

Photovoltaic Inverter (PVI)

Complete photovoltaic inverter stations for challenging grid codes utility-scale solar plants

- Advanced control and power capabilities, designed to meet complex technical requirements and the most challenging grid codes.
- Optimal design for AC-coupled solar + storage applications.
- Easy integration to the grid and low power consumption.
- Ancillary services capabilities (FRS, VRS, RR, ...) based on the most advanced control algorithms, including the virtual battery mode for spinning reserve.



Fast Dynamic Response

Provides advanced power management, including:

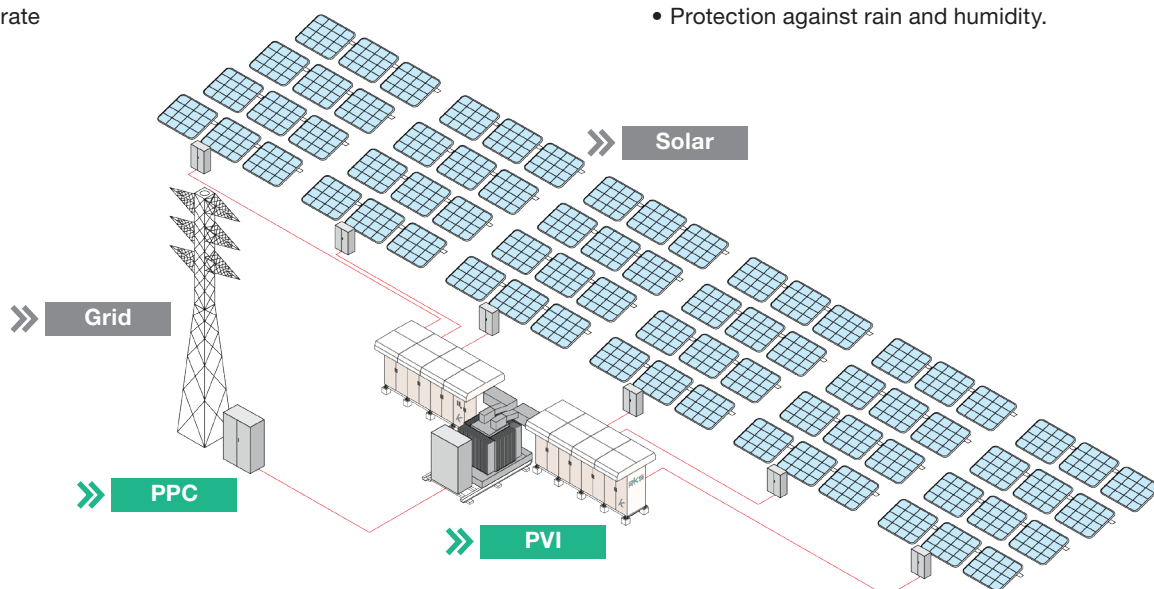
- Voltage Support
- Islanding
- Grid Inertia
- Limited Frequency Regulation
- Limited Capacity Firming
- Ramp rate



Harsh Environments

Filters to avoid dust entrance combined with top-quality components that enable us to work in any possible scenario:

- Effective operating conditions in remote high-altitude.
- Coating on internal components and electronics to resist corrosive saline conditions.
- Sealing elements and standard IP65 enclosure.
- Protection against rain and humidity.



Shaping the energy of tomorrow

| Model | | TECHNICAL SPECIFICATIONS PVI - 1500V FULL POWER | | |
|--------------------------------|---|---|------------------------|------------------------|
| PVI REFERENCES | | PVI-3M-WD3-V690 | PVI-3M-WD3-V620 | PVI-3M-WD3-V530 |
| AC | Nominal AC voltage [Vac] (1) | 690 ±15% | 620 ±15% | 530 ±15% |
| | Rated AC power [kW/kVA] @ 95°F/35°C @Vdc min (2) | 4.761 | 4.349 | 3.717 |
| | Rated AC power [kW/kVA] @ 122°F/50°C @Vdc min (2) | 4.266 | 3.897 | 3.331 |
| | Maximum output current @ 95°F/35°C @Vdc min (2) | 4.591 | 4.536 | 4.465 |
| | Total Current Demand Distortion (TDD) | <3% | | |
| | Power factor (3) | Efficiency Maximum / Euroeta / CEC [%] (4) | | |
| | Efficiency Maximum / Euroeta / CEC [%] (4) | 98,6 / 98,3 / 98,5 (5) | 98,5 / 98,3 / 98,4 (5) | 98,5 / 98,3 / 98,4 (5) |
| DC | MPP Voltage range @ full power [Vdc] (2) | 987-1250 | 887-1250 | 758-1250 |
| | Max. DC voltage [Vdc] | 1500 | | |
| | Number of MMPT Inputs | 3 | | |
| | Rated input current at Vdc_min [A] @35°C | 3 x 1600 | | |
| | Rated input current at Vdc_min [A] @50°C | 3 x 1440 | | |
| | Max. Short circuit input current [A] (6) | 3 x 4800 | | |
| | Number of DC Inputs | 3 Busbar with up to 12 | | |
| | COMMON FEATURES | | | |
| Protections | General AC Protection & Disconn | AC circuit breaker | | |
| | General DC Protection & Disconn | DC load break switch | | |
| | DC Overvoltage Protection | SPD (type 2) | | |
| | Ground-fault monitoring | Yes | | |
| | Insulation monitoring | Yes | | |
| | Lightning protection | Optional (SPD type 1+2) | | |
| | DC Input fuse protection (7) | Fuses | | |
| Cabinet | Dimensions [WxDxH] | 5212 x 2190 x 2460 mm | | |
| | Weight | ~7 tn | | |
| | Type of Ventilation | Forced air cooling | | |
| Environment | Degree of Protection (8) | IP65 | | |
| | Operation ambient temperature | From -4°F to 140°F (-20°C to 60°C), derating >95°F (35°C) | | |
| | Maximum relative humidity | 100% | | |
| | Max. altitude above sea level | 4000 masl, derating >1000 masl | | |
| | Storage and transport temperature | From -40°F to 149°F (-40°C to 65°C) | | |
| | Storage and transport humidity | From 5% to 85% | | |
| Certifications & Standards (9) | IEEE 1547-2018, UL 1741 – SA & SB, IEC 62477, IEC 62109-1, IEC 62109-2, IEC62109, IEC 61000-3-4, IEC 61000-3-11, IEC 61000-3-12, IEC 61000-6-4, IEC 60529, CE Marking, NEC Compliance | | | |

(1) Other voltage configurations are possible under request.

(2) Values at nominal AC voltage and $\cos\phi=1$, $f=60\text{Hz}$. Consult for derating curves.

(3) Consult for capability curves.

(4) Self-consumption is not considered in the efficiency measurement.

(5) Depending on the transformer model required, standby losses and auxiliary power consumption may vary.

(6) Higher values under request

(7) Different DC fuse sizes are available

(8) Lower protection -IP54- is also available

(9) Other applicable standards/grid codes are possible