Галатек ЕООД
Варна, ул.Зеленика 1-ва, №19
телефони: моб. 089/9925787, офис: 0876/105056

Оферта

за доставка и монтаж

на

Соларна система SOLAX 5kW с литиева батерия Solax Triple Power T-BAT- 3kW

/Монофазен хибриден инвертор 7,5kW, Фотоволтаични панели 5kW, Батерия 3 kWh/

№	Наименование	Мярка	Количест	Цена	Сума
1	Соларен инвертор SOLAX X1-7.5 G4 монофазен	бр.	1	4 464,00 лв.	4 464,00 лв.
2	Фотоволтаични панели 545W JA SOLAR	бр.	9	429,00 лв.	3 861,00 лв.
3	SOLAX ограничител на изходящата енергия монофазен	бр.	1	469,00 лв.	469,00 лв.
4	Алуминиева конструкция за покрив за 9 броя панели	бр.	1	1 269,00 лв.	1 269,00 лв.
5	Соларен кабел, MC4 конектори, табла за защита	бр.	1	1 856,00 лв.	1 856,00 лв.
6	Акумулаторна Батерия Solax Triple Power T-BAT H3.0- 3kW с BMS и монтаж	бр.	1	6 318,00 лв.	6 318,00 лв.
7	Монтаж на конструкция и фотоволтаични панели Окабеляване на фотоволтаичната система Монтаж на Инвертор и табла защита Настройка и пускане в експлоатация	бр.	1	3 170,00 лв.	3 170,00 лв.
				Общо с ДДС:	**21 407,00 лв.**

Изготвил: инж.Антон Душев

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Технически характеристики на включените компоненти в офертата сравнени с изисквания на Европейската програма за финансиране на домакинствата за изграждане на фотоволтаични системи 2023г

Фотоволтаични панели			
Показател		**В офертата**	**Изисквания на Програмата**
1	**Ефективност на панела**	**21,10%**	**20%**
2	**Продуктова гаранция**	**12 години**	**12 години**
3	**Деградация първа година**	**до 1%**	**до 2%**
4	**Линейна деградация на еднолицеви модули, на година**	**до 0,5%**	**до 0,6%**
Инвертор Solax			
Показател		**В офертата**	**Изисквания на Програмата**
1	**Ефективност на инвертора** (European weighted efficiency)	**97,70%**	**96%**
2	**Смущения от хармоници THD**	**до 3%**	**до 3%**
3	**Продуктова гаранция**	**10 години**	**10 години**
4	**Наличие на устройство, което ограничава връщане на електроенергия в мрежата съвместно с инвертора или вградена такава финкция на инвертора**	**Solax integrated Smart Meter**	**да**
Системи за съхранение Solax Triple Power			
Показател		**В офертата**	**Изисквания на Програмата**
1	**Работна температура**	**от 0*С до +55*С**	**до +45*С**
2	**Продуктова гаранция**	**10 години**	**5 години**
Конструкция			
Показател		**В офертата**	**Изисквания на Програмата**
1	**Материалите на конструкцията и крепежите са алуминий и неръждаема стомана, които са устойчиви на корозия и не повишават степента на корозия, когато са монтирани заедно в масив или когато са монтирани върху повърхността на основната конструкция**		
2	**Продуктова гаранция**	**10 години**	**10 години**

Higher output power

Lower LCOE

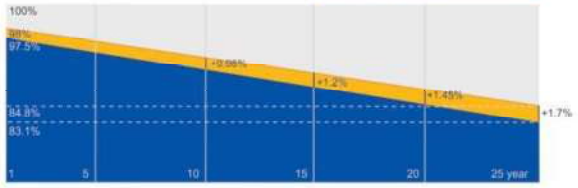
Less shading and lower resistive loss

Better mechanical loading tolerance

Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty

0.55% Annual Degradation Over 25 years



Comprehensive Certificates

- IEC 61215, IEC 61730,UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval

JA SOLAR

www.jasolar.com

Specifications subject to technical changes and tests.
JA Solar reserves the right of final interpretation.

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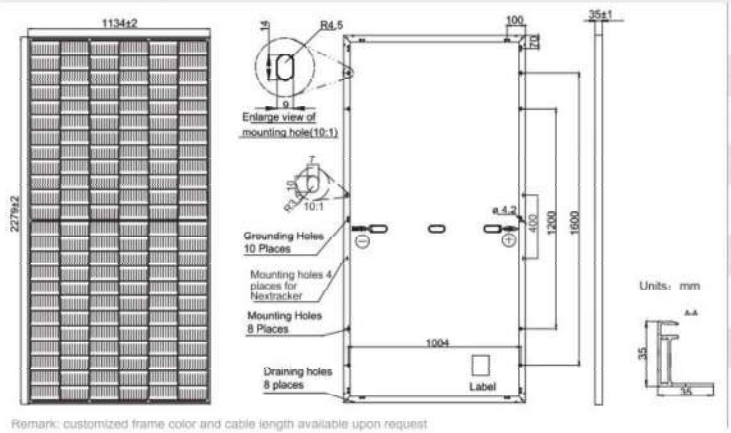
JA SOLAR

