

Sunny Central 125



The leading grid-tied photovoltaic inverters in Europe and America

*Rugged and reliable
German engineering*

*Powder coated
stainless steel modular
rack enclosure*

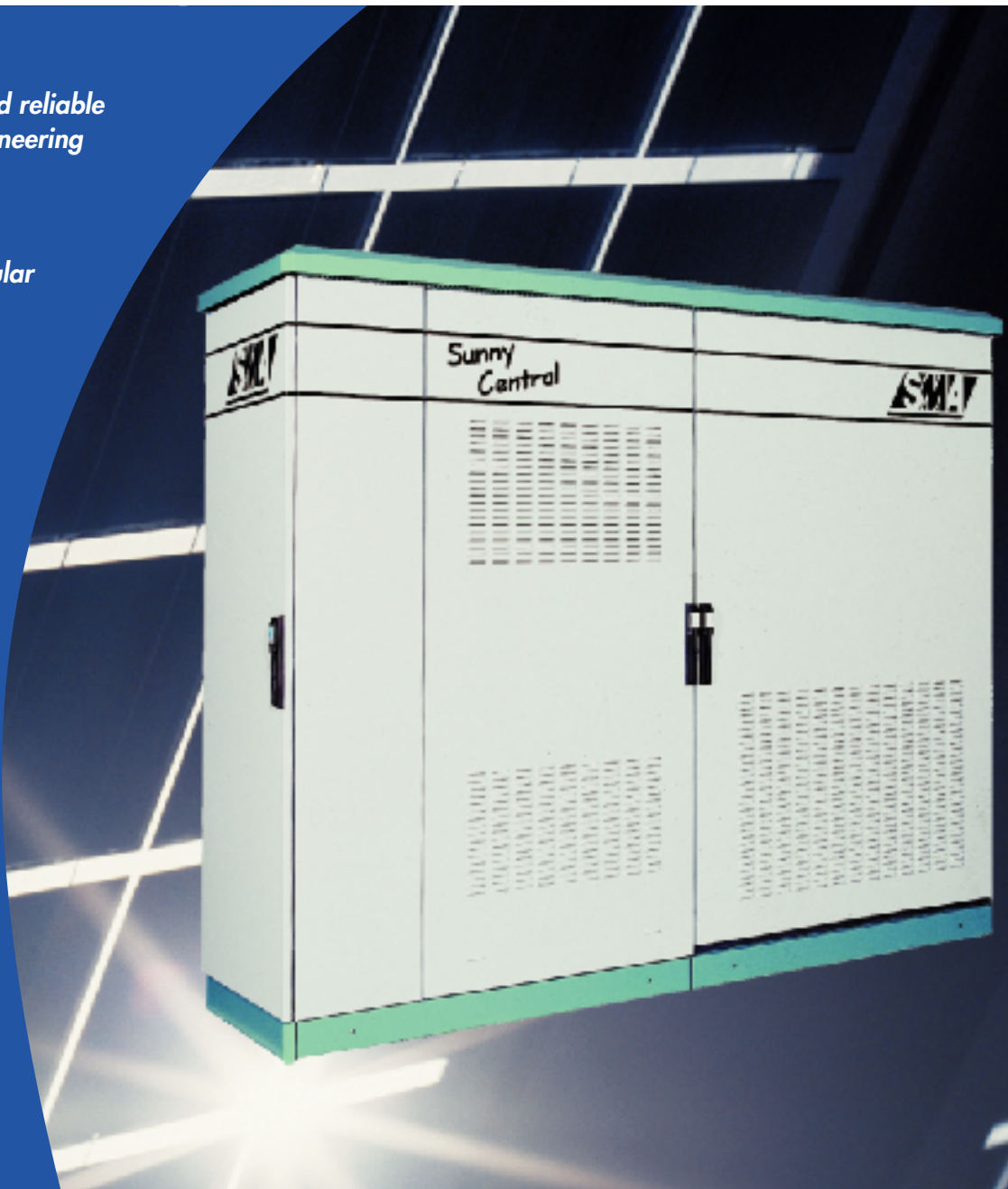
*AC and DC
disconnects integral
and included*

