

# PWS1-500KTL-EX-G Power Conversion System



## Features

### Flexible Configuration

- 62.5kW to 500kW by 1 to 8 power modules.
- 3P3W AC output

### High Efficiency & Stability

- Maximum efficiency up to 98.2%
- Multi-string technology for better battery safety and performance.

### Extensive Use

- Multiple battery strings working in parallel or independently to allow easy power and energy expansion.

### Compliance & Compatibility

- Compatible with various types of battery system.
- Global grid certified & listed

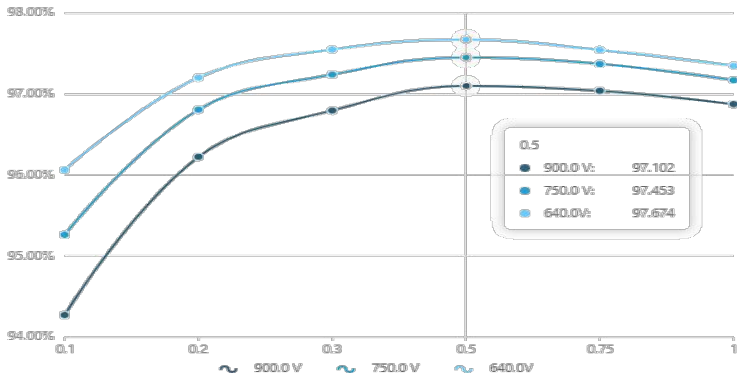
## Specification

|                               |                                                 |
|-------------------------------|-------------------------------------------------|
| Model                         | PWS1-500KTL-EX-8M1-G                            |
| Operation                     | On-Grid only <sup>1</sup>                       |
| Nominal power                 | 500kVA <sup>2</sup>                             |
| AC max power                  | 550kVA <sup>2</sup>                             |
| AC frequency                  | 50(-2.5~2.5) Hz                                 |
| AC voltage                    | 400(-15%~15%) Vac                               |
| Battery voltage range         | 600~900Vdc                                      |
| Quantity of battery strings   | 1                                               |
| DC max current in each branch | 880A                                            |
| THDi                          | ≤3%                                             |
| AC PF                         | Listed: 0.8~1 leading or lagging (Controllable) |
|                               | Actual: 0.1~1 leading or lagging (Controllable) |

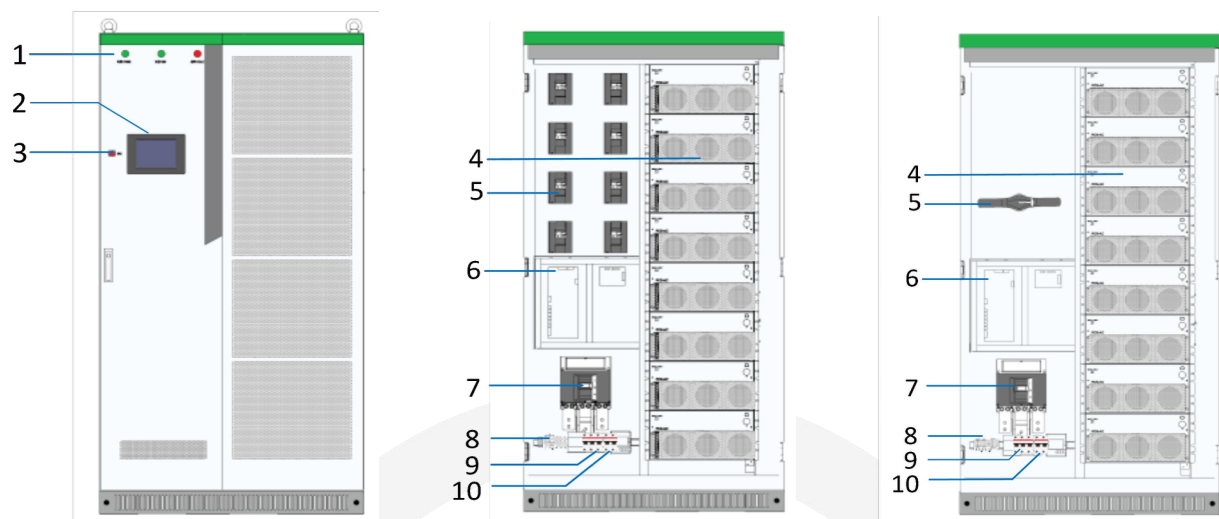
1. Grid connection is required for the operation of the PCS.
2. Power series from 62.5kW to 500kW by equipping different numbers of power modules (1-8).

