

**ZINERIC**



ENERGY STORAGES

## About the company

Zineric is a leading manufacturer of energy storage and electrical components dedicated to renewable energy sources. From PV switchboards to intelligent storage systems - our offer responds to the real needs of modern installations, both domestic, commercial and industrial.

Behind the brand's success stands an experienced team of engineers who support customers at every stage - from design, through component selection, to after-sales care. We focus on quality, safety and reliability, which translate into the longevity of our solutions.



## Why Zineric?

### A comprehensive approach

We offer not only a device, but an entire energy storage system ready for integration with a PV installation and energy management systems.

### Premium security

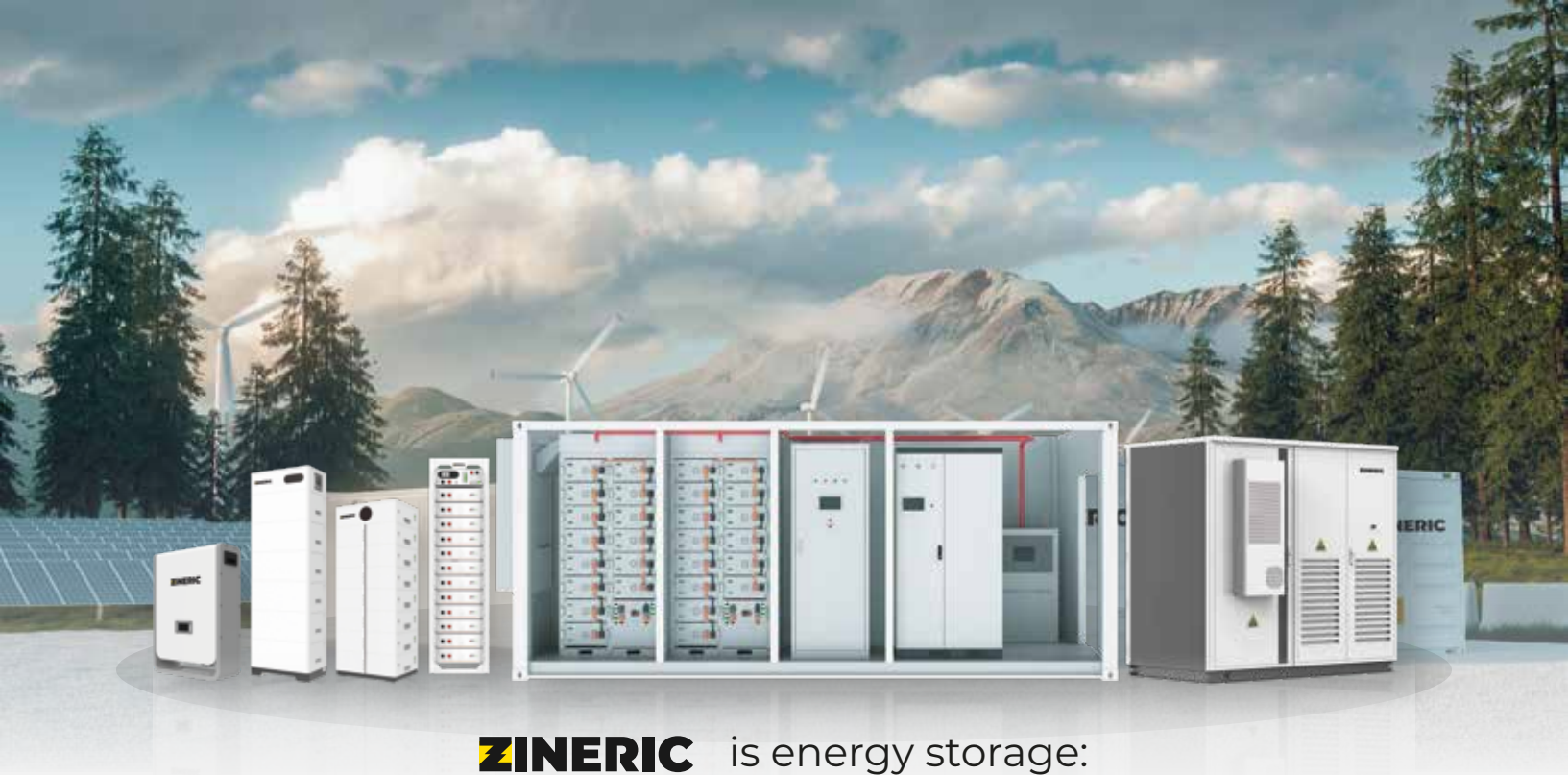
Our warehouses are based on proven  $\text{LiFePO}_4$  technologies, which are characterized by the highest level of safety.

