

Power Optimiser For Australia

P605 / P730 / P801 / P850 / P800p / P950 / P1100



POWEROPTIMISER

PV power optimisation at the module-level

The most cost effective solution for commercial and large field installations

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Balance of System cost reduction; 50% less cables, fuses and combiner boxes, over 2x longer string lengths possible
- Fast installation with a single bolt
- Advanced maintenance with module-level monitoring
- Module-level voltage shutdown for installer and firefighter safety
- Use with two PV modules connected in series or in parallel

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Optimiser Model (Typical Module Compatibility)	P605 (for 1 x high power PV module)	P730 (for up to 2 x 72-cell PV modules)	P801 (for up to 2x72- cell PV modules)	P850 (for up to 2x high power or bi-facial modules)	P800p (for up to 2x 96-cell 5" PV modules)	P950 (for up to 2x high power or bi- facial modules)	P1100 (for up to 2x high power or bi- facial modules)		
INPUT									
Rated Input DC Power ⁽¹⁾	605	730	800	850	800	950	1100	W	
Connection Method	Single input for series connected modules				Dual input for independently connected ⁽⁷⁾	Single input for series connected modules			
Absolute Maximum Input Voltage (Voc at lowest temperature)	65	125			83	125			Vdc
MPPT Operating Range	12.5 - 65	12.5 - 105			12.5 - 83	12.5 - 105			Vdc
Maximum Short Circuit Current per Input (Isc)	14	11	11.75	12.5	7	12.5	14	Adc	
Maximum Efficiency	99.5								%
Weighted Efficiency	98.6								%
Overvoltage Category	II								
OUTPUT DURING OPERATION (POWER OPTIMISER CONNECTED TO OPERATING SOLAREEDGE INVERTER)									
Maximum Output Current	15			18					Adc
Maximum Output Voltage	80								Vdc
OUTPUT DURING STANDBY (POWER OPTIMISER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)									
Safety Output Voltage per Power Optimiser	1 ± 0.1								Vdc
STANDARD COMPLIANCE									
EMC	FCC Part15 Class A, IEC61000-6-2, IEC61000-6-3								
Safety	IEC62109-1 (class II safety)								
RoHS	Yes								
Fire Safety	VDE-AR-E 2100-712:2013-05								
INSTALLATION SPECIFICATIONS									
Compatible SolarEdge Inverters	Three phase inverters SE15K & larger						Three phase inverters SE25K & larger		
Maximum Allowed System Voltage	1000								Vdc
Dimensions (W x L x H)	129 x 153 x 52	129 x 153 x 49.5		129 x 162 x 59	129 x 168 x 59	129 x 162 x 59	129 x 168 x 59	mm	
Weight (including cables)	1064	933		1064				gr	
Input Connector	MC4 ⁽²⁾								
Output Connector	MC4								
Output Wire Length	1.4	2.2			2.4			m	
Input Wire Length	0.16	0.16, 0.9 ⁽³⁾		0.16, 0.9, 1.3, 1.6 ⁽³⁾	0.16	0.16, 1.3, 1.6 ⁽³⁾	0.16, 1.3 ⁽³⁾	m	
Operating Temperature Range ⁽⁴⁾	-40 to +85								°C
Protection Rating	IP68 / NEMA6P								
Relative Humidity	0 - 100								%

(1) Rated power of the module at STC will not exceed the optimiser "Rated Input DC Power". Modules with up to +5% power tolerance are allowed

(2) For other connector types please contact SolarEdge

(3) Longer inputs wire length are available for use with split junction box modules. (For 0.9m/0.52ft order P730/P801/ P850-xxxLxxx. For 1.3m/4.26ft order P850/P950/P1100 -xxxXxxx. For 1.6m/5.24ft order P850/P950-xxxYxxx)

(4) For ambient temperature above +70°C power de-rating is applied. Refer to <https://www.solaredge.com/sites/default/files/se-temperature-derating-note.pdf> for more details

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PV System Design Using a Solaredge Inverter ⁽⁵⁾⁽⁶⁾⁽⁷⁾⁽⁸⁾		Three Phase for 230/400V Grid						Three Phase for 277/480V Grid								
Compatible Power Optimisers		P605	P730	P801	P850	P800p	P950	P1100	P605	P730	P801	P850	P800p	P950	P1100	
Minimum String Length	Power Optimisers	14														
	PV Modules	14	27						14	27						
Maximum String Length	Power Optimisers	30														
	PV Modules	30	60						30	60						
Maximum Nominal Power per String		11250 ⁽⁹⁾			13500 ⁽⁹⁾				12750 ⁽¹⁰⁾			15300 ⁽¹⁰⁾			W	
Parallel Strings of Different Lengths or Orientations		Yes														

(5) P730/P801 can be mixed in one string, and P850/P800p/P950/P1100 can also be mixed in one string. It is not allowed to mix P730/P801 with P850/P800p/P950/P1100, nor is it allowed to mix P730-P1100 with P370-P505 in one string. P605 cannot be mixed with any other power optimizer in the same string

(6) For SE15K and above, the minimum DC power should be 11KW

(7) In a case of odd number of PV modules in one string it is allowed to install one P730/P850/P800p/P801/P950/P1100 power optimiser connected to one PV module. When connecting a single module to the P800p seal the unused input connectors with the supplied pair of seals

(8) Power optimisers intended for use with two PV modules each (2:1 connection), can be used with a single PV module (1:1 connection), as long as the entire string uses 1:1 connections

(9) For the 230/400V grid: With P605/P730/P801 up to 13,500W per string may be installed, with P850/P800p up to 15,750W and with P950/P1100 up to 18,500W per string may be installed when the maximum power difference between each string is 2,000W. For P950, minimum two strings are required for SE15K-SE27.6K inverters. For P1100, minimum two strings are required for SE25K-SE27.6K inverters. For P950/P1100 with SE30K and above minimum three strings are required

(10) For the 277/480V grid: With P605/P730/P801 up to 15,000W per string may be installed, with P850/P800p up to 17,500W and with P950/P1100 up to 20,300W per string may be installed when the maximum power difference between each string is 2,000W. For P950/P1100, minimum three strings are required for SE33.3K and SE40K inverters