POWER OPTIMIZIER

The SolarEdge module add-on power optimizer is connected by installers to the solar modules. Ease of installation is completed by simply clipping the power optimizer to the module frame or by attaching it to the rail with a single screw.


SolarEdge Optimizador


SolarEdge Optimizador


SolarEdge Optimizador


Optimizador SolarEdge P850


Optimizador SolarEdge P800

P-Series Module Add-On Power Optimizers

Connected by installers to the PV module and compatible with a wide range of modules

Power Optimizer P Model	Module Power	Module Voc
P300	≤ 300 W	< 48 V
P350	≤ 350 W	< 60 V
P370	≤ 370 W	< 60 V
P500	≤ 500 W	< 80 V
P404	≤ 405 W	< 80 V
P405	≤ 405 W	< 125 V
P485	≤ 485 W	< 125 V
P505	≤ 505 W	< 83 V

* Also available with frames mounted in advance for quicker installation.

P-Series Commercial Power Optimizer

Commercial solution connecting two modules per power optimizer

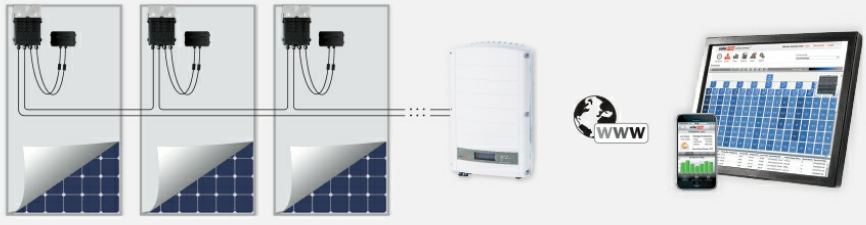
Power Optimizer Model	Module Power	Module Voc
P600	≤600W*	< 96 V
P700	≤700W*	< 125 V

* Rated combined STC power of 2 modules connected in series. Module of up to +5% power tolerance allowed.

* Also available with frames mounted in advance for quicker installation.

Feature highlights:

- Per-module Maximum Power Point Tracking (MPPT)
- Superior efficiency (99.5% peak efficiency, 98.8% weighted efficiency)
- Mitigates all types of modules mismatch-loss, from manufacturing tolerance to partial shading
- Designed for extreme environmental conditions
- 25 year reliability and warranty
- Advanced, real-time performance measurement
- Automatic module DC voltage shut-down for installer and firefighter safety
- Independent optimization technology (IndOP™) - allows operation with any inverter and requires no additional interface hardware
- Available with frames mounted in advance for quicker installation



P SERIES

	P300	P350	P401	P500	P404	P405	P485	P505
	60 cell	60/72 cell	60/72 cell	96 cell	60/72 cell	Thin Film	Thin Film	Hight current
INPUT								

Rated Input DC Power [1]	W	300	370	400	500	405	405	485	505
Absolute Maximum Input Voltage (Voc at lowest temperature)	Vdc	48	60	60	80	80	125	125	83
MPPT Operating Range	Vdc	8 - 48	8 - 60	8 - 60	8 - 80	12,5 - 80	12,5 - 105	12,5 - 105	12,5 - 83
Maximum Continuous Input Current (Isc)	Adc	11	11	11,75	10,1	10,1	10,1	10,1	14
Maximum Efficiency	%	99,5							
Weighted Efficiency	%	98,8							
Overtoltage Category		II							
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)									
Maximum Output Current	Adc	15							
Maximum Output Voltage	Vdc	60	60	60	60	85	85	85	85
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)									
Safety Output Voltage per Power Optimizer	Vdc	1 ± 0,1							
STANDARD COMPLIANCE									
EMC		FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3							
Safety		IEC62109-1 (class II safety), UL1741							
RoHS		Yes							
Fire Safety		VDE-AR-E 2100-712:2013-05							
INSTALLATION SPECIFICATIONS									
Maximum Allowed System Voltage	Vdc	1000							
Dimensions (W x L x H)	mm	128 x 152 x 28	128 x 152 x 28	129 x 153 x 30	129 x 153 x 34	128 x 152 x 36	129 x 90 x 59	129 x 90 x 59	129 x 162 x 59
Weight (including cables)	gr	655	655	655	750	775	845	845	1064
Input Connector		MC4 [2]							
Output Connector		MC4							
Output Wire Length	m	1,2							
Operating Temperature Range	° C	-40 +85							
Protection Rating		IP68 / NEMA6P							
Relative Humidity	%	0 - 100							

[1] Rated STC power of the module. Module of up to +5% power tolerance allowed.
[2] For other connector types please contact SolarEdge.
[3] For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to "Power Optimizers Temperature De-Rating Application Note" for more details.

