EFASOLAR 100/100T/250

EFASOLAR 100 EFASOLAR 100T
EFASOLAR 250

The **EFASOLAR** range is represented in the lower power segment by the models of **EFASOLAR 100T**, **EFASOLAR 100** and **EFASOLAR 250**. The **EFASOLAR 100T** model has an output power of 100 kW, with an integrated isolation transformer. The **EFASOLAR 100** and **EFASOLAR 250** are transformerless models intended for use in installations connected to the medium voltage grid.

Customer Benefits

- Ready for self-consumption applications
- LV protected output
- Maximum performance
- DC and AC in the same cabinet
- High availability and reliability

Key Benefits

- Designed for LV and MV grid connections
- DC and AC switchgear
- Reactive power compensation at night
- Web server and integrated datalogger
- All protective devices and features included

Main Features

Grid Support

- Q, P Control inbuilt
- Grid support features
- Grid code compliance
- LV connection option
- LVRT capability

Compact Design

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

PV Interface

- Wide MPPT range
- Motorized DC load switch
- Power derating in case of over temperature
- Advanced MPPT algorithm

Reliability Focus

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

Energy Management

- Ready for self-consumption applications
- Dynamic P, Q control modes
- Open communication protocol
- HMI remote access
- Integration in monitoring software solutions

After Sales

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

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Technical Data

	EFASOLAR 100	EFASOLAR 100T	EFASOLAR 250
Electrical			
Input			
Maximum power	120 kW	120 kW	285 kW
Minimum voltage	430 V	430 V	480 V
Maximum voltage		900 V (1000 V optional)	
MPPT range	450 V - 810 V	450 V - 810 V	480 V - 820 V
Maximum current	258 A	258 A	542 A
Number of independent MPP inputs		1	
Number of DC inputs		1	
Output			
Rated power	100 kVA	100 kVA	250 kVA
Rated voltage [1]	230 V	400 V	315 V
Rated current	251 A	145 A	458 A
Frequency		50 Hz / 60 Hz	
Maximum current	278 A	160 A	509 A
THD		< 3%	
Power factor [2]/Displacement power factor [3]		1,0 / 0,8 inductive to 0,8 capacitive	
Required grid type	IT grid	TN grid	IT grid
Isolation transformer	No	Yes	No
Efficiency			
Maximum	98,1% [4]	96,6% [5]	98,4% [4]
Euro-efficiency	97,6% [4]	95,6% [5]	98,0% [4]
CEC efficiency	97,6% [4]	95,6% [5]	98,1% [4]
Protective devices			
d.c. disconnect device		Motor-drive switch disconnector	
a.c. disconnect device		Circuit breaker	
d.c. overvoltage protection		Type II surge arrester	
a.c. overvoltage protection		Type I surge arrester	
Auxiliaries overvoltage protection		-	
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	-	230 V
Max. self-consumption (operation) / self-consumption (night)	450 W / <50 W	500 W / <50 W	650 W / <50 W
Color		RAL 7035	
Altitude for rated conditions / Maximum operating altitude above sea level [6]	1000 m / 3000 m	1000 m / 3000 m	1000 m / 3000 m
Dimensions (WxDxH)	1020 x 605 x 1910 mm 40,2 x 23,8 x 75,2”	1200 x 605 x 1910 mm 47,2 x 23,8 x 75,2”	1200 x 605 x 1910 mm 47,2 x 23,8 x 75,2”
Weight	700 kg / 1543 lb	1150 kg / 2535 lb	850 kg / 1896 lb
Protection degree		IP20 / NEMA 2	
Protective class		I	
Standards			
CE marking		Yes	
Safety/EMC		EN 50178, EN 62109-1, EN 62109-2 / EN 61000-6-2, EN 61000-6-4	
Grid interface		EN 50438, 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 AC voltage, DC voltages and power classes can be configured.
(2) - Power factor > 0,98 at rated output voltage and power load > 15%.
(3) - The adjustable range can be extended and other values can be configured.
(4) - Efficiency measured without auxiliary power supply consumption and at input and output rated voltage.
(5) - Efficiency of EFASOLAR 100T measured with 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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