

SYNERGY THREE PHASES INVERTERS

Specifically designed to work with power optimizers



SolarEdge Synergy



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Inversores SolarEdge monofásicos



Optimizador SolarEdge P800

Three Phase Inverters with Synergy Technology

SolarEdge's expanded offering of three phase inverters with synergy technology up to 100kW combines large capacity with ease of installation. The inverter design is based on small, lightweight, and easy-to-carry primary and secondary units. They are wall mounted for a minimal footprint, with installation only requiring a one or two-person crew.

No crane or special tools are needed when installing the inverter, unlike alternative large capacity inverters on the market today, which are heavy, bulky, and difficult to install. Installing SolarEdge's large capacity inverters instead of using multiple, smaller capacity inverters will further reduce setup times and costs.

This new generation of SolarEdge three phase inverters is available in the following sizes: 50kW, 55kW, and 82.8kW.

Easy Inverter Commissioning with Inverter SetApp

Inverter commissioning has never been this easy. Activating, commissioning, and configuring your inverter is now done directly through your smartphone using the SolarEdge SetApp mobile application.

Take your inverter commissioning to the next level.

Key Benefits:

- Easy two-person installation – each unit mounted separately, equipped with cables for simple connection between units
- Balance of System and labor reduction compared to using multiple smaller string inverters
- Independent operation of each unit enables higher uptime and easy serviceability
- No wasted ground area: wall/rail mounted or horizontally mounted under the modules (10° inclination)
- Built-in module-level monitoring with Ethernet or cellular GSM
- Fixed voltage inverter for superior efficiency (98.3%) and longer strings
- Integrated Connection Unit with optional integrated DC Safety Switch – eliminates the need for external DC isolators
- Built-in RS485 Surge Protection, to better withstand lightning events
- Advanced safety features - integrated arc fault protection and optional rapid shutdown

SPECIFICATIONS

		SE50K	SE55K	SE82,8
OUTPUT				
Rated AC Power Output	VA	50000	55000	82800
Máximum AC Power Output	VA	50000	55000	82800
AC Output Voltage Line to line; Line to Neutral (Nominal)	Vac	380 / 220 ; 400 / 230		
AC Ouput Voltage - Line to Neutral range	Vac	304 - 437 / 176 - 253 ; 320 - 460 / 184 - 264.5		
AC Frequency (Nominal)	Hz	50 / 60 ± 5		
Max. Continuous Output Current (per phase)	A	76	80	120
Grids Supported - Three Phase	V	3 / N / PE (WYE with Neutral)		
Maximum residual current injection	mA	250 per unit		
Protections	Utility monitoring, Islanding Protection, Configurable Power FactorCountry configurable Thresholds			
INPUT				
Maximum DC Power (Module STC) Inverter / Unit	W	67500 / 33750	74500 / 37250	111750 / 37250
Transformer-less, Ungrounded		Yes		
Maximum input voltage	Vdc	900		
Nominal DC input voltage	Vdc	750		
Maximum Input Current	Adc	2 x 37	2 x 40	3 x 40
Reverse-polarity protection		Yes		
Ground-Fault isolation detection		350kΩ Sensitivity		
Maximum inverter efficiency	%	98,3		
European Weighted efficiency	%	98,0		
Nighttime Power Consumption	W	< 12		
ADDITIONAL FEATURES				
Supported Communication Interfaces		RS485, Ethernet, Built-in GSM (optional)		
RS485 Surge Protection		Bulit-in		
Rapid Shutdown		Optional (Automatic upon AC Grid Disconnect)		
Cable covers		Ordered separately with part number: DCD-SGY-COVER-LP (for SE50K and SE55K) DCD-SGY-COVER-HP (for SE82.8K) ; Dimensions (H x W x D) – 314.3 x 343.7 x 134.5 mm		
CONNECTION UNIT				
DC Disconnect		1000 V / 2 x 40 A		1000 V / 3 x 40 A
STANDARD COMPLIANCE				
Safety		IEC-62109, AS3100		
Grid Connection Standards		VDE-AR-N-4105, G59/3, AS-4777,EN 50438 , CEI-021,VDE 0126-1-1, CEI-016, BDEW		
Emissions		IEC61000-6-2, IEC61000-6-3 , IEC61000-3-11, IEC61000-3-12		
INSTALLATION SPECIFICATIONS				
Number of units		2		3
AC Output	mm	Cable gland — diameter 22-32; PE gland diameter 10-16		Cable gland — diameter 30-38; PE mm gland d
DC Input		6 strings, 4-10mm2 DC wire, gland outer diameter 5-10mm 3 MC4 pairs per unit		9 strings, 4-10mm2 DC wire, gland outer diameter 5-10mm 3 MC4 pairs per unit
AC Output wire	mm²	Aluminum or Copper; L, N: Up to 70, PE: Up to 35		Aluminum or Copper; L, N: Up to 95, mm2 PE
Dimensions	mm	Primary Unit: 940 x 315 x 260; Secondary Unit: 540 x 315 x 260		
Weight	Kgr	Primary Unit: 48; Secondary Unit: 45		
Noise	dBA	< 60		
Operating temperature range	°C	-40 +60		
Cooling		Fan (user replaceable)		
Protection Rating		IP65 - Outdoor and Indoor		
Bracked mounted		Provided		

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