



Hybrid Inverters

ממירים היברידיים



SynergX.co.il



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Traditional Inverters

Inverters have been around for quite some time. Solar panels link to inverters, which in turn convert the DC power from the solar panels into AC power that you can use in your home, office or factory.

These traditional systems provide power only when the sun is out, and any energy that you don't use at that specific time must be fed back to the grid right away. Depending on the feed-in-tariff rate on your contract with your electricity provider, you may get paid approximately 50 agorot per kWh. In the evening, however, when the sun has set and there is still high demand (and higher electricity costs), you may be buying "back" that power at several times the above-mentioned cost.

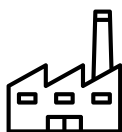
Sunsynk's market-leading hybrid inverters can be used for both on-grid and off-grid applications, connecting a range of power sources (like Solar PV, the grid, etc.) with battery storage via the same inverter!



Residential



Commercial



Industrial



Mobile



Hybrid Inverter Unit



Batteries:
Energy Storage Unit(s)

Sunsynk's game changing inverters!

Sunsynk has invented a better type of inverter - the "Hybrid inverter".

The SunSynk hybrid inverter is bi-directional. This allows you to fast charge a storage battery during the day, saving the excess power that you did not use, in order to use (or sell) the stored power whenever it makes the best economic sense.

Each individual hybrid inverter unit ranges in power from 3.6kW to 16kW for single-phase units and 12kW to 50kW in three-phase units. You then have the option to combine multiple inverter units together for more power, and/or to combine additional batteries together for more storage capacity (electricity costs), you may be buying "back" that power at several times the above-mentioned cost.



Sunsynk's hybrid inverters' versatility have earned them the name "The Swiss-army knife of inverters"



Standard Features:

- ✓ IP65 protected
- ✂ Compact design
- ↕ Works both on and off-grid
- 💡 Advanced MPPT control
- ⌚ Rapid battery charging
- ⊕ Built-in DC isolator
- 🔌 Built-in UPS (Uninterruptible Power Supply)
- 🔌 Built-in auxiliary load
- 🔄 Interactive display
- 🏆 Warranty included



5.5kW Single-Phase Hybrid Inverter

ממיר היברידי 5.5 kW חד-פאזי

Model	SUNSYNK-5K-SG01LP1
Product Type	Hybrid Inverter
Enclosure	IP65
Ambient Temperature	-45°C ~ 60°C (>45°C derating)
Protection Level	Class I
Charge Mode	
Battery Voltage	48Vd.c (40Vd.c ~ 60Vd.c)
Battery Current	120Ad.c (max.)
AC Input Voltage	L/N/PE 220/230Va.c
AC Input Frequency	50/60Hz
AC Input Rated Current	22.7Aa.c
Max. AC Input Current	25Aa.c (max.)
Max. AC Input Power	5500W
Max. Apparent Output Power	5500VA
PV Input Voltage	370Vd.c (125Vd.c ~ 500Vd.c)
MPPT Input Voltage	150Vd.c ~ 425Vd.c
PV Input Current	13Ad.c + 13Ad.c
Max. PV Input Power	6500W
Max. PV Isc	17Ad.c + 17Ad.c
Utility-Interactive	
AC Output Voltage	L/N/PE 220/230Va.c
AC Output Frequency	50/60Hz
AC Output Rated Current	22.7Aa.c
Max. AC Output Current	25Aa.c (max.)
Max. AC Output Power	5500W
AC Output Rated Power	5500VA
AC Output Power Factor	0.95 leading to 0.95 lagging
Max. AC Isc	75Aa.c
Battery Discharge Voltage	40Vd.c ~ 60Vd.c
Battery Discharge Current	120Ad.c (max.)
Battery Discharge Power	5000W
Stand Alone	
AC Output Voltage	L/N/PE 220/230Va.c
AC Output Frequency	50/60Hz
AC Output Rated Current	22.7Aa.c
AC Output Rated Power	5500W
Max. Continuous AC Pass-through Current	35Aa.c
Peak Output Power	10000W (10 seconds)
Battery Discharge Voltage	40Vd.c ~ 60Vd.c
Max. Discharge Current	120A (max.)
Compliance	VDE-AR-N 4105:1028-11; DINVDE V 0124-100:2020-06; IEC/EN62109-1/2:2010; IEC/EN62109-1/2:2011



