EFASOLAR 1000

The **EFASOLAR 1000** is a 1 MVA solar inverter suitable for utility scale power plants with centralized architecture.

The **EFASOLAR 1000** has integrated an advanced control module with remote power controllability modes and grid support features that guarantees an excellent performance and authentic grid dispatch integration.

Customer Benefits

- 1 MVA solar inverter at 50 °C
- Maximum efficiency with harsh conditions
- High availability and reliability
- DC & AC protection
- Extended support using Efacec international structure

Key Benefits

- Designed for utility scale project
- Configurable DC inputs with current measurement
- Reactive power compensation at night
- Grid dispatch integration
- All protective devices and features included

Main Features

Grid Support

- Q, P control inbuilt
- Grid support features
- Grid code compliance
- IEC 62116, BDEW standards
- LVRT capability

Compact Design

- Optimized for PVStation
- Front access for enhanced O&M
- Robust design
- 600 mm depth
- Fast & easy field installation

PV Interface

- Wide MPPT range
- Input voltage up to 1000 V
- Configurable DC inputs
- Fuse protected
- Individual current measurements

Reliability Focus

- Extended temperature range
- High quality components
- Fast & easy replacement
- Fast troubleshooting
- Kaizen manufacturing

Power Plant Controller

- Dynamic P, Q control modes
- Grid dispatch integration
- Open communication protocol
- HMI remote access
- Integration in monitoring software solutions

After Sales

- Warranty extension options
- Service & availability contracts
- Customer service portal & hotline
- Extended support using Efacec international structure

Technical Data

	EFASOLAR 1000
Electrical	
Input	
Maximum power	1400 kW
Minimum voltage	595 V
Maximum voltage	1000 V
MPPT range	595 V - 850 V
Maximum current	1900 A
Number of independent MPP inputs	1
Number of DC inputs [1]	6 inputs equipped with fuses
Output	
Rated power (25 °C / 50 °C)	1100 kVA / 1000 kVA
Rated voltage [2]	405 V
Rated current	1426 A
Frequency	50 Hz / 60 Hz
Maximum current	1570 A
THD	< 3%
Power factor [3]/Displacement power factor [4]	1,0 / 0,8 inductive to 0,8 capacitive
Required grid type	IT grid
Isolation transformer	No
Efficiency	
Maximum [5]	98,7%
Euro-efficiency [5]	98,5%
CEC efficiency [5]	98,6%
Protective devices	
DC disconnect device	Motor-drive switch disconnector
AC disconnect device	Circuit breaker
DC overvoltage protection	Type II surge arrester
AC overvoltage protection	Type I surge arrester
Auxiliaries overvoltage protection	Type II surge arrester
Ground fault monitoring	•
Overvoltage	•
Undervoltage	•
Overfrequency	•
Underfrequency	•
Anti-islanding	•
Reverse polarization	•
Short circuit on the output	•
Overtemperature	•
Asymmetrical current	•
General data	
Ambient temperature	-10 °C ... +50 °C / +14 °F ... +122 °F
Max. permissible value for relative humidity (noncondensing)	15% ... 95%
Cooling concept	Air forced cooling
Auxiliaries power supply	230 V
Max. self-consumption (operation) / self-consumption (night)	1300 W / <85 W
Color	RAL 7035
Altitude for rated conditions / Maximum operating altitude above sea level [6]	1000 m / 3000 m
Dimensions (WxDxH)	2200 x 610 x 2000 mm / 86,6 x 24 x 78,7”
Weight	1800 kg / 3968 lb
Protection degree	IP20 / NEMA 2
Protective class	I
Standards	
CE marking	Yes
Safety/EMC	EN 62109-1, EN 62109-2 / EN 61000-6-2, EN 61000-6-4
Grid interface	IEC 62116, BDEW, P.O.12.3, Arrêté 23-04-2008, ABNT NBR 16149, ABNT NBR 16150, South African Grid code, Chilean Grid Code
Interfaces	
Local Human Machine Interface	4.3” Color, touch screen
Remote interface	Web Virtual HMI
Communication protocols	Modbus TCP/RTU
Data storage	Datalogger
Optionals	
	Remote monitoring software
	Reactive energy compensation module
	Maintenance service
	Warranty extension

• Base feature
(1) Other configurations can be used.
(2) Other AC voltage, DC voltage and power classes can be configured.
(3) Power factor > 0,98 at rated output voltage and power load > 15%.
(4) The adjustable range can be extended and other values can be configured.
(5) Efficiency measured without auxiliary power supply consumption and at input and output rated voltage.
(6) Please consult Efacec with the specific operating conditions in order to characterize an eventual derate with altitude.

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