## Specification

| Physical                      |                                                   |
|-------------------------------|---------------------------------------------------|
| Cooling                       | Forced air cooling                                |
| Noise                         | < 75dB                                            |
| Enclosure                     | NEMA1 IP20 and optional IP54 with outdoor cabinet |
| Max elevation                 | 3000m/10000feet (> 3000m/10000feet derating)      |
| Operating ambient temperature | -20°C to 50°C (De-rating over 45°C)               |
| Humidity                      | 0~95% (No condensing)                             |
| Size (W×H×D)                  | 1100×2160×800 mm                                  |

| Weight                         | Cabinet 380kg + Module 40kg*n (n=1,2,...,8)                                                                                                                                                                                                                                                     |     |  |  |          |        |  |          |        |  |          |        |  |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|--|----------|--------|--|----------|--------|--|----------|--------|--|
| Installation                   | Floor standing                                                                                                                                                                                                                                                                                  |     |  |  |          |        |  |          |        |  |          |        |  |
| Other                          |                                                                                                                                                                                                                                                                                                 |     |  |  |          |        |  |          |        |  |          |        |  |
| Efficiency curve               |  <table><tr><th>0.5</th><td></td><td></td></tr><tr><td>900.0 V:</td><td>97.102</td><td></td></tr><tr><td>750.0 V:</td><td>97.453</td><td></td></tr><tr><td>640.0 V:</td><td>97.674</td><td></td></tr></table> | 0.5 |  |  | 900.0 V: | 97.102 |  | 750.0 V: | 97.453 |  | 640.0 V: | 97.674 |  |
| 0.5                            |                                                                                                                                                                                                                                                                                                 |     |  |  |          |        |  |          |        |  |          |        |  |
| 900.0 V:                       | 97.102                                                                                                                                                                                                                                                                                          |     |  |  |          |        |  |          |        |  |          |        |  |
| 750.0 V:                       | 97.453                                                                                                                                                                                                                                                                                          |     |  |  |          |        |  |          |        |  |          |        |  |
| 640.0 V:                       | 97.674                                                                                                                                                                                                                                                                                          |     |  |  |          |        |  |          |        |  |          |        |  |
| CEC efficiency                 | -                                                                                                                                                                                                                                                                                               |     |  |  |          |        |  |          |        |  |          |        |  |
| Protection                     | OTP, AC OVP/UVP, OFP/UFP, EPO, AC Phase Reverse, Fan/Relay Failure, OLP, GFDI, Anti-islanding                                                                                                                                                                                                   |     |  |  |          |        |  |          |        |  |          |        |  |
| Configurable protection limits | Upper/Lower AC Voltage/Frequency limit, Battery EOD voltage.                                                                                                                                                                                                                                    |     |  |  |          |        |  |          |        |  |          |        |  |
| AC connection                  | 3-Phase 3-Wire                                                                                                                                                                                                                                                                                  |     |  |  |          |        |  |          |        |  |          |        |  |
| Display                        | Touch Screen                                                                                                                                                                                                                                                                                    |     |  |  |          |        |  |          |        |  |          |        |  |
| Communication                  | RS485, CAN, Ethernet                                                                                                                                                                                                                                                                            |     |  |  |          |        |  |          |        |  |          |        |  |
| Isolation                      | Non-isolation                                                                                                                                                                                                                                                                                   |     |  |  |          |        |  |          |        |  |          |        |  |
| Certification                  | CE LVD IEC 62477, CE EMC IEC 61000<br>EN 50549-1:2019, EN50549-2<br>G99, AS4777.2:2020, VDE 4110, CE10-16<br>Synergrid listing                                                                                                                                                                  |     |  |  |          |        |  |          |        |  |          |        |  |
| Short circuit                  |                                                                                                                                                                                                                                                                                                 |     |  |  |          |        |  |          |        |  |          |        |  |
| Fault current                  | 1600A                                                                                                                                                                                                                                                                                           |     |  |  |          |        |  |          |        |  |          |        |  |
| Fault duration                 | 80ms                                                                                                                                                                                                                                                                                            |     |  |  |          |        |  |          |        |  |          |        |  |

# Appearance



Visible Components of the

4/8 Strings Version

1 String version

| Position | Designation               | Description     |
|----------|---------------------------|-----------------|
| 1        | Indicator lights          |                 |
| 2        | Touch Screen              |                 |
| 3        | EPO (Emergency Power Off) |                 |
| 4        | PCS-AC (1~8 module(s))    | 62.5KW per unit |
| 5        | DC disconnectors          | 1 or 8          |
| 6        | Main control board        |                 |
| 7        | AC Switch                 |                 |
| 8        | Wiring terminal           |                 |
| 9        | SPD switch                |                 |
| 10       | AUX Power supply switch   |                 |

## Applicable types as per number of power modules

| Type                 | Nominal AC Power (kVA) |
|----------------------|------------------------|
| PWS1-500KTL-EX-1M1-G | 62,5                   |
| PWS1-500KTL-EX-2M1-G | 125                    |
| PWS1-500KTL-EX-3M1-G | 187,5                  |
| PWS1-500KTL-EX-4M1-G | 250                    |
| PWS1-500KTL-EX-5M1-G | 312,5                  |
| PWS1-500KTL-EX-6M1-G | 375                    |
| PWS1-500KTL-EX-7M1-G | 437,5                  |
| PWS1-500KTL-EX-8M1-G | 500                    |