
Power Optimiser For Australia Module Add-On

P370 / P401 / P404 / P485 / P500 / P505



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

/ Power Optimiser For Australia

Module Add-On

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Optimiser Model (Typical Module Compatibility)	P370 (60&70 Cell modules)	P401 (60&70 Cell modules)	P404 (for 60-cell and 72-cell, short strings)	P485 (for high- voltage modules)	P500 (for 96-cell modules)	P505 (for higher current modules)	
INPUT							
Rated Input DC Power ⁽¹⁾	370	400	405	485	500	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	60		80	125	80	83	Vdc
MPPT Operating Range	8 - 60		12.5 - 80	12.5 - 105	8 - 80	12.5-83	Vdc
Maximum Short Circuit Current (Isc)	11	11.75	11		10.1	14	Adc
Maximum Efficiency	99.5						%
Weighted Efficiency	98.8						%
Overvoltage Category	II						
OUTPUT DURING OPERATION (POWER OPTIMISER CONNECTED TO OPERATING SOLAREEDGE INVERTER)							
Maximum Output Current	15						Adc
Maximum Output Voltage	60		85		60	85	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 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 x 27.5	129 x 153 x 29.5	129 x 153 x 42.5	129 x 159 x 49.5	129 x 153 x 33.5	129 x 162 x 59	mm
Weight (including cables)	655		775	845	750	1064	gr
Input Connector ⁽²⁾	MC4 ⁽²⁾			Single or Dual MC4 ⁽²⁾⁽³⁾	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 P370/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)	P370, P401, P500	8	9	16	
	P404, P485, 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 P404/P485/P505 with P370/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-power-optimizer-single-string-design-application-note.pdf>