

i50 String Optimizer

600V Systems

maximum output **50A**

Vxxx-i50-50 models		V525	V550	V575	V600
Electrical					
Input					
Maximum voltage per input	V	600	600	600	600
Maximum current (Imp) per input	A	32	32	32	32
Maximum short-circuit current (Isc) per input	A	34	34	34	34
MPP tracking voltage range	V	300 - 440	300 - 465	300 - 490	300 - 515
Startup voltage per input	V	390	390	390	390
Number of inputs		2	2	2	2
Output					
Output voltage range	V	0 - 525	0 - 550	0 - 575	0 - 600
Maximum output voltage at full power	V	440	465	490	515
Output voltage at zero power	V	525	550	575	600
Maximum output current	A	50	50	50	50
Maximum continuous output power	kWdc	21.9	23.1	24.4	25.6
Efficiency (max / CEC / Euro)	%		99.45 / 99.4 / 99.3		
Mechanical					
Input & output connector		Stäubli MC4-Evo 2			
Dimensions		20.18" x 9.45" x 4.26" (513 mm x 240 mm x 108 mm)			
Weight		22.6 lbs. (10.25 kg)			
Ambient temperature operating range		-40 °F – 131 °F (-40 °C – 55 °C)			
Cooling		Convection			
Environmental					
Environmental category		Outdoor			
Pollution degree		2			
Maximum operating altitude		9843 ft (3000 m)			
Overvoltage category		OVII			
Ingress protection		IP66 / 4X			
General					
Compliance		ETL to UL 1741; IEC 61000-6-1, 61000-6-3, 62109; CE; Giteki 2-1-19; FCC Part 15, class A			

Follow Ampt design guidelines to identify possible derating at high ambient temperatures or altitudes.

i50 String Optimizer

600V Systems

maximum output **48A**

Vxxx-i50-48 models		V525	V550	V575	V600
Electrical					
Input					
Maximum voltage per input	V	600	600	600	600
Maximum current (Imp) per input	A	32	32	32	32
Maximum short-circuit current (Isc) per input	A	34	34	34	34
MPP tracking voltage range	V	300 - 445	300 - 470	300 - 495	300 - 520
Startup voltage per input	V	390	390	390	390
Number of inputs		2	2	2	2
Output					
Output voltage range	V	0 - 525	0 - 550	0 - 575	0 - 600
Maximum output voltage at full power	V	445	470	495	520
Output voltage at zero power	V	525	550	575	600
Maximum output current	A	48	48	48	48
Maximum continuous output power	kWdc	21.2	22.4	23.6	24.8
Efficiency (max / CEC / Euro)	%		99.45 / 99.4 / 99.3		
Mechanical					
Input & output connector		Stäubli MC4-Evo 2			
Dimensions		20.18" x 9.45" x 4.26" (513 mm x 240 mm x 108 mm)			
Weight		22.6 lbs. (10.25 kg)			
Ambient temperature operating range		-40 °F – 131 °F (-40 °C – 55 °C)			
Cooling		Convection			
Environmental					
Environmental category		Outdoor			
Pollution degree		2			
Maximum operating altitude		9843 ft (3000 m)			
Overvoltage category		OVII			
Ingress protection		IP66 / 4X			
General					
Compliance		ETL to UL 1741; IEC 61000-6-1, 61000-6-3, 62109; CE; Giteki 2-1-19; FCC Part 15, class A			