JAM72S30 525-550/MR Series

MECHANICAL DIAGRAMS



Remark: customized frame color and cable length available upon request

SPECIFICATIONS

Cell	Mono
Weight	28.6kg±3%
Dimensions	2279±2mm×1134±2mm×35±1mm
Cable Cross Section Size	4mm² (IEC), 12 AWG(UL)
No. of cells	144(6×24)
Junction Box	IP68, 3 diodes
Connector	QC 4.10(1000V) QC 4.10-35(1500V)
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); Landscape: 1300mm(+)/1300mm(-)
Packaging Configuration	31pcs/Pallet, 620pcs/40ft Container

ELECTRICAL PARAMETERS AT STC

TYPE	JAM72S30 -525/MR	JAM72S30 -530/MR	JAM72S30 -535/MR	JAM72S30 -540/MR	JAM72S30 -545/MR	JAM72S30 -550/MR
Rated Maximum Power(Pmax) [W]	525	530	535	540	545	550
Open Circuit Voltage(Voc) [V]	49.15	49.30	49.45	49.60	49.75	49.90
Maximum Power Voltage(Vmp) [V]	41.15	41.31	41.47	41.64	41.80	41.96
Short Circuit Current(Isc) [A]	13.65	13.72	13.79	13.86	13.93	14.00
Maximum Power Current(Imp) [A]	12.76	12.83	12.90	12.97	13.04	13.11
Module Efficiency [%]	20.3	20.5	20.7	20.9	21.1	21.3
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α_Isc)	+0.045%/°C					
Temperature Coefficient of Voc(β_Voc)	-0.275%/°C					
Temperature Coefficient of Pmax(γ_Pmp)	-0.350%/°C					
STC	Irradiance 1000W/m², cell temperature 25°C, AM1.5G					

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.

ELECTRICAL PARAMETERS AT NOCT

TYPE	JAM72S30 -525/MR	JAM72S30 -530/MR	JAM72S30 -535/MR	JAM72S30 -540/MR	JAM72S30 -545/MR	JAM72S30 -550/MR
Rated Max Power(Pmax) [W]	397	401	405	408	412	416
Open Circuit Voltage(Voc) [V]	46.05	46.18	46.31	46.43	46.55	46.68
Max Power Voltage(Vmp) [V]	38.36	38.57	38.78	38.99	39.20	39.43
Short Circuit Current(Isc) [A]	10.97	11.01	11.05	11.09	11.13	11.17
Max Power Current(Imp) [A]	10.35	10.39	10.43	10.47	10.51	10.55
NOCT	Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s, AM1.5G					

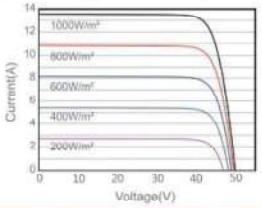
*For NexTracker installations, Maximum Static Load, Front is 2400Pa while Maximum Static Load, Back is 2400Pa.

OPERATING CONDITIONS

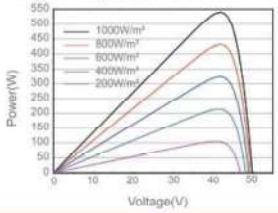
Maximum System Voltage	1000V/1500V DC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse Rating	25A
Maximum Static Load,Front* Maximum Static Load,Back*	5400Pa(112lb/ft²) 2400Pa(50lb/ft²)
NOCT	45±2°C
Safety Class	Class II
Fire Performance	UL Type 1

