Power Optimiser
For Australia
Module Add-On
P401 / P500 / P505

25 YEAR WARRANTY

POWEROPTIMISER

PV power optimisation at the module-level

- Specifically designed to work with SolarEdge inverters

- Up to 25% more energy

- Superior efficiency (99.5%)

- Mitigates all types of modules mismatch-loss, from manufacturing tolerance to partial shading

- Flexible system design for maximum space utilization

- Fast installation with a single bolt

- Next generation maintenance with module level monitoring

- Module-level voltage shutdown for installer and firefighter safety

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Optimiser Model (Typical Module Compatibilty)	P401 (60&70 Cell modules)	P500 (for 96-cell modules)	P505 (for higher current modules)	
INPUT				
Rated Input DC Power[1]	400	500	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	60	80	83	Vdc
MPPT Operating Range	8 - 60	8 - 80	12.5-83	Vdc
Maximum Short Circuit Current (Isc)	11.75	10.1	14	Adc
Maximum Efficiency		99.5		%
Weighted Efficiency		98.8		%
Overvoltage Category		II		
OUTPUT DURING OPERATION (POWER OPTIMISER CONNECTED TO OPERATING SOLAREDGE INVERTER)				
Maximum Output Current		15		Adc
Maximum Output Voltage	60	60	85	Vdc
OUTPUT DURING STANDBY (POWER OPTIMISER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)				
Safety Output Voltage per Power Optimiser		1 ± 0.1		Vdc
STANDARD COMPLIANCE				
EMC		FCC Part 15 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		1000		Vdc
Dimensions (W x L x H)	129 x 153 x29.5	129 x 153 x 33.5	129 x 162 x 59	mm
Weight (including cables)	655	750	1064	gr
Input Connector[2]	MC4[2]	MC4[2]		
Input Wire Length	0.16 / 0.9[4]	0.16		m
Output Connector		MC4		
Output Wire Length		1.2		m
Operating Temperature Range		-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) Dual version for parallel connection of 2 modules; P/N: P485-4RMDMRM. In a case of odd number of PV modules in one string it is allowed to install one P485 dual version power optimiser connected to one PV module. When connecting a single module seal the unused input connectors with the supplied pair of seals
(4) Longer inputs wire length are available for use. For 0.9m input wire length order P401-xxxLxxx

PV System Design Using a Solaredge Inverter[5]		Single Phase HD-WAVE	Single Phase	Three Phase Residential	Three Phase Commercial	
Minimum String Length (Power Optimisers)	P401, P500	8		9	16	
	P505	6		8	14	
Maximum String Length (Power Optimisers)		25		25	50	
Maximum Nominal Power per String		5700[6] (6000 with SE8000H, SE10000H)	5250[6]	5625[6]	11250[7]	W
Parallel Strings of Different Lengths or Orientations		Yes				

(5) It is not allowed to mix P505 with P401/P500 in one string
(7) It is allowed to install up to 13,500W per string when the maximum power difference between each string is 2,000W
(6) If the inverters rated AC power ≤ maximum nominal power per string, then the maximum power per string will be able to reach up to the inverters maximum input DC power Refer to: https://www.solaredge.com/sites/default/files/se-single-string-power-optimizer-application-note-aus.pdf

CE RoHS