### Flexibility of applications

Zineric systems operate successfully in various types of installations, from home installations to large industrial facilities.

### Longevity and quality

Each Zineric energy storage is an investment for years weather resistance and a high number of operating cycles.



### For home

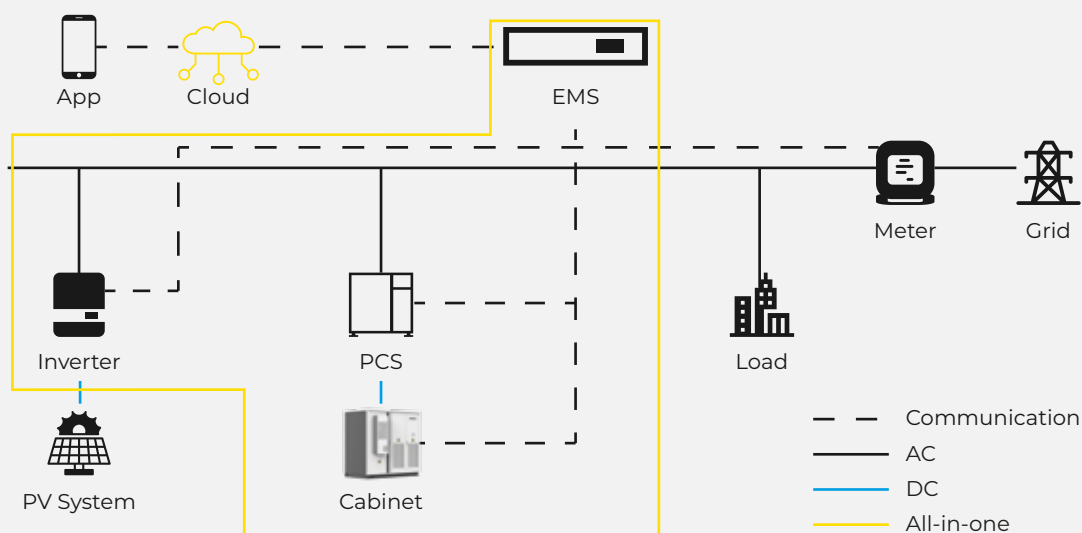
- Zineric F1 Energy Storage 5,12 kWh HV Stack Tower
- Zineric F2 Energy Storage 5,12 kWh LV Stack Tower
- Zineric O1 Energy Storage 5,12 kWh LV Rack
- Zineric O2 Energy Storage 5,12 kWh LV Wallmount Ściana/Podłoga

### For the company

- Zineric ZC-1 50/100 kWh All-in-one Air-Cooling Inverter Slot
- Zineric ZC-2 100/215 kWh All-in-one Air-Cooling MPPT

### For industryt

- Zineric ZI-1 0,5/1 MWh PCS Air-Cooling Container
- Zineric ZI-2 5 MWh no-PCS Liquid-Cooling Container





# Zineric F1 Energy Storage

5,12 kWh HV Stack Tower



IP65 protection level



LCD touch panel



Auto-protection against overvoltage, current, temperature



Automatic identification of modules



Long warranty: 10 years (up to 6000 cycles)



Scalable structure (up to 30.72 kWh)

