3000	28	67



OFF GRID SOLAR INVERTER

5KVA / 5KW 80 AMP



SYSMK5K48V

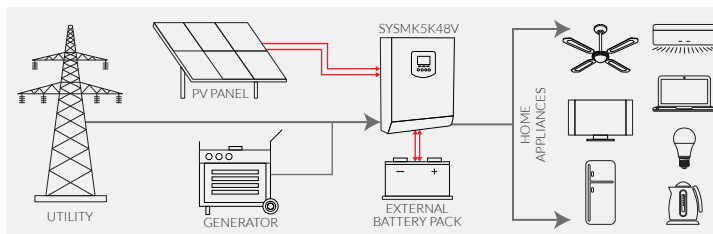


FEATURES

- Rated power 5000VA / 5000W
- Rated current 80A
- Nominal battery system voltage 48VDC
- DC input 48VDC, 117A
- AC output 230 VAC, 50/60Hz
- Pure sine wave inverter
- Built-in MPPT solar charge controller
- Selectable input voltage range for home appliances and personal computers
- Selectable charging current based on applications
- Configurable AC / Solar input priority via LCD setting
- Compatible to AC mains or generator power
- Battery equalization for optimized battery performance and life-cycle
- Parallel operation with up to 9 units

INVERTER	
Rated Power	5000VA / 5000W
Parallel Capability	9 units
INPUT	
Voltage	230VAC
Selectable Voltage Range	170-280VAC (For personal computers) 90-280VAC (For home appliances)
Frequency Range	50Hz/60Hz (Auto sensing)
OUTPUT	
AC Voltage Regulation	230VAC ±5%
Surge Power	10000VA
Efficiency (Peak)	93%
Transfer time	10ms (For personal computers) 20ms (For home appliances)
Waveform	Pure sine wave
BATTERY	
Battery Voltage	48VDC
Floating Charge Voltage	54VDC (Max 58VDC)
Overcharge Protection	60VDC
SOLAR CHARGER & AC CHARGER	
Max. PV Array Power	4000W
MPPT range at operating voltage	60VDC ~ 115VDC
Max. PV array open circuit voltage	145VDC
Max. Solar Charge Current	80A
Max. AC Charge Current	60A
Max. Charge Current	140A
MECHANICAL SPECIFICATIONS	
Dimensions (W*H*D)	295*468*120mm
Net Weight (kg)	13.5
OTHER	
Humidity	5% to 95% Relative Humidity (Non-condensing)
Operating Temperature	0°C -55°C
Storage Temperature	-15°C -60°C

Typical transfer time for parallel operation is 30ms. Product specifications are subject to change without further notice.



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HYBRID SOLAR INVERTER 5KVA ON/OFF GRID

SYSH18-5K-MPK-80A



FEATURES

- Rated power 5kVA
- Nominal Battery System Voltage 48VDC
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage)
- Built-in MPPT 80A solar charge controller
- New SUB working mode (Solar-Utility-Battery working mode) for 4kVA-5kVA series
- MPPT Efficiency max 98%
- Combining solar system, AC utility, and battery power source to supply continuous power
- Multiple operations: basic Grid-tie, Off-Grid, Grid-Interactive
- Parallel operation with up to 3 units
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485 monitoring function with free CD
- Compatible with generator
- IP20 rating

INVERTER OUTPUT	
Rated Power	5000VA 5000W
Surge Power	10 000VA
AC Voltage Regulation (Batt. Mode)	220VAC/230VAC/ 240VAC±5%
Electric Current	13A
Output Frequency	50Hz/60Hz Auto Sensing
Inverter Efficiency (Peak)	93%
Transfer Time	10ms(For PC) 20ms(For Other Home Appliance)

AC INPUT	
Voltage	230VAC
Selectable Voltage Range	170~280VAC(For Personal Computers) 90~280VAC(For Home Appliances) 184~253VAC(VDE4105)
Frequency Range	50Hz/60Hz (Auto sensing)

BATTERY	
Normal Voltage	48VDC
Floating Charge Voltage	54VDC
Overcharge Protection	60VDC

SOLAR CHARGER & AC CHARGER	
Max. PV Array Open Circuit Voltage	145VDC
PV Array MPPT Voltage Range	64~130VDC
Standby Power Consumption	2W
Rated Power	4000W
Max. Solar Charge Current	80A
Max. Efficiency	>98%
Max. AC Charge Current	60A
Max. Charge Current	140A

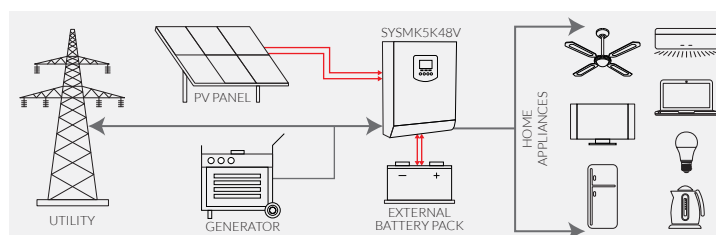
MECHANICAL SPECIFICATIONS	
Machine Dimensions (W*H*D)	297.5*468*125mm
Packaging Dimensions (W*H*D)	638*395*241mm
Net Weight (kg)	14
Gross Weight (kg)	16.4

OTHER	
Humidity	5% to 95% Relative Humidity (Non-condensing)
Operating Temperature	0°C -55°C
Storage Temperature	-15°C -60°C

Output Protection
requires 16Amp Circuit Breaker

APPROXIMATE BACK-UP TIME TABLE

MODEL	LOAD (W)	BACK-UP TIME@48V 100Ah(min)	BACK-UP TIME@48V 200Ah(min)
5000W	1000	208	488
	2000	89	205
	3000	50	123
	4000	38	89
	5000	21	72



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