CHARACTERISTICS

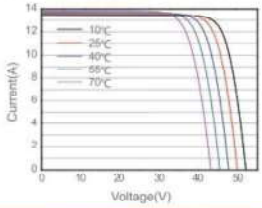
Current-Voltage Curve JAM72S30-540/MR



Power-Voltage Curve JAM72S30-540/MR



Current-Voltage Curve JAM72S30-540/MR



Premium Cells, Premium Modules

Version No. : Global_EN_20201207A

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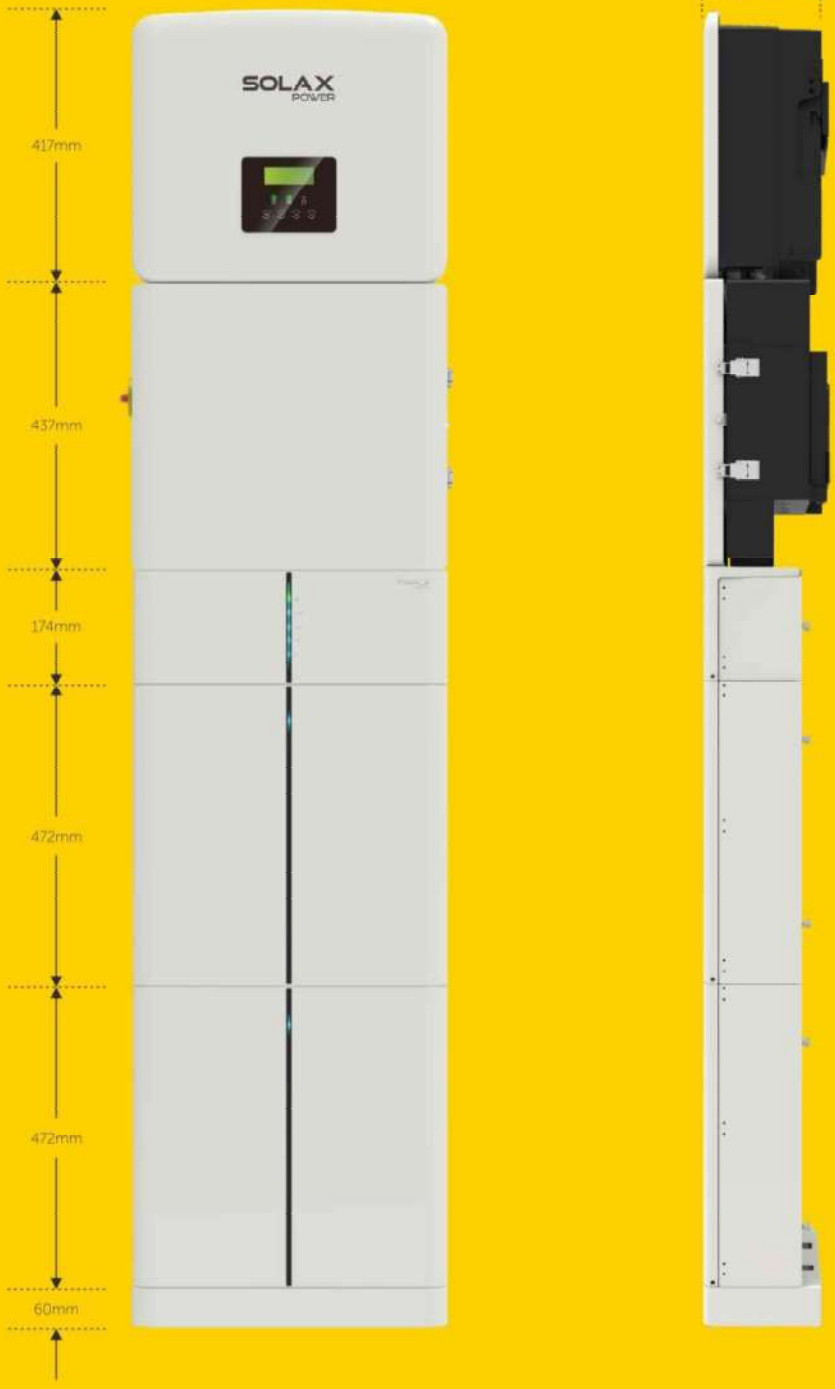