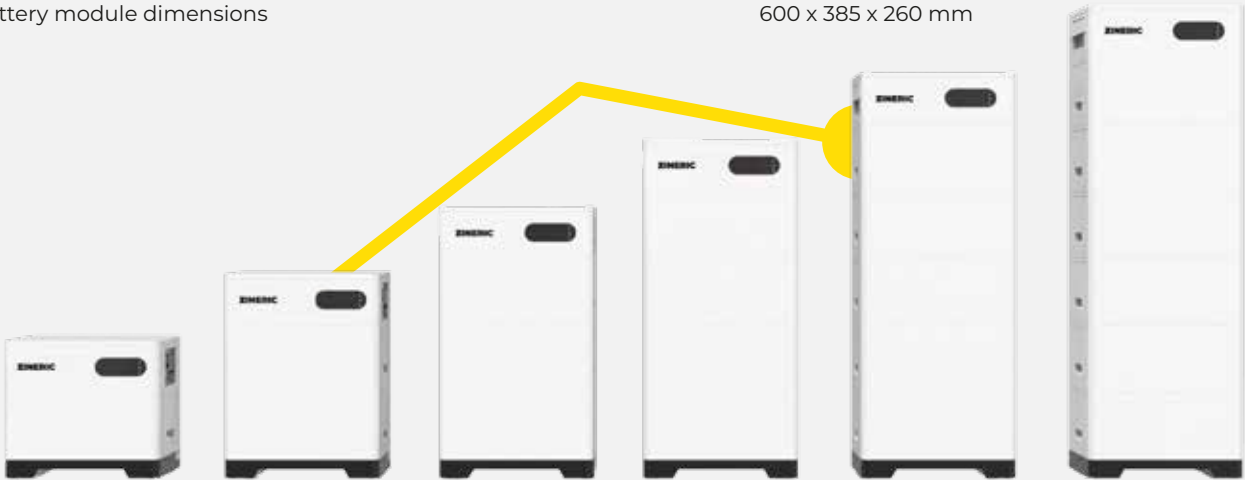


Aerosol fire extinguishing system

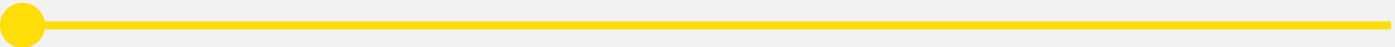




Modern design

| Model Zineric F1 5,12 kWh HV Stack Tower |  |             |             |             |           |             |
|--|--|-------------|-------------|-------------|-----------|-------------|
| Battery type                             | LiFeP04  |             |             |             |           |             |
| Module energy                            | 5,2 kWh  |             |             |             |           |             |
| Module nominal voltage                   | 102,4 V  |             |             |             |           |             |
| Module capacity                          | 50 Ah  |             |             |             |           |             |
| Number of battery modules                | 1  | 2           | 3           | 4           | 5         | 6           |
| System energy                            | 5,12 kWh   | 10,24 kWh   | 15,36 kWh   | 20,48 kWh   | 25,6 kWh  | 30,72 kWh   |
| Nominal system voltage                   | 102,4 V  | 204,8 V     | 307,2 V     | 409,6 V     | 512 V     | 614,4 V     |
| System operating voltage                 | 96-115,2 V                                       | 192-230,4 V | 288-345,6 V | 384-460,8 V | 480-576 V | 576-691,2 V |
| Recommended charge/discharge current     | 25A  |             |             |             |           |             |
| Max continuous charge/discharge current  | 50A  |             |             |             |           |             |
| Peak charge/discharge current (15S)      | 60A  |             |             |             |           |             |
| Depth of discharge (DOD)                 | >95%   |             |             |             |           |             |
| Display type                             | LED+LCD (touch)                                  |             |             |             |           |             |
| Protection level                         | IP65   |             |             |             |           |             |
| Operating temperature range              | Charging :0~ + 55°C / Discharging: -20°C~ + 55°C |             |             |             |           |             |
| Storage temperature range                | 0°C~+35°C  |             |             |             |           |             |
| Humidity                                 | 5%~95%   |             |             |             |           |             |
| Height                                   | <2000 m  |             |             |             |           |             |
| Life Cycle                               | > 6000 cycles                                    |             |             |             |           |             |
| Installation                             | Multi-storey installation / floor installation   |             |             |             |           |             |
| Security                                 | Built-in intelligent BMS system, circuit breaker |             |             |             |           |             |
| Communication port                       | RS485/CAN  |             |             |             |           |             |
| Warranty period                          | 10 years   |             |             |             |           |             |
| Weight of the control module             | 24,5 kg  |             |             |             |           |             |
| Control module dimensions                | 600 x 385 x 200 mm                               |             |             |             |           |             |
| Battery module weight                    | 57,5 kg  |             |             |             |           |             |
| Battery module dimensions                | 600 x 385 x 260 mm                               |             |             |             |           |             |