PV SYSTEM DESIGN		Single Phase HD Wave	Single Phase	Three phases
Minimum String Length (Power Optimizers)	P300, P370, P401, P500	8	8	16
	P404, P405, P485, P505	6	6	14 (13 with SE3K)
	P600, P700	-	-	13 (26 modules)
	P650 - P950	-	-	14 (27 modules)
Maximum String Length (Power Optimizers)	P300 - P505	25	25	50
	P600 - P950	-	-	30 (60 modules)
Maximum Power per String		5.700 W	5.250 W	12.750 W (*)
Parallel Strings of Different Lengths or Orientations		Yes	Yes	Yes

It is not allowed to mix P404/P405 with P300/P370/P500/P600/P700 in one string.
It is not allowed to mix P600/P700 with P300/P370P500/P404/P405 in one string
P600 and P700 can be mixed in one string.
(5) For SE15k and above, the minimum DC power should be 11KW.
(6) The P370/P401/P500 cannot be used with the SE3K three phase inverter (available in some countries; refer to the three phase inverter SE3K-SE10K datasheet).
(7) Exactly 10 when using SE3K-RW010BNN4
(8) For the 230/400V grid: it is allowed to install up to 13,500W per string when the maximum power diference between each string is 2,000W.
(9) For the 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power diference between each string is 2,000W

P300, P370, P401, P500, pueden mezclarse en un mismo sring

- P404, P405, P485, P505, it is allowed to mix in one string
- P600, P650, P730, P801, it is allowed to mix in one string
- P800p, P850, it is allowed to mix in one string.
- P950 it is not allowed to mix with anyother optimizer.
- In a case of odd number of PV modules in one string it is allowed to install one P650/P730/P850/P800p/P801/P950 power optimizer connected to one PV module. When connecting a single module to the P800p seal the unused input connectors with the supplied pair of seals.

(*) With P650/P730/P801 up to 13,500W per string may be installed, with P850/P800p up to 15,750W and with P950 up to 16,250W per string may be installed when the maximumpower difference between each string is 2,000W

P SERIES INDUSTRIAL

		P600	P650	P700	P730	P800p	P801	P850	P950
		2 x 60 Cell	2 x 60 cell	2 x 72 cell	2 x 72 cell	2 x 96 cell	2 x 73 cell	2 x Hight power	2 x Hight power
INPUT									
Rated Input DC Power (1)	W	600	650	700	730	800	800	850	950
Absolute Maximum Input Voltage (Voc at lowest temperature)	Vdc	96	96	125	125	83	125	125	125
MPPT Operating Range	Vdc	12,5 - 80	12,5 - 80	12,5 - 105	12,5 - 105	12,5 - 83	12,5 - 105	12,5 - 105	12,5 - 105
Maximum Continuous Input Current (Isc)	Adc	10,10	11	10,10	11	7	11	12,5	12,5
Maximum Efficiency	%	99,5							
Weighted Efficiency	%	98,6							
Overtoltage Category		II							
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)									
Maximum Output Current	Adc	15	15	15	15	18	15	18	17
Maximum Output Voltage	Vdc	85	85	85	85	85	85	85	85
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)									
Safety Output Voltage per Power Optimizer	Vdc	1 ± 0,1							
STANDARD COMPLIANCE									
EMC		FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3							
Safety		IEC62109-1 (class II safety), UL1741							
RoHS		Yes							
Fire Safety		VDE-AR-E 2100-712:2013-05							
INSTALLATION SPECIFICATIONS									
Maximum Allowed System Voltage	Vdc	1000							
Dimensions (W x L x H)	mm	129 x 153 x 43	129 x 153 x 43	129 x 153 x 50	129 x 153 x 50	129 x 153 x 59	129 x 153 x 50	129 x 162 x 59	129 x 162 x 59
Weight (including cables)	gr	834	834	933	933	1019	933	1064	1064
Input Connector		MC4 (2)							
Output Connector		MC4							
Output Wire Length	m	1,2							
Operating Temperature Range	° C	-40 +85							
Protection Rating		IP68 / NEMA6P							
Relative Humidity	%	0 - 100							

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	P650 - P950	-	-	14 (27 modules)
Maximum String Length (Power Optimizers)	P300 - P505	25	25	50
	P600 - P950	-	-	30 (60 modules)
Maximum Power per String		5.700 W	5.250 W	12.750 W (*)
Parallel Strings of Different Lengths or Orientations		Yes	Yes	Yes

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