

## DOUBLE CONVERSION THREE PHASE INVERTER

### SUNZET MV

#### Modular three-phase central inverter for mid voltage plants

##### Description



The SUNZET MV has been specially designed for mid voltage grid connected solar generation plants. An outstanding feature of SUNZET MV 125 and 166 KW inverters is their 98% efficiency.

SUNZET MV inverters provide high reliability and guaranteed operation. Another outstanding function is the high-energy efficiency of its MPPT, which is over 99%.

Another important feature is its automatic regulation of reactive power and communications tools between it and the centralised supervision and control system. All its parameters are configurable both locally and remotely.

SUNZET inverters operate with an output voltage 3x450 V and are adapted to meet with the requirements of response against voltage sags in accordance with several European Regulators.



Sunzet 125 MV

##### Features

- > Range of input DC voltage (300-720 VDC)
- > Maximum power point tracking (MPPT)
- > High energy efficiency MPPT > 99%
- > Very low harmonic distortion THD < 3%
- > Selectable power factor
- > Unlimited parallel connection
- > Anti-islanding protection with automatic shut down
- > Monitoring from the unit with LCD
- > Strings currents monitoring (with option "Sunzet String Box")
- > IP21 protection level
- > Protection against: inverse polarity, short-circuits, over voltages, insulation failure with output to relay
- > Automatic reactive energy regulation
- > PC-based Web server programme for full access to inverter data
- > Maximum efficiency
- > Modularity
- > DC and AC surge protections included
- > Compatible with thin film modules
- > ETHERNET communications ports
- > Easy access through any web browser
- > Remote SCADA (SWS 1000): communications system, parameter display, inverter records control, production data storage etc, (optional)

##### Connectivity and accessories

###### > Sunzet Web server integrated

PC-based Web server programme for full access to inverter data by Zigor to monitor and communicate with SUNZET MV inverters (integrated).

###### > SWS 1000

The SWS 1000 Scada system is a platform for monitoring and register variables, check and modify the settings as well as customise all parameters from the SUNZET MV inverters (optional).

See more information about connectivity and accessories on page 52

on-grid solar plants

mid voltage solar plants

hybrid generation

energy saving

telecom back up

wind energy



NON - STOP POWER



<b>ELECTRICAL CHARACTERISTICS</b>		
<b>Model</b>	<b>Sunzet 125 MV</b>	<b>Sunzet 166 MV</b>
Reference	17570	200103
Continuous output power	125 KW	166 KW
Maximum recommended PV power	+5% to +20%	
Nominal DC power	≥ 128 KW	≥ 170 KW
Nominal AC voltage	3x450 V	
Nominal frequency	50 Hz	
Power factor	1 adjustable ± 0.8	
Nominal line current AC	162 A	215 A
Current distortion AC	<3% THD of nominal power <sup>(1)</sup>	
Maximum open circuit voltage DC	880 V <sup>(2)</sup>	
Power tracking range (MPPT) DC	300 to 720 V	
Maximum input current DC	360 A	575 A
Maximum efficiency	98%	97,60 %
European efficiency	97,34%	96,27 %
<b>ENVIRONMENTAL AND MECHANICAL FEATURES</b>		
Range of ambient temperatures	-10°C to +50°C <sup>(3)</sup>	
Type and grade of environmental protection	IP21	
Approximate Weight	490 Kg	450 kg
Dimensions (HxWxD)	2150 x 800 x 600 mm	
Operating height	<1000 m without power loss	
Relative humidity	0 to 95% without condensation	
<b>GENERAL FEATURES</b>		
Refrigerating method	Internal forced ventilation External fan control (6 Amax.)	
Protection functions	Inverse polarity, Over/Sub-voltage AC Over/Sub-frequency, Overvoltage DC	
User interface	LCD screen	
Breakers (AC and DC)	Integrated in the system	
Communication software	Web server through Ethernet connection	
Equipment supervision: self diagnostic	Yes	
Data acquisition	SNMP	
SWS 1000 Scada System (option)	Ethernet, GSM modem (option), Data logger, Monitoring programme	
<b>STANDARDS</b>		
Certificates	CE Marking, VDE, ENEL	
Directives	2004/108/CE (UNE-EN 61000-6-2 / UNE-EN 61000-6-3) 2006/95/CE (EN 50178)	
Standards	IEC 62116 (2008) IEE 1547	
<b>Countries standards</b>		
Spain	PO 12.3	
Germany	VDE 0126-1-1	
Italy	DK5940 (Chapter 8.2 Allegato 17. TERNA Regolazione)	
UK	G83	
France	Decret: Arrête du 23 avril 2008	

(1) For THDV < 1% and Nominal Power.

(2) This voltage must not be exceeded under any circumstances.

(3) Under 40°C, the system operates with nominal values, at 50°C nominal values are maintained for two hours  
These specifications may be changed without notice.