| Inverter manufacturer   | Type                       | Communication | Zineric FI |
|---|----------------------------|---------------|------------|
|    | SUN-5~25K-SG01HP3-EU/AU    | CAN           | ✓          |
|   | SUN-29.9~50K-SG01HP3-EU/AU | CAN           | ✓          |
|    | GW5KN-10KN-ET+             | CAN           | ✓          |
|   | BT(5K-10K)                 | CAN           | ✓          |
|   | EH(3K-6K)                  | CAN           | ✓          |
|   | BH(3K-6K)                  | CAN           | ✓          |
|   | EHB                        | CAN           | ✓          |
|   | GW40-50K-ET-10             | CAN           | ✓          |
|   | GW6-15K-ET-20              | CAN           | ✓          |
|   |                            |               |            |
|  | RHI-3P-HVES-5G series      | CAN           | ✓          |
|   | S6-EH3P(5-10)K-H-EU        | CAN           | ✓          |
|   | S6-EH3P(29.9-50)K-H        | CAN           | ✓          |
|  | SH.5.0                     | CAN           | 90% tested |
|   | SH.6.0                     | CAN           | 90% tested |
|   | SH.8.0                     | CAN           | 90% tested |
|   | SH.10.0                    | CAN           | 90% tested |
|  | HYD 10000                  | CAN           | 90% tested |
|   | HYD 15000                  | CAN           | 90% tested |
|   | HYD 20000                  | CAN           | 90% tested |
|  | HYT-HV Series              | CAN           | ✓          |
|   | HAT-HV Series              | CAN           | ✓          |



| Inverter manufacturer   | Type                 | Communication | Zineric FI |
|---|----------------------|---------------|------------|
|    | AF3~9.6K-DH Series   | CAN           | ✓          |
|   | AF3~30K-TH Series    | CAN           | ✓          |
|   | AF3~12K-THP Series   | CAN           | ✓          |
|   | AF3~17K-THA Series   | CAN           | ✓          |
|   | AF3~6K-THC Series    | CAN           | ✓          |
|   | AF3~15K-THM Series   | CAN           | ✓          |
|   | AF3~30K-TH-0 Series  | CAN           | ✓          |
|   | AF3~12K-THP-0 Series | CAN           | ✓          |
|   | AF3~15K-THM-0 Series | CAN           | ✓          |
|  | REX 10HP3G01         | RS485         | ✓          |
|   | REX 50HP3G01         | RS485         | ✓          |
|   | REX 40HP3G01         | RS485         | ✓          |
|   | REX 30HP3G01         | RS485         | ✓          |
|   | REX 25HP3G01         | RS485         | ✓          |

Cable arrangement in pins for communication with inverters

| NO.   | Deye  | Goodwe | Solis | Sungrow | Afore | Felicity |
|-------|-------|--------|-------|---------|-------|----------|
| PIN 1 | X     | X      | X     | X       | CAN_H | X        |
| PIN 2 | X     | X      | X     | X       | X     | X        |
| PIN 3 | X     | X      | X     | X       | CAN_L | X        |
| PIN 4 | CAN_H | CAN_H  | CAN_H | CAN_H   | X     | X        |
| PIN 5 | CAN_L | CAN_L  | CAN_L | CAN_L   | X     | X        |
| PIN 6 | X     | X      | X     | X       | X     | X        |
| PIN 7 | X     | X      | X     | X       | X     | CAN_L    |
| PIN 8 | X     | X      | X     | X       | X     | CAN_H    |

