



The **WISE** Choice

## EASTMAN WORLD

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Welcome to Eastman World - Your Global Partner in Energy Solutions!



## *Energy Storage System*

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**Single Phase**

3.6 / 5 / 6kW

**Three Phase**

4 / 5 / 6 / 8 / 10kW

# Eastman Introduction

**Founded in 2006**

Established in 2006, Eastman Auto & Power Limited is a well-known name in the field of solar energy, energy storage, and power electronics, boasting a USD 300 million revenue and a dedicated workforce of over 3,000 professionals. Building on the group's decades-long success and maintaining the trust of our partners, Mr. Jagdish Rai Singal ventured into the future of energy with Eastman Auto & Power Limited. Today, the solar business spans over 25 countries across Asia, Africa, Middle East, and Europe and provides the world with cutting-edge products that have set new benchmarks in their respective segments. Driven by innovation, we continually set industry standards, ensuring uninterrupted power supply for residential, commercial, and industrial applications.

Our global solar distribution business provides reliable and high-quality solar solutions, including solar inverters, solar panels, solar batteries (carbon, gel, lithium, and tubular), solar pump inverters, solar charge controllers, and more. Our products offer a range of solutions to help you make the switch to clean energy. With us as your unwavering partners, we forge a sustainable future, amplifying global excellence through transformative products and services.



# ENERGY STORAGE SYSTEM

Experience a continuous flow of clean energy with our **solar inverter + battery solution** – the perfect solution for storing and utilizing solar power efficiently.

## Single Phase

3.6 / 5 / 6kW

## Three Phase

4 / 5 / 6 / 8 / 10kW



HIGH PERFORMANCE



HIGH RELIABILITY



HIGH INTELLIGENCE





Single Phase

# STORAGE SYSTEM

## PRODUCT MODEL

INVERTER

ES-INV-SPH3.6K

ES-INV-SPH5K

+

BATTERY

ES-BAT-4.8S / ES-BAT-10.1P



## PRODUCT FEATURES



### HIGH PERFORMANCE

- 200% PV over management.
- 200% backup overload capacity, 60A battery current.
- Max. efficiency 97.3%, Battery efficiency 97%.
- Load monitoring accuracy 10W, Battery discharging threshold 10W.



### HIGH RELIABILITY

- UPS level redundant protection against backup load breakdown.
- Three-level firmware and two-level hardware battery protection.
- Multiple temperature monitoring, delicate thermal management.
- Max. 6 Inverters in parallel to increase power availability.



### HIGH INTELLIGENCE

- Internal EMS optimizes home energy supply automatically.
- PV production forecast.
- Built-in electric power service, FCAS, VPP, etc.
- Online monitoring, online diagnosis, online service.

# ENERGY STORAGE SYSTEM(SINGLE PHASE)

3.6 / 5 kW

## PRODUCT SPECIFICATIONS

INVERTER MODEL	ES-INV-SPH3.6K	ES-INV-SPH5K
<b>PV INPUT</b>		
Max. PV Input Power	7.36kW	10kW
Max. PV Input Voltage	580V	580V
MPPT Range	100~550V	100~550V
Max. Input Current	15A / 15A	15A / 15A
Max. Short Circuit Current	18.75A / 18.75A	18.75A / 18.75A
MPPT Trackers	2	2
Strings Per MPPT Tracker	1 / 1	1 / 1
<b>AC PORT</b>		
Rated Grid Output Power	3.68kVA	5kVA / 4.6kVA(DE)
Max. Grid Input Power	7.36kVA	10kVA
Rated Grid / Backup Voltage		230Vac
Rated Grid / Backup Frequency		50/60Hz
Surge Backup Power	7.36kVA	10kVA
Rated Backup Power	3.68kVA	5kVA
THDi		<3%
THDv		<3% (Linear Load) / <5% (Non-linear Load)
DCV		<100mV
Crest Ratio		3 : 1
Transfer Time		<10ms
<b>EFFICIENCY</b>		
Max. Efficiency	97.3%	97.3%
Max. Round Trip Efficiency	90%	90%
<b>GENERAL DATA</b>		
Operating Temperature Range		-20~60°C
Topology		Transformerless
Dimensions (W*H*D)		590×405×205mm
Weight	19.5kg	19.5kg
Load Monitoring		Meter / CT / Backup box
External Communication		RS-485 / WIFI / 4G / Ethernet
Grid Regulation		VDE-AR-N 4105:2018, G98, G99, C10/11:2021, NTS 631, RD647:2020 UNE 217002:2020, CEI 0-21, VDE 0126-1-1, NRS 097-2-1, AS/NZS 4777.2:2020, EN 50549-1
Safety Regulation		IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62477-1:2012
BATTERY MODEL	ES-BAT-4.8S	ES-BAT-10.1P
Battery Type		LFP
Battery Capacity	4.8kWh	10.1kWh
Usable Capacity	4.6kWh	9.6kWh
Depth of Discharge (DoD)		95%
Nominal Battery Voltage		96V
Operating Voltage Range		90~108V
Max. Charging Current	50A	52.5A
Max. Discharging Current	50A	52.5A
Operating Temperature Range		Charge:0°C<50°C / Discharge:-10°C<T<50°C
Cycle Lifetime		8000
Parallel / Series	1 ~ 4 in series	1~6 in parallel
Dimensions (W*H*D)	590×430×205mm	590×750×205mm
Weight	53.4kg	90kg
Colour	White	Blue
Communication		CAN / RS-485 (Optional)
Safety Regulation		IEC 62619:2017, IEC 62040:2017
Transportation		UN38.3
<b>SYSTEM</b>		
Operating Altitude		≤3000m (>3000m Derating)
Relative Humidity		0~95% (No Condensing)
Protection Degree		IP65
Cooling		Natural Convection
Noise		<30dB
Warranty		5 years / 10 years
EMC		IEC/EN 61000-6-1, IEC/EN 61000-6-3