*High efficiency
isolation transformer
INSIDE THE BOX*

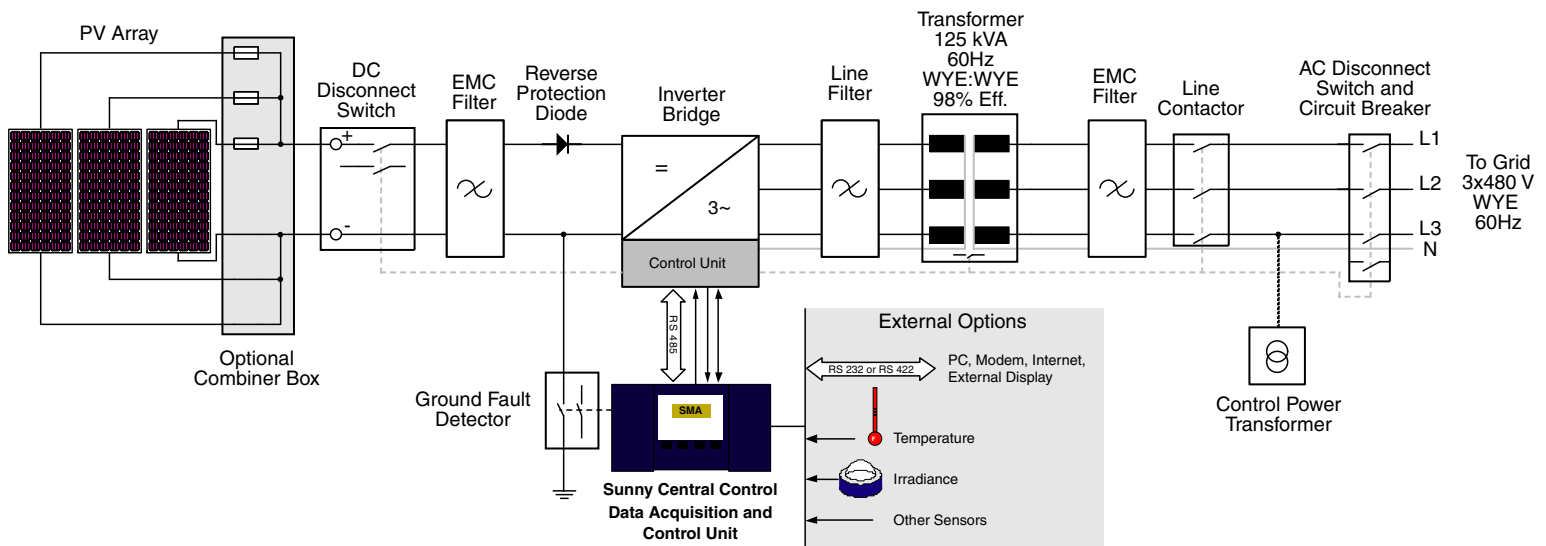
*Sunny Boy Control Plus
data acquisition system
included as
user interface*

*FCC part 15 and
IEEE 519/929
compliant*

*Uses the same
advanced
communication
protocols as all other
SMA products*



The Sunny Central is the culmination of many years experience with the Sunny Boy and European Sunny Central photovoltaic inverters. The design incorporates the same proven MPP tracker found in more than 200,000 fielded Sunny Boys. The high efficiency power stage produces a perfect AC current sine wave exceeding the latest FCC and IEEE requirements. The AC system isolation transformer is incorporated into the inverter cabinet and is disconnected whenever the inverter is not producing power. This eliminates the unnecessary and costly power losses found in other central PV inverters.



Specifications

Inverter Technology	True sine wave, current source, high frequency PWM
AC Input Voltage	422–528 V AC (480 V AC nominal)
AC Input Frequency	59.3–60.5 Hz (60 Hz nominal)
AC Output Current Limit	180 A AC
AC Output Switch and Breaker Rating	200 A AC
DC Input Voltage	275–600 V DC
Peak Power Tracking Voltage	275–550 V DC
Nominal AC Power Output	125 kW (at 45 °C)
Current THD	Less than 4%
Power Factor	Unity
Peak Inverter Efficiency	95.7% (fans off)
Cooling	Temperature controlled forced fan cooling with optional sealed heat exchanger
PV Start Voltage	300 V DC (adjustable)
Maximum DC Current	460 A DC
DC Input Switch Rating	800 A AC
DC Voltage Ripple (peak to peak)	Less than 3%
Power Consumption	110 W standby
Ambient Temperature	-25 °C ... +50 °C
Enclosure	Bridge NEMA 4 main enclosure NEMA 3R, powder coated, stainless steel and aluminum
Size	93 W x 71 H x 24 D (inches)
Weight	3307 lbs (1500 kg.)
Certifications	FCC part 15, IEEE 519/929, UL Listed to 1741 for use in the U.S. and Canada



Robust system design allows full power operation with ambient temperatures up to 45°C.

In higher ambient temperatures the inverter protects itself by reducing output power to safely regulate internal component temperatures. The enclosure is powder coated stainless steel and aluminum designed for long term outdoor installation in the harshest of environments. The power electronics are sealed in an isolated enclosure and kept cool with an air-to-air heat exchanger. The magnetics and isolation transformer are housed in a separate enclosure, thermally isolated from sensitive electronics. Integrated AC and DC switchgear isolates the Sunny Central from all power sources during periods of non-operation. The Sunny Central is equipped with a special version of the Sunny Boy Control Plus advanced data acquisition and control system. A 4-line display and keypad allow simple system configuration and monitoring. A wide variety of different interfaces for plant monitoring and remote configuration with a PC are also available. The Sunny Central Control can acquire data from nearly any known external sensor type for sophisticated plant monitoring and data logging. The Sunny Central incorporates the same communication protocol found in all SMA photovoltaic products. This allows the Sunny Central to be monitored and controlled with the same advanced software used with the Sunny Boy inverter family.

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