

PVMaster ISO-Container Station with Ampt Mode™

PVI3.86.3000

- 20-foot PVMaster ISO-Container Station for direct connection to the medium voltage system
- Compact and modular design with high power density
- Compact and modular design
- Simple and fast installation and commissioning
- Voltage range 860 V to 920 V
- Applicable with all common module types
- Maximum efficiency >98.8 % ⁵⁾
- Optimized to operate in Ampt Mode™



Technical data

Designation	PVI3.86.3000
Generator connection (DC)	
Recommended PV generator output ¹⁾	3300 kWp
Min./max. input voltage ($V_{dc, min} / V_{dc, max}$)	860 V / 1000 V
Voltage range (V_{min} to V_{max})	860 V to 920 V
Max. input current ($I_{dc, max}$)	6 x 600 A
Rated input voltage ($V_{dc, r}$)	880 V
Start voltage supply ($V_{dc, start}$) ²⁾	860 V
Number of voltage controller	1
Termination technique (L+, L-)	Cage clamp terminal 240 mm ²
Mains power connection (AC)	
Max. output power ($S_{ac, r}$) at $V_{ac, r}$	3000 kVA
Rated power ($P_{ac, r}$) at $\cos \varphi = 1$ ³⁾	3000 kW
Rated voltage ($V_{ac, r}$) ⁴⁾	555 V
Min./max. output voltage ($V_{ac, min} / V_{ac, max}$)	In accordance with country-specific requirements
Rated frequency (f_r)	50 Hz / 60 Hz
Frequency range (f_{min} to f_{max})	In accordance with country-specific requirements
Max. output current ($I_{ac, max}$)	3120 A
System form	In accordance with country-specific requirements
Power factor $\cos \varphi$	Adjustable 0.8 ind. to 0.8 cap.
Distortion factor (THD) at $P_{ac, r}$	<2.5 %
Termination technique (L1, L2, L3)	Copper busbar
Efficiency ⁵⁾	
Max. efficiency	>98.8 %
European efficiency	>98.6 %
CEC efficiency	>98.6 %
Dimensions	
Height	2591 mm
Width	6058 mm
Depth ⁶⁾	2438 mm
Weight (approx.)	10,000 kg
General data	
Immediate vicinity	Outdoor installation
Ambient temperature	-10 °C to +50 °C ⁷⁾
Cooling method	Regulated air (optional air conditioning system ⁸⁾ / liquid cooling (self-contained system)
Pollution severity (EN 60664-1)	2

1) At Module-STC (1000 W/m²; AM 1.5; 25°C) in accordance with EN 60904-3

Data as per EN 50524

2) The actual DC start voltage is derived from the Ampt™ string optimizer

3) At $\cos \varphi = 1$ the maximum apparent power ($S_{ac, r}$) of the unit is available as active power at the rated grid voltage ($V_{ac, r}$). The maximum active power will be reduced accordingly with decreasing grid voltage and/or decreasing power factor $\cos \varphi$.

4) Line-to-line voltage; other rated system voltages on request

5) Values related to inverter performance excluding additional components

6) Dimensions excluding heat exchanger and Main Combiner Boxes

7) If an air conditioning system is used. Ratings up to 45 °C can be achieved without air conditioning system; power derating where appropriate at higher ambient temperatures

8) With air conditioning system. Container inside separated from environment.

Technical data

Designation	PVI3.86.3000
Power consumption	
Intrinsic consumption in active mode ⁹⁾	3600 W
Standby power consumption ¹⁰⁾ / night	<600 W / 9 W
External auxiliary voltage supply	1 x terminal, three-phase, 400 V, 50/60 Hz
Safety / Protective equipment	
Insulation monitoring of PV generator	Yes
AC/DC surge voltage protector	Optional / Yes
Temperature monitoring	Temperature-dependent derating, shutdown at impermissible temperatures
Overload response	Current limitation, operating point shift
PV generator/mains decoupling	Electrical isolation by internal medium voltage transformer
Isolation point	Yes
Protection class (IEC 62103)	1
Protection type (IEC 60529)	
Inverter room	IP54
Standards	
General	<ul style="list-style-type: none"> - CE conformity - Conforming to EEG 2014 - DIN EN 62109: Safety of power converters for use in photovoltaic power systems - DIN EN 61000-6-2 and DIN EN 61000-6-4: Electromagnetic compatibility - DIN VDE 0101: Power installations exceeding 1 kV a.c. - DIN VDE 0100: Low-voltage electrical installations
Grid monitoring	- In accordance with country-specific requirements
Interfaces / Features / Options	
Interfaces	<ul style="list-style-type: none"> - Ethernet (RJ45) - microSD card - Digital outputs as floating contacts (24 V to 230 V, AC/DC, changeover contact) - Digital inputs with extended-range actuation coils (24 V or 230 V, AC/DC) - S0 pulse inputs or digital inputs with extended-range actuation coils (24 V or 230 V, AC/DC) - Analog inputs (0 V to +10 V / -10 V to +10 V / 0 mA to 20 mA / 4 mA to 20 mA) - PT100 inputs - CAN (e.g. for string monitoring)
Features	<ul style="list-style-type: none"> - DC surge protector type 2 - AC surge protector type 2 (auxiliary supply AC voltage) - DC main switch - AC short-circuit proofing - Insulation monitoring of PV generator - Extensive power factor control functions for static and dynamic grid stabilisation - Integrated data logger - Support for various online portals - Air/liquid heat exchanger with pump - CSC certification for sea transportation
Options	<ul style="list-style-type: none"> - DC surge protector type 1 + 2 - AC surge protector type 1 + 2 - Grounding of PV generator - VPN modem (GSM, DSL) for remote data access and transmission - Control unit with extensive functionality - Trouble reports issued by e-mail - Park controller - Uninterruptible power supply (UPS)

9) Consumption of inverters excluding additional components

10) Without fan in passive mode