Note: Specifications are subject to change without advance notice.



Single Phase

## STORAGE SYSTEM

### PRODUCT MODEL

INVERTER

ES-INV-SPH6K

+

BATTERY

ES-BAT-4.8S / ES-BAT-10.1P



### PRODUCT FEATURES



#### HIGH PERFORMANCE

- 166% PV over management.
- 200% backup overload capacity, 60A battery current.
- Max. efficiency 97.3%, Battery efficiency 97%.
- Load monitoring accuracy 10W, Battery discharging threshold 10W.



#### HIGH RELIABILITY

- UPS level redundant protection against backup load breakdown.
- Three-level firmware and two-level hardware battery protection.
- Multiple temperature monitoring, delicate thermal management.



#### HIGH INTELLIGENCE

- Internal EMS optimizes home energy supply automatically.
- PV production forecast.
- Built-in electric power service, FCAS, VPP, etc.
- Online monitoring, online diagnosis, online service.

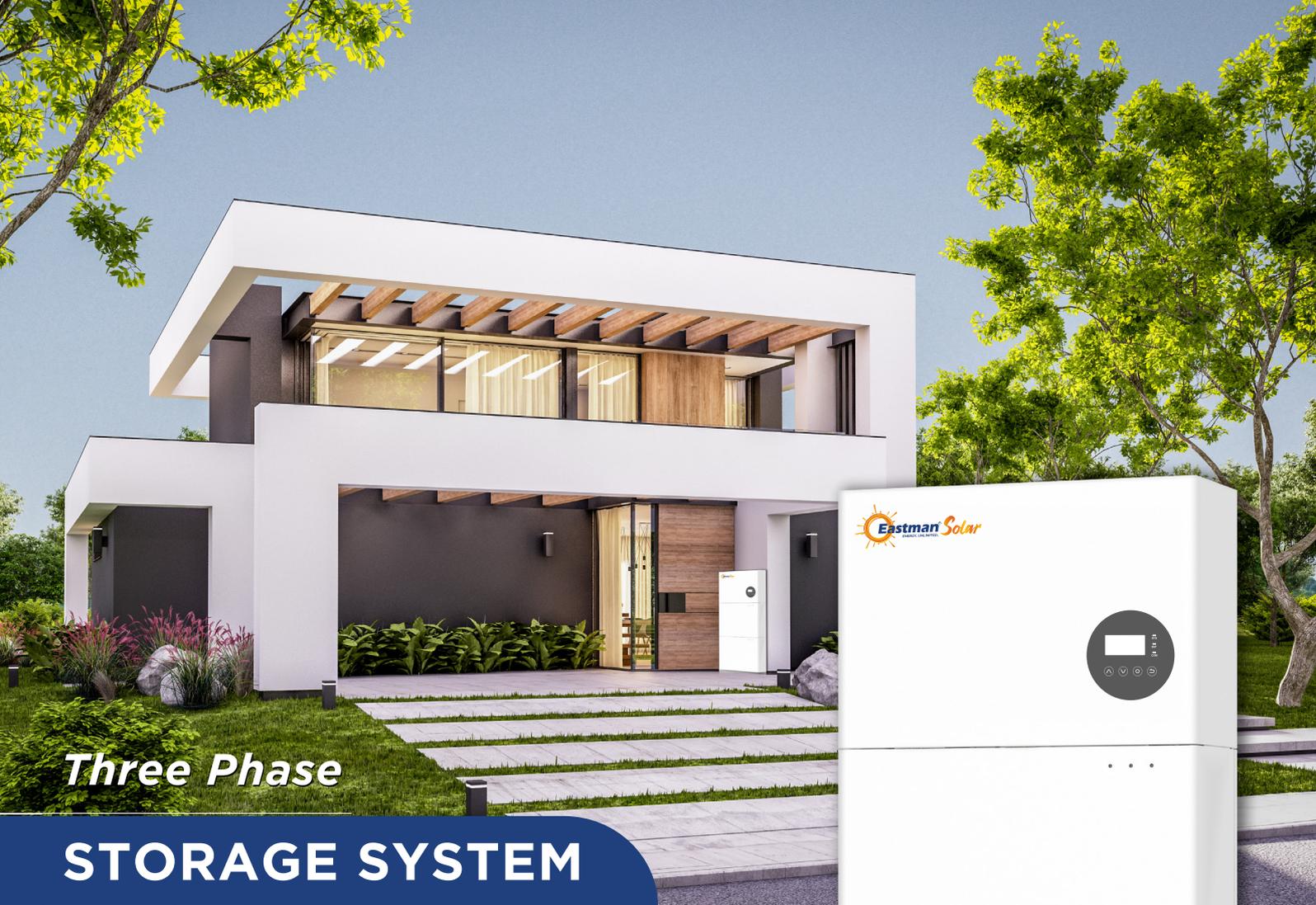
# ENERGY STORAGE SYSTEM(SINGLE PHASE)