8.8kW Single-Phase Hybrid Inverter

ממיר היברידי 8.8kW חד-פאזי

Model	SUNSYNK-8K-SG01LP1
Battery Input Data	
Battery Type	Lead-acid or Li-Ion
Battery Voltage Range	48Vd.c (40Vd.c ~ 60Vd.c)
Max. Charging/Discharging Current	190Ad.c (max.)
Charging Curve	3 Stages / Equalization
External Temperature Sensor	Yes
Charging Strategy for Li-Ion Battery	Self-adaption to BMS
PV String Input Data	
Max. DC Input Power	10400W
PV Input Voltage	370V (125V~500V)
MPPT Range	150~425V
Start-up Voltage	125V
PV Input Current	26Ad.c + 26Ad.c
Max PV Isc	44Ad.c + 44Ad.c
No. of MPPT Trackers	2
No. of Strings Per MPPT Tracker	2+2
AC Output Data	
Rated AC Output and UPS Power	8000W
Max. AC Output Power	8800W
Peak Power (off grid)	2 times of rated power, 10s
AC Output Rated Current	34.8A
Max. AC Current	38.3A
Max. Continuous AC Passthrough	50A
Power Factor	0.8 leading to 0.8 lagging
Output Frequency and Voltage	50 / 60Hz; 208Vac (2 / 3 Phase), 220/230Vac (Single Phase)
Grid Type	2 / 3 Phase; Single Phase
Total Harmonic Distortion (THD)	<3% (of nominal power)
DC current injection	<0.5 In
Efficiency	
Max. Efficiency	97.60%
Euro Efficiency	97.00%
MPPT Efficiency	>99%
Protection	
Integrated	PV Arc Fault Detection, PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection
Surge Protection	DC Type II / AC Type II
Over Voltage Category	DC Type II / AC Type III
Certifications and Standards	
Grid Regulation	EN 50549-1, AS-NZS 4777.2, NRS 097-2-1
EMC/Safety Regulation	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
General Data	
Operating Temperature Range	-40~60 °C, >45 °C Derating
Cooling	Smart cooling
Noise	<30 dB
Communication with BMS	RS485; CAN
Net Weight	32kg
Gross Weight	38.5kg
Cabinet size	420W×670H×233D (Excluding connectors and brackets)
Protection Degree	IP65
Installation Style	Wall-mounted
Warranty	5 years



16kW Single-Phase Hybrid Inverter

ממיר היברידי 16 kW חד-פאזי

Model		SUNSYNK MAX
Battery Input Data		
Battery Type	Lead-acid or lithium-ion	
Battery Voltage Range	43~60V	
Max. Charge Current	300A	
Max. Discharge Current	300A	
Charging Curve	3 Stages/Equalisation	
External Temperature Sensor	Yes	
Charging Strategy for Li-Ion Battery	Self-adaptation to BMS	
PV String Input Data		
Max. DC Input Power	18000W	
Max PV Input Voltage	450V	
MPPT Range	250V~450V	
Start-up Voltage	150V	
PV Input Current	22A + 22A	
Max. PV Isc	26A + 26A	
No. of MPPT / Strings per MPPT	3 / 2	
AC Output Data		
Max. On-Grid AC Power	16000W	
Max. Off-Grid AC Power	13000W	
(Peak Power (Off-Grid	2 times of rated power, 10 S	
AC Output Rated Current	65A	
Max AC Current	70A	
Max Continuous AC Pass-through	150A	
Bypass Current	150A	
Frequency Range	45Hz ~55Hz	
Voltage Range	211V ~ 264V	
Grid Type	Single-phase	
Current Harmonic Distortion	(THD<3%(linear load<1.5%	
Efficiency		
Max. Efficiency	97.60%	
Euro Efficiency	97.00%	
MPPT Efficiency	99.90%	
Protection		
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Surge protection, DC Battery Current Protection	
Certifications and Standards		
Grid Regulation	VDE 0126, AS4777, NRS2017, G98, G99, IEC61683, IEC62116, IEC61727, RD1699:2011 XP C15-712-3:2019-05	
Safety EMC / Standard	IEC62109-1, IEC62109-2, EN61000-6-1, EN61000-6-3	
General Data		
Operating Temperature Range	-25~55°C	
Cooling	Fan	
Noise	<30dB	
Communication with BMS	RS485; CAN	
Weight	34.5kg	
Size	422W×702H×281D mm	
Protection Degree	IP65	
Installation Style	Wall-mounted	



