Power Optimizer

with IndOP™ Technology

P401I

25
YEAR
WARRANTY

PV power optimization at the module-level

/ Independent optimization technology (IndOP™) - allows operation with any inverter and requires no additional interface hardware

/ Up to 25% more energy

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

/ Superior efficiency (99.5%)

/ Fast installation with a single bolt

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BENEFITS PER SOLUTION	SolarEdge Power Optimizer with SolarEdge Inverter	SolarEdge Power Optimizer with SolarEdge Safety & Monitoring Interface and a Non-SolarEdge Inverter	SolarEdge Power Optimizer with a Non-SolarEdge Inverter
Added Energy	+		
Safety		+	-
Monitoring		+	-
Multi-facet Design		+	
Long String Design	+	-	

	P401I (for 60-cell & 72-cell PV modules)		Unit
INPUT			
Rated Input DC Power[1]	420		W
Absolute Maximum Input Voltage (Voc at lowest temperature)	60		Vdc
MPPT Operating Range	8 - 60		Vdc
Maximum Short Circuit Current (Isc)	12.5		Adc
Maximum Efficiency	99.5		%
Weighted Efficiency	98.6		%
Overvoltage Category	II		
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING INVERTER)	Power Optimizer connected to a SolarEdge Inverter	Power Optimizer connected to a Non-SolarEdge Inverter[2]	
Maximum Output Current	15	10	Adc
Maximum Output Voltage	60	Voc of connected PV module	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)[3]			
Safety Output Voltage per Power Optimizer	1.0 ± 1		Vdc
STANDARD COMPLIANCE			
EMC	FCC Part15 Class A, 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 (WxLxH)	129 x 153 x 29.5 / 5.08 x 6.02 x 1.16		mm / in
Weight (including cables)	655 / 1.5		g / lb
Input Connector	MC4[4]		
Output Wire Connector	MC4		
Output Wire Length	1.2 / 3.9		m / ft
Input Wire Length	0.16 / 0.52		m / ft
Operating Temperature Range	-40 to +85 / -40 to +185		°C / °F
Protection Rating	IP68 / NEMA 6P		
Relative Humidity	0 - 100		%

PV SYSTEM DESIGN	SOLAREDGE SINGLE PHASE HD-WAVE	SOLAREDGE SINGLE PHASE INVERTER	SOLAREDGE THREE PHASE INVERTER	NON-SOLAREDGE INVERTER[2]	
Minimum String Length (Power Optimizers)	8		16	According to inverter design rules & PV module datasheet, minimum 4 power optimizers per string	
Maximum String Length (Power Optimizers)	25		50		
Maximum Power per String	5700	5250	11250		W
Parallel Strings of Different Lengths	Yes			No	
Parallel Strings of Different Orientations	Yes				

(1) Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed.
(2) Available only if Safety & Monitoring Interface (SMI) is installed or if SafeDCTM is disabled during installation by a one-time operation using the SolarEdge Key.
(3) Available only if Safety & Monitoring Interface (SMI) is installed or if connected to a SolarEdge Inverter.
(4) For other connector types please contact SolarEdge.

CE RoHS