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**F2**

# Zineric F2 Energy Storage

5,12 kWh LV Stack Tower



IP65 protection level



BMS with built-in battery  
(5,12 kWh)



Auto-protection against  
overvoltage, current, temperature



Automatic identification of  
modules



Long warranty: 10 years  
(up to 6000 cycles)



Scalable structure  
(up to 40.96 kWh)



Aerosol fire extinguishing system



LCD panel

| Model Zineric F2 5,12 kWh LV Stack Tower |  |           |           |           |          |           |
|--|--|-----------|-----------|-----------|----------|-----------|
| Battery type                             | LiFeP04  |           |           |           |          |           |
| Nominal energy                           | 5,12 kWh   |           |           |           |          |           |
| Nominal capacity                         | 100 Ah   |           |           |           |          |           |
| Nominal voltage                          | 51,2 V   |           |           |           |          |           |
| Number of battery modules                | 1  | 2         | 3         | 4         | 5        | 6         |
| System energy                            | 5,12 kWh   | 10,24 kWh | 15,36 kWh | 20,48 kWh | 25,6 kWh | 30,72 kWh |
| Recommended charge/discharge current     | 50 A   | 100 A     | 150 A     | 200 A     | 250 A    | 300 A     |
| Max continuous charge/discharge current  | 60 A   | 120 A     | 180 A     | 240 A     | 300 A    | 360 A     |
| Peak charge/discharge current (15S)      | 100 A  | 200 A     | 300 A     | 400 A     | 500 A    | 600 A     |
| Scalability                              | Max 8 pieces in parallel                               |           |           |           |          |           |
| System operating voltage                 | 44.8 ~ 57.6V   |           |           |           |          |           |
| Depth of discharge (DOD)                 | ≥ 95%  |           |           |           |          |           |
| Display type                             | Control module: LCD/Battery module: LED*4              |           |           |           |          |           |
| Security Level                           | IP21   |           |           |           |          |           |
| Operating temperature range              | Charge: 0 ~ + 55°C/Discharge: -20°C ~ + 55°C           |           |           |           |          |           |
| Storage temperature range                | 0°C ~ + 35°C   |           |           |           |          |           |
| Humidity                                 | 5% ~ 95%   |           |           |           |          |           |
| Height                                   | <2000 m  |           |           |           |          |           |
| Life cycle                               | > 6000 cycles  |           |           |           |          |           |
| Installation                             | Wall mount / Floor mount                               |           |           |           |          |           |
| Security                                 | Built-in intelligent BMS system, circuit breaker, fuse |           |           |           |          |           |
| Communication port                       | RS485/CAN  |           |           |           |          |           |
| Warranty period                          | 10 years   |           |           |           |          |           |
| Weight of the control module             | 46 kg  |           |           |           |          |           |
| Control module dimensions                | 600 x 450 x 180 mm                                     |           |           |           |          |           |
| Battery module weight                    | 46 kg  |           |           |           |          |           |
| Battery module dimensions                | 600 x 450 x 180 mm                                     |           |           |           |          |           |





# Zineric O1 Energy Storage

5,12 kWh LV Rack



24/7 monitoring



Long service life



Home Security



Auto-protection against overvoltage, current, temperature



Displaying the charge level



High scalability (up to 81,92 kWh)

