



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 kW

Three Phase

4 / 5 / 6 / 8 / 10 kW

# 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 business spans over 25 countries across Asia and Africa, providing 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 (tubular, carbon, gel and lithium) 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**

3.6kW

**Three Phase**

4 / 5 / 6 / 8 / 10kW



HIGH PERFORMANCE



HIGH RELIABILITY

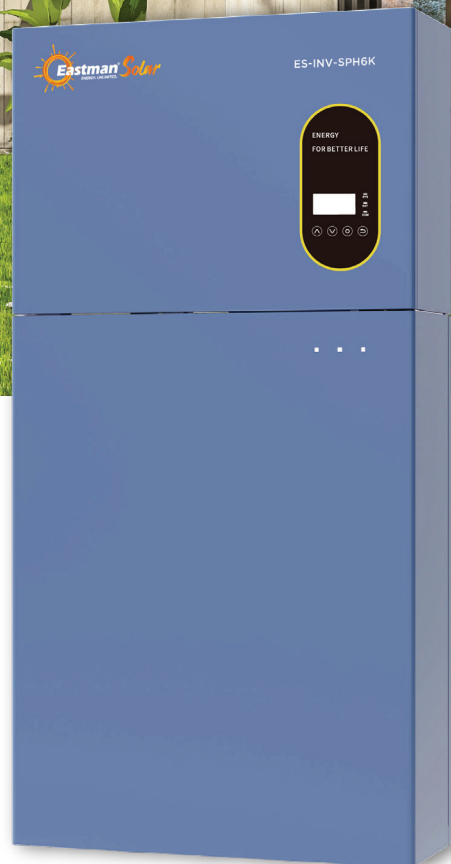


HIGH INTELLIGENCE



Single Phase

# STORAGE SYSTEM



## Product Model

INVERTER

ES-INV-SPH3.6K

+

BATTERY

ES-BAT-4.8S

## 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)

## 3.6kW

### Product Specifications

| INVERTER MODEL                | ES-INV-SPH3.6K   |
|-------------------------------|--|
| <b>PV INPUT</b>               |  |
| Max. PV Input Power           | 7.36kW   |
| Max. PV Input Voltage         | 580V   |
| MPPT Range                    | 100~550V   |
| Max. Input Current            | 15A / 15A  |
| Max. Short Circuit Current    | 18.75A / 18.75A  |
| MPPT Trackers                 | 2  |
| Strings Per MPPT Tracker      | 1 / 1  |
| <b>AC PORT</b>                |  |
| Rated Grid Output Power       | 3.68kVA  |
| Max. Grid Input Power         | 7.36kVA  |
| Rated Grid / Backup Voltage   | 230Vac   |
| Rated Grid / Backup Frequency | 50/60Hz  |
| Surge Backup Power            | 7.36kVA  |
| Rated Backup Power            | 3.68kVA  |
| 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%  |
| Max. Round Trip Efficiency    | 90%  |
| <b>GENERAL DATA</b>           |  |
| Operating Temperature Range   | -20~60°C   |
| Topology                      | Transformerless  |
| Dimensions (W*H*D)            | 590×405×205mm  |
| Weight                        | 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<br>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  |
| <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 ~ 4 in series  |
| Dimensions (W*H*D)            | 590×430×205mm  |
| Weight                        | 53.4kg   |
| Colour                        | White  |
| 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.

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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