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X1-Hybrid G4

	X1-Hybrid-3.0	X1-Hybrid-3.7	X1-Hybrid-5.0	X1-Hybrid-6.0	X1-Hybrid-7.5
INPUT (DC)					
Max.PV array power [Wp]	4500	5500	7500	9000	10000
Max.DC voltage [V]			600		
Nominal DC operating voltage [V]			360		
Max. input current (input A/input B) [A]			14/14		
Max. short circuit current (input A/input B) [A]			16/16		
MPPT voltage range[V]			70-550		
Start operating voltage[V]			90		
No. of MPP trackers/Strings per MPPT tracker			2/1		
INPUT AC					
Max. apparent AC power[VA]	6300	7360	9200	9200	9200
Max. AC current[A]	27.4	32	40	40	40
Nominal grid voltage(AC voltage range)[V]			220/230/240(180-270)		
Nominal grid Frequency/range[Hz]			50/60		
OUTPUT AC					
Nominal AC power [VA]	3000	3680	5000	6000	7500
Max. apparent AC power [VA]	3300	3680	5500(4600for DE 4999for AU)	6600	7500
Nominal grid voltage(AC voltage range) [V]			220/230/240(180-270)		
Nominal grid frequency/range [Hz]			50/60		
Max. AC current [A]	14.4	16	23.9(20 for DE/21.7 for AU)	26.6	32.6
Displacement power factor			0.8 leading...0.8 lagging		
THDi, rated power [%]			<2		
OUTPUT DC (BATTERY)					
Battery type			Li-ion / lead-acid		
Battery voltage range [V]			80-480		
Max.continuous charge/discharge current [A]			30		
Communication interfaces			CAN/RS485		
Reverse connect protection			Yes		
EPS OUTPUT (WITH BATTERY)					
EPS MAX. continuous apparent power [VA]	3000	3680	5000	6000	7500
EPS rated voltage[V],Frequency [Hz]			230, 50/60		
EPS MAX.continuous current [A]	13	16	21.7	26.1	32.6
EPS peak apparent power (rated)[%], Duration[s]			120% overload , 600		100%
Switching time [ms]			internal switch <10, external switch <100		
THDv, linear Load [%]			<2		
EFFICIENCY					
MPPT efficiency [%]			99.9		
Euro efficiency [%]			97.0		
Max. efficiency [%]			97.6		
Battery charge/discharge efficiency [%]			97.0/97.0		
POWER CONSUMPTION					
Standby consumption (Night) [W]			<3		
STANDARD					
Safety			IEC62109-1 / IEC62109-2		
EMC			EN 61000-6-1:2007/EN 61000-6-2:2005/EN 61000-6-3/EN 61000-6-4/EN61000-3-2/EN61000-3-3/EN61000-3-11/EN61000-3-12		
Certification			VDE 0126-1-1 A1:2012 / VDE4105:2018 /G99 /G98 / AS4777 / EN50549/ CEI 0-21 /RD661/RD1699/UNE206007-1/VDE0216/VFR2019		
ENVIRONMENT LIMIT					
Degree of protection(according to IEC60529)			IP65		
Operating temperature range [°C]			-35..... +60°C (derating at +45°C)		
Max. operation altitude [m]			<3000		
Humidity [%]			0~100 (no condensing)		
Storage temperature [°C]			-40..... +70°C		
Typical noise emission [dB]			<30		
DIMENSION AND WEIGHT					
Dimensions(WxHxD) [mm]			482*417*181		
Weight[kg]			22		23
Cooling concept			Natural cooling		Forced airflow
Topology			Non-isolated		
Communication interfaces			CT/Meter/External control RS485/Indoor LCD/Pocket Series(optional)/DRM/USB Upgrade		
LCD display			Yes		
Standard warranty [years]			10		

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Triple Power 3.0 Battery

- Safest $LiFePO_4$ battery (30 Ah)
- Working temperature range:-30~50°C
- Smart temperature balancing
- Cycle life>6000 times
- IP67 protection level
- Less self consumption
- Quick installation
- No toxic heavy metals or caustic materials

	T-BAT H 3.0	T-BAT H 6.0*	T-BAT H 9.0*	T-BAT H 12.0*
Nominal Voltage [V]	102.4	204.8	307.2	409.6
Operating voltage range [V]	90-116	180-232	270-348	360-464
Total energy [kWh]	3.1	6.1	9.2	12.3
Usable energy [kwh]	3.1	6.1	9.2	12.3
Rated Capacity [Ah]	30			
Standard power [kW]	2.55	5.1	7.65	10.2
Max power [kW]	3.1	6.1	10.2	12.3
Recommend charge/discharge current [A]	25			
Maxcharge/discharge current [A]	30			
Faradic charge efficiency	99%			
Battery roundtrip efficiency	95%			
Cycel life [90% DOD]	6000 Cycles			
Expected life time / Warranty [year]	10			
Available charge/discharge temperature range [°C]	-30 to 50			
Storage temperature [°C]	-20 to 55 (3 months) 0 to 40 (1 year)			
Humidity [%]	0~100			
Altitude [m]	Below 4000			
Protection	IP67			
System to Inverter	RS485/CAN2.0			
Battery to battery/BMS	CAN2.0			
Master LED indicator	4LED (25%, 50%, 75%, 100%), 1LED (working mode)			
System Switch (on/off)	Button*1+Breaker*1			
Safety Certificate	CE/TUV Mark/IEC62619/IEC62040/IEC60529			
EMC	61000-6-1/2/3, 61000-3-2/3			
UN number	UN3840			
Hazardous materials classifcation	Class 9			
Transport testing requirement	UN38.3			
Dimensions(LxWxH) [mm]	MC0600: 482*174*148 HV10230: 482*472*148	MC0600: 482*174*148 HV10230: 482*472*148	MC0600: 482*174*148 HV10230: 482*472*148	MC0600: 482*174*148 HV10230: 482*472*148
Weight [kg]	MC0600: 7.5kg +HV10230: 33kg	MC0600: 7.5kg +2*HV10230: 66kg	MC0600: 7.5kg +3*HV10230: 99kg	MC0600: 7.5kg +4*HV10230: 132kg

* MC0600:Battery BMS (one MC0600 can be connected 1~4 HV10230)
* HV10230:Battery Pack

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