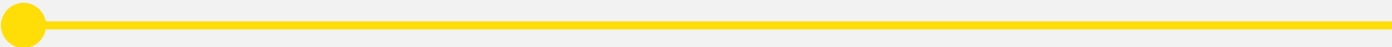


Small size



Easy installation

| Model                       |   | Zineric O1 5,12 kWh LV Rack |
|-----------------------------|---|-----------------------------|
| Battery type                | LifePO4 (LFP)   |                             |
| Nominal voltage             | 51,2 V  |                             |
| Nominal capacity            | 5,12 kWh  |                             |
| Usable capacity             | 4,608 kWh   |                             |
| Design life                 | +10 years (25°C/77°F)   |                             |
| Dimension (mm)              | 480x443x133   |                             |
| Weight (kg)                 | 43,4  |                             |
| Cycle life                  | >6000 cycles (25°C±2°C, 80% DOD)  |                             |
| Discharge voltage           | 44,8 V  |                             |
| Charge voltage              | 56,8 V  |                             |
| Charge current              | 50 A (recommended); 100 A (max)   |                             |
| Internal resistance         | ≤30mΩ   |                             |
| Power consumption           | <2 W (work) < 100 mW (sleep)  |                             |
| Monitoring parameters       | System voltage, current, cell voltage, cell temperature, module temperature |                             |
| SOC                         | Intelligent algorithm   |                             |
| Communication               | CAN/RS-485  |                             |
| Operating temperature range | Charge temperature 0°C ~ 60°C:<br>Discharge temperature -20°C ~ 60°C        |                             |
| Storage temperature range   | -20°C ~ 45°C  |                             |
| Humidity                    | 15% ~ 85% (no condensing)   |                             |
| Product warranty            | 5 years   |                             |
| Performance warranty        | 10 years  |                             |





# Zineric O2 Energy Storage

5,12 kWh LV Wallmount Wall/Floor



24/7 monitoring



Long service life



Home Security



Auto-protection against overvoltage, current, temperature



Displaying the charge level



High scalability  
(up to 20.48 kWh)

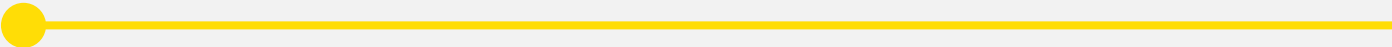


Wall or ground mounting

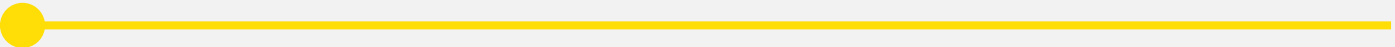





Easy installation

| Model                       | Zineric O2 5,12 kWh LV Wallmount  |
|-----------------------------|---|
| Battery type                | LifePO4 (LFP)   |
| Nominal voltage             | 51,2 V  |
| Nominal capacity            | 5,12 kWh  |
| Usable capacity             | 4,608 kWh   |
| Design life                 | +10 years (25°C/77°F)   |
| Dimension (mm)              | 475x221x675   |
| Weight (kg)                 | 59,6  |
| Cycle life                  | >6000 cycles (25°C±2°C, 80% DOD)  |
| Discharge voltage           | 44,8 V  |
| Charge voltage              | 56,8 V  |
| Charge current              | 50 A (recommended); 100 A (max)   |
| Internal resistance         | ≤30mΩ   |
| Power consumption           | <2 W (work) < 100 mW (sleep)  |
| Monitoring parameters       | System voltage, current, cell voltage, cell temperature, module temperature |
| SOC                         | Intelligent algorithm   |
| Communication               | CAN/RS-485  |
| Operating temperature range | Charge temperature 0°C ~ 60°C;<br>Discharge temperature -20°C ~ 60°C        |
| Storage temperature range   | -20°C ~ 45°C  |
| Humidity                    | 15% ~ 85% (no condensing)   |
| Product warranty            | 5 years   |
| Performance warranty        | 5 years   |