12kW 3-Phase Hybrid Inverter

ממיר היברידי 12kW תלת-פאזי

Model		SUNSYNK-12K-SG04LP3
Product Type		Hybrid Inverter
Enclosure		IP65
Ambient Temperature		-45°C ~ 60°C (>45°C derating)
Protection Level		Class I
Charge Mode		
Battery Voltage		48Vd.c (40Vd.c ~ 60Vd.c)
Battery Current		240Ad.c (max.)
AC Input Voltage		3L/N/PE 220/380Va.c, 230/400Va.c
AC Input Frequency		50/60Hz
AC Input Rated Current		18.2/17.4A
Max. AC Input Current		20/19.1A
Max. AC Input Power		13200W
Max. Apparent Output Power		13200VA
PV Input Voltage		550Vd.c (160Vd.c ~ 800Vd.c)
MPPT Input Voltage		200Vd.c ~ 650Vd.c
PV Input Current		26Ad.c + 13Ad.c
Max. PV Input Power		15600W
Max. PV Isc		34Ad.c + 17Ad.c
Utility-Interactive		
AC Output Voltage		3L/N/PE 220/380Va.c, 230/400Va.c
AC Output Frequency		50/60Hz
AC Output Rated Current		18.2/17.4A
Max. AC Output Current		20/19.1A
Max. AC Output Power		13200W
AC Output Rated Power		12000W
AC Output Power Factor		0.8 leading to 0.8 lagging
Max. AC Isc		75Aa.c
Battery Discharge Voltage		40Vd.c ~ 60Vd.c
Battery Discharge Current		240Ad.c (max.)
Battery Discharge Power		12000W
Stand Alone		
AC Output Voltage		3L/N/PE 220/380Va.c, 230/400Va.c
AC Output Frequency		50/60Hz
AC Output Rated Current		18.2/17.4A
AC Output Rated Power		12000W
Max. Continuous AC Pass-through Current		45Aa.c
Peak Output Power		24000W (10 seconds)
Battery Discharge Voltage		40Vd.c ~ 60Vd.c
Max. Discharge Current		240Ad.c (max.)
Compliance		VDE-AR-N 4105:1028-11; DIN VDE V 0124-100:2020-06; IEC/EN62109-1/2:2010; IEC/EN62109-1/2:2011



50kW 3-Phase HV Hybrid Inverter

ממיר היברידי 50kW תלת-פאזי מתח גבוה

Model		SUN-50K- SG01HP3-EU- BM4
Battery Input Data		
Battery Type		Li-Ion
Max. Charging Current		50A+50A
Max. Discharging Current		50A+50A
Number of battery input		2
Charging Strategy for Li-Ion Battery		Self-adaption to BMS
PV String Input Data		
Max. DC Input Power		65000W
Max. DC Input Voltage		1000V
Start-up Voltage		180V
MPPT Range		150-850V
Full Load DC Voltage Range		450-850V
Rated DC Input Voltage		600V
PV Input Current		36+36+36+36A
Max. PV Isc		55+55+55+55A
No. Of MPPT Trackers		4
No. Of Strings Per MPPT Tracker		2+2+2+2
AC Output Data		
Rated AC Output and UPS Power		50000W
Max. AC Output Power		55000W
Peak Power(off grid)		time of rated power, 10 S
AC Output Rated Current		75.8/72.5A
Max. AC Current		83.3A
Max. Continuous AC Pass through		150A
Generator input/Smart load/AC couple current		75.8/150 / 75.8A
Power Factor		0.8 leading to 0.8 lagging
Output Frequency and Voltage		50/60Hz; 3L/N/PE 220/380, 230/400Vac
Grid Type		Three Phase
DC injection current (mA)		<0.5%In
Efficiency		
Max. Efficiency		97.60%
Euro Efficiency		97.00%
MPPT Efficiency		>99%
Protection		
PV Input Lightning Protection		Integrated
Anti-islanding Protection		Integrated
PV String Input Reverse Polarity Protection		Integrated
Insulation Resistor Detection		Integrated
Residual Current Monitoring Unit		Integrated
Output Over Current Protection		Integrated
Output Shorted Protection		Integrated
Output Over Voltage Protection		DC Type II / AC Type III
Battery Over Current Protection		Fuses
Certifications and Standards		
Grid Regulation		VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150
EMC/Safety Regulation		IEC62109-1/-2, NBT32004-2018, EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4
General Data		
Operating Temperature Range(°C)		-40~60 °C, >45 °C Derating
Cooling		Intelligent air cooling
Noise(dB)		≤45 dB
Communication with BMS		RS485; CAN
Weight(kg)		75
Size(mm)		527W×894H×294D
Protection Degree		IP65
Installation Style		Wall-mounted
Warranty		5Yrs

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