6 kW

## PRODUCT SPECIFICATIONS

INVERTER MODEL		ES-INV-SPH6K	
PV INPUT			
Max. PV Input Power		10kW	
Max. PV Input Voltage		580V	
MPPT Range		100~550V	
Max. Input Current		15A / 15A	
Max. Short Circuit Current		22.5A / 22.5A	
MPPT Trackers		2	
Strings Per MPPT Tracker		1 / 1	
AC PORT			
Rated Grid Output Power		6kVA	
Max. Grid Input Power		11.5kVA	
Rated Grid / Backup Voltage		230Vac	
Rated Grid / Backup Frequency		50/60Hz	
Surge Backup Power		11.5kVA	
Rated Backup Power		6kVA	
THDi		<3%	
THDv		<3% (Linear Load) / <5% (Non-linear Load)	
DCV		<100mV	
Crest Ratio		3 : 1	
Transfer Time		<10ms	
EFFICIENCY			
Max. Efficiency		97.3%	
Max. Round Trip Efficiency		90%	
GENERAL DATA			
Operating Temperature Range		-20~60°C	
Topology		Transformerless	
Dimensions (W*H*D)		590×405×205mm	
Weight		20kg	
Load Monitoring		Meter / CT / Backup box	
External Communication		RS-485 / WIFI / 4G / Ethernet	
Grid Regulation		CEI 0-21, NRS 097-2-1, IEC 62116, IEC 61727	
Safety Regulation		IEC/EN 62109-1, IEC/EN 62109-2	
BATTERY MODEL		ES-BAT-4.8S	ES-BAT-10.1P
Battery Type		LFP	
Battery Capacity		4.8kWh	10.1kWh
Usable Capacity		4.6kWh	9.6kWh
Depth of Discharge (DoD)		95%	
Nominal Battery Voltage		96V	
Operating Voltage Range		90~108V	
Max. Charging Current		50A	52.5A
Max. Discharging Current		50A	52.5A
Operating Temperature Range		Charge:0°C<50°C / Discharge:-10°C<T<50°C	
Cycle Lifetime		8000	
Parallel / Series		1~4 in series	1~6 in parallel
Dimensions (W*H*D)		590×430×205mm	590×750×205mm
Weight		53.4kg	90kg
Colour		White	Blue
Communication		CAN / RS-485 (Optional)	
Safety Regulation		IEC 62619:2017, IEC 62040:2017	
Transportation		UN38.3	
SYSTEM			
Operating Altitude		≤3000m (>3000m Derating)	
Relative Humidity		0~95% (No Condensing)	
Protection Degree		IP65	
Cooling		Natural Convection	
Noise		<30dB	
Warranty		5 years / 10 years	
EMC		IEC/EN 61000-6-1, IEC/EN 61000-6-3	

Note: Specifications are subject to change without advance notice.