| Inverter manufacturer   | Type                         | Communication | Zineric F2 | Zineric O1&O2 |
|---|------------------------------|---------------|------------|---------------|
|    | SUN-SG01LP1 series           | CAN           | 90% tested | ✓             |
|   | SUN-SG03LP1 series           | CAN           | 90% tested | ✓             |
|   | SUN-SG04LP1 series           | CAN           | 90% tested | ✓             |
|   | SUN-SG04LP3 series           | CAN           | 90% tested | ✓             |
|    | CW-BP                        | CAN           |            | ✓             |
|   | SBP GW-ES                    | CAN           |            | ✓             |
|   | EM                           | CAN           |            | ✓             |
|  | S5-EA1P3K-L                  | CAN           | ✓          | ✓             |
|   | S6-EA1P(3.6-6)K-L            | CAN           | ✓          | ✓             |
|   | S6-EO1P(4-5)K-48             | CAN           | ✓          | ✓             |
|   | S5-EH1P(3-6)K-L              | CAN           | ✓          | ✓             |
|   | S6-EH1P(3-6)K-L-EU           | CAN           | ✓          | ✓             |
|  | SI 4.4-M                     | CAN           |            | ✓             |
|   | SI 6.0-H                     | CAN           |            | ✓             |
|   | SI 8.0-H                     | CAN           |            | ✓             |
|   | SI 6048US                    | CAN           |            | ✓             |
|  | ME3000SP                     | CAN           |            | ✓             |
|   | HYD series                   | CAN           |            | ✓             |
|  | HYS-LV Series                | CAN           |            | ✓             |
|   | HAS-LV Series                | CAN           |            | ✓             |
|  | Multiplus 48V (via Venus OS) | CAN           |            | ✓             |
|   | Quattro 48V (via Venus OS)   | CAN           |            | ✓             |



| Inverter manufacturer   | Type                           | Communication | Zineric F2 | Zineric O1&O2 |
|---|--------------------------------|---------------|------------|---------------|
|    | PLENTICORE plus                | CAN           |            | ✓             |
|   | PLENTICORE plus G2             | CAN           |            | ✓             |
|   | PLENTICORE BI xx/26            | CAN           |            | ✓             |
|   | PLENTICORE BI xx/26 G2         | CAN           |            | ✓             |
|   | PLENTICORE G3                  | CAN           |            | ✓             |
|    | SPH 3000 - 10000               | CAN           |            | with Cerbo GX |
|   | SPF 2000 - 5000                | CAN           |            | with Cerbo GX |
|   | SPF 5000 ES / SPF 6000 ES PLUS | CAN           |            | ✓             |
|   | WIT                            | CAN           |            | ✓             |
|  | T-REX-4-6KLP3G01 (4-6 kW)      | RS485         | ✓          | ✓             |
|   | T-REX-10KLP3G01                | RS485         | ✓          | ✓             |
|   | T-REX-3K6P1G01                 | RS485         | ✓          | ✓             |
|  | ASW3000-6000H-S2               | CAN           |            | ✓             |

Cable arrangement in pins for communication with inverters

| NO.   | Deye  | Goodwe | Solis | Sungrow | Afore | Sofar | Hoymiles | Victron | Felicity |
|-------|-------|--------|-------|---------|-------|-------|----------|---------|----------|
| PIN 1 | X     | X      | X     | X       | X     | CAN_H | X        | X       | X        |
| PIN 2 | X     | X      | X     | X       | X     | CAN_L | X        | X       | X        |
| PIN 3 | X     | X      | X     | X       | X     | X     | X        | X       | CAN_L    |
| PIN 4 | CAN_H | CAN_H  | CAN_H | CAN_H   | CAN_H | X     | CAN_H    | X       | CAN_H    |
| PIN 5 | CAN_L | CAN_L  | CAN_L | CAN_L   | CAN_L | X     | CAN_L    | X       | X        |
| PIN 6 | X     | X      | X     | X       | X     | X     | X        | X       | X        |
| PIN 7 | X     | X      | X     | X       | X     | X     | X        | CAN_H   | X        |
| PIN 8 | X     | X      | X     | X       | X     | X     | X        | CAN_L   | X        |

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**ZC-2**

# Zineric ZC-2 100/215 kWh

All-in-one Air Cooling MPPT



Sensors detecting: smoke, fire, leak, carbon dioxide, excessive moisture



Flexibility of scaling - possibility to connect 10 units together to achieve parameters of 1 MW / 2 MWh



Air cooling – stable operation even at high temperatures



Plug & Play installation - quick installation and easy integration with the system

| Model                                    |  | Zineric ZC-2 100/215 kWh All-in-one Air Cooling MPPT |
|--|--|--|
| DC                                       |  |  |
| Link                                     |  | LFP 280 Ah   |
| Number of MPPTs                          |  | 2  |
| MPPT Operating Voltage/Full Load Voltage |  | 250 ~ 850 / 450 ~ 850                                |
| Security                                 |  | Switch and fuse                                      |
| System capacity                          |  | 14,336 kWh / 1P16S                                   |
| Maximum PV voltage                       |  | 1000 V / 120 kW                                      |
| System capacity                          |  | 215 kWh / 1P240S                                     |
| Rated current                            |  | 140 A  |
| Charge/discharge speed                   |  | ≤ 0,5 Cp   |
| DC efficiency                            |  | 94%  |
| AC (OnGrid)                              |  |  |
| Rated output power                       |  | 100 kW   |
| Nominal input voltage                    |  | AC 340 V ~ 460 V                                     |
| Power factor                             |  | - 1 ~ 1  |
| Nominal output current                   |  | 144 A  |
| Nominal network frequency                |  | 50 Hz / 60 Hz  |
| Wiring                                   |  | 3P + N + PE  |
| AC (OffGrid)                             |  |  |
| Rated output power                       |  | 100 kW   |
| Nominal input voltage                    |  | AC 400 V   |
| THD                                      |  | Linear ≤ 1% / Non-linear ≤ 5%                        |
| Nominal output current                   |  | 144 A  |
| Nominal network frequency                |  | 50 Hz / 60 Hz  |
| Output wiring                            |  | 3P + N + PE (isolated transformer, sts inside)       |
| System                                   |  |  |
| Total system performance                 |  | 87% & 0,5P (STD)                                     |
| Communication                            |  | RS485, CAN, TCP/IP                                   |
| Fire prevention                          |  | FK5112   |
| DOD                                      |  | 5 ~ 95%  |
| Cooling / Cooling power                  |  | Forced air conditioning / 1,1 kW ~ 3 kW              |
| Operating temperature                    |  | -20°C ~ 50°C   |
| Housing protection                       |  | IP54   |
| Relative humidity range                  |  | 5 ~ 95% RH (no condensation)                         |
| Maximum working height                   |  | ≤ 3000 m   |
| Weight / Dimensions (mm)                 |  | 3900 kg / 2450x1550x2400                             |

**ZC-1**



PV and ESS Integration

Emergency backup

Cloud Platform Planning

Peak shaving and valley filling

Micro-grid

## Zineric ZC-1 50/100 kWh All-in-one Air-Cooling Inverter Slot

### Technical specification



|                             |  |
|-----------------------------|--|
| Dimensions                  | 1100x2380x1100                           |
| Weight                      | < 1,5 T                                  |
| Installation location       | Outside                                  |
| Protection level            | IP54                                     |
| Anti-corrosion level        | C4                                       |
| Humidity                    | 5% ~ 95% (non-condensing)                |
| Operating temperature range | -30°C ~ 50°C                             |
| Height                      | 4000 m (> 3000 m depreciation)           |
| Communication port          | Ethernet; CAN                            |
| Communication protocol      | CAN; TCP                                 |
| Cooling method              | Air conditioner                          |
| Certificates                | IEC 62619-2017; UN 38.3; IEC 61000-6-2/4 |

### Work with:

**GROWATT**

**Afore**

**SCFAR**

**solis**

**Deye**



**ZI-1**

**ZI-2**

### **Zineric ZI-1 0,5/1 MWh PCS Air-Cooling Container**

### **Zineric ZI-2 5 MWh no-PCS Liquid-Cooling Container**



LFP Tier-1 Battery Cells



Modular design



Plug-and-Play



Dual Fire Suppression System



24/7 monitoring



Intelligent fluid refill



Fast delivery



Internal BMS





**Contact:**

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Service:  
[zineric@zineric.com](mailto:zineric@zineric.com)