*Three Phase*

# STORAGE SYSTEM

## PRODUCT MODEL

INVERTER

ES-INV-TPH4K  
 ES-INV-TPH5K  
 ES-INV-TPH6K  
 ES-INV-TPH8K  
 ES-INV-TPH10K

+

BATTERY

ES-BAT-4.8S

## PRODUCT FEATURES



### HIGH PERFORMANCE

- 200% PV over management.
- 200% backup overload capacity, 50A battery current.
- Max. efficiency 98%, Battery efficiency 96%.
- Load monitoring accuracy 10W, Battery discharging threshold 10W.



### HIGH RELIABILITY

- UPS level redundant protection against backup load breakdown.
- Three-level firmware and two-level hardware battery protection.
- Multiple temperature monitoring, delicate thermal management.
- Max. 3 Inverters in parallel to increase power availability.



### HIGH INTELLIGENCE

- Internal EMS optimizes home energy supply automatically.
- PV production forecast.
- Built-in electric power service, FCAS, VPP, etc.
- Online monitoring, online diagnosis, online service.

# ENERGY STORAGE SYSTEM(THREE PHASE)

4 / 5 / 6 / 8 / 10kW

## PRODUCT SPECIFICATIONS

INVERTER MODEL	ES-INV-TPH4K	ES-INV-TPH5K	ES-INV-TPH6K	ES-INV-TPH8K	ES-INV-TPH10K
<b>PV INPUT</b>					
Max. PV Input Power	8kW	10kW	12kW	16kW	20kW
Max. PV Input Voltage	1100V				
MPPT Range	140~950V				
Max. Input Current	16A / 16A / 16A				
Max. Short Circuit Current	24A / 24A / 24A				
MPPT Trackers	3				
Strings Per MPPT Tracker	1 / 1 / 1				
<b>AC PORT</b>					
Rated Grid Output Power	4kVA	5kVA	6kVA	8kVA	10kVA
Max. Grid Input Power	8kVA	10kVA	12kVA	16kVA	20kVA
Rated Grid / Backup Voltage	220/380Vac, 230/400Vac, 3/N/PE				
Rated Grid / Backup Frequency	50/60Hz				
Surge Backup Power	8kVA	10kVA	12kVA	16kVA	20kVA
Rated Backup Power	4kVA	5kVA	6kVA	8kVA	10kVA
THDi	<3%				
THDv	<3% (Linear Load) / <5% (Non-linear Load)				
DCV	<100mV				
Crest Ratio	3 : 1				
Transfer Time	<10ms				
<b>EFFICIENCY</b>					
Max. Efficiency	98%	98%	98.2%	98.4%	98.4%
Max. Round Trip Efficiency	96%				
<b>GENERAL DATA</b>					
Operating Temperature Range	-20~60°C				
Topology	Transformerless				
Dimensions (W*H*D)	590×416×205mm				
Weight	25kg				
Load Monitoring	Meter / CT / Backup box				
External Communication	RS-485 / WIFI / 4G / Ethernet				
Grid Regulation	VDE-AR-N 4105:2018, G98, C10/11:2021, NTS 631, RD647:2020, UNE 217002:2020, CEI 0-21, VDE 0126-1-1, NRS 097-2-1, AS/NZS 4777.2:2020, EN 50549-1, Erzeuger Type A, PPDS, NCRfG				
Safety Regulation	IEC/EN 62109-1, IEC/EN 62109-2				
<b>BATTERY MODEL</b>			<b>ES-BAT-4.8S</b>		
Battery Type	LFP				
Battery Capacity	4.8kWh				
Usable Capacity	4.6kWh				
Depth of Discharge (DoD)	95%				
Nominal Battery Voltage	96V				
Operating Voltage Range	90~108V				
Max. Charging Current	50A				
Max. Discharging Current	50A				
Operating Temperature Range	Charge:0°C<50°C / Discharge:-10°C<T<50°C				
Cycle Lifetime	8000				
Parallel / Series	1~6 in series				
Dimensions (W*H*D)	590×430×205mm				
Weight	53.4kg				
Communication	CAN / RS-485 (Optional)				
Safety Regulation	IEC 62619:2017, IEC 62040:2017				
Transportation	UN38.3				
<b>SYSTEM</b>					
Operating Altitude	≤3000m (>3000m Derating)				
Relative Humidity	0~95% (No Condensing)				
Protection Degree	IP65				
Cooling	Natural Convection				
Noise	<30dB				
Warranty	5 years / 10 years				
EMC	IEC/EN 61000-6-1,IEC/EN 61000-6-3				

Note: Specifications are subject to change without advance notice.



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