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i50 String Optimizer

600V Systems

maximum output **44A**

Vxxx-i50-44 models		V525	V550	V575	V600
Electrical					
Input					
Maximum voltage per input	V	600	600	600	600
Maximum current (Imp) per input	A	32	32	32	32
Maximum short-circuit current (Isc) per input	A	34	34	34	34
MPP tracking voltage range	V	300 - 450	300 - 475	300 - 500	300 - 525
Startup voltage per input	V	390	390	390	390
Number of inputs		2	2	2	2
Output					
Output voltage range	V	0 - 525	0 - 550	0 - 575	0 - 600
Maximum output voltage at full power	V	450	475	500	525
Output voltage at zero power	V	525	550	575	600
Maximum output current	A	44	44	44	44
Maximum continuous output power	kWdc	19.7	20.8	21.9	23.0
Efficiency (max / CEC / Euro)	%		99.45 / 99.4 / 99.3		
Mechanical					
Input & output connector		Stäubli MC4-Evo 2			
Dimensions		20.18" x 9.45" x 4.26" (513 mm x 240 mm x 108 mm)			
Weight		22.6 lbs. (10.25 kg)			
Ambient temperature operating range		-40 °F – 131 °F (-40 °C – 55 °C)			
Cooling		Convection			
Environmental					
Environmental category		Outdoor			
Pollution degree		2			
Maximum operating altitude		9843 ft (3000 m)			
Overvoltage category		OVII			
Ingress protection		IP66 / 4X			
General					
Compliance		ETL to UL 1741; IEC 61000-6-1, 61000-6-3, 62109; CE; Giteki 2-1-19; FCC Part 15, class A			

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600V Systems

maximum output **40A**

Vxxx-i50-40 models		V525	V550	V575	V600
Electrical					
Input					
Maximum voltage per input	V	600	600	600	600
Maximum current (Imp) per input	A	32	32	32	32
Maximum short-circuit current (Isc) per input	A	34	34	34	34
MPP tracking voltage range	V	300 - 460	300 - 485	300 - 510	300 - 535
Startup voltage per input	V	390	390	390	390
Number of inputs		2	2	2	2
Output					
Output voltage range	V	0 - 525	0 - 550	0 - 575	0 - 600
Maximum output voltage at full power	V	460	485	510	535
Output voltage at zero power	V	525	550	575	600
Maximum output current	A	40	40	40	40
Maximum continuous output power	kWdc	18.2	19.2	20.2	21.2
Efficiency (max / CEC / Euro)	%	99.45 / 99.4 / 99.3			
Mechanical					
Input & output connector	Stäubli MC4-Evo 2				
Dimensions	20.18" x 9.45" x 4.26" (513 mm x 240 mm x 108 mm)				
Weight	22.6 lbs. (10.25 kg)				
Ambient temperature operating range	-40 °F – 131 °F (-40 °C – 55 °C)				
Cooling	Convection				
Environmental					
Environmental category	Outdoor				
Pollution degree	2				
Maximum operating altitude	9843 ft (3000 m)				
Overvoltage category	OVII				
Ingress protection	IP66 / 4X				
General					
Compliance	ETL to UL 1741; IEC 61000-6-1, 61000-6-3, 62109; CE; Giteki 2-1-19; FCC Part 15, class A				

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600V Systems

maximum
output **36A**

Vxxx-i50-36 models		V525	V550	V575	V600
Electrical					
Input					
Maximum voltage per input	V	600	600	600	600
Maximum current (Imp) per input	A	28.8	28.8	28.8	28.8
Maximum short-circuit current (Isc) per input	A	30.8	30.8	30.8	30.8
MPP tracking voltage range	V	300 - 465	300 - 490	300 - 515	300 - 540
Startup voltage per input	V	390	390	390	390
Number of inputs		2	2	2	2
Output					
Output voltage range	V	0 - 525	0 - 550	0 - 575	0 - 600
Maximum output voltage at full power	V	465	490	515	540
Output voltage at zero power	V	525	550	575	600
Maximum output current	A	36	36	36	36
Maximum continuous output power	kWdc	16.6	17.5	18.4	19.3
Efficiency (max / CEC / Euro)	%		99.45 / 99.4 / 99.3		
Mechanical					
Input & output connector		Stäubli MC4-Evo 2			
Dimensions		20.18" x 9.45" x 4.26" (513 mm x 240 mm x 108 mm)			
Weight		22.6 lbs. (10.25 kg)			
Ambient temperature operating range		-40 °F – 131 °F (-40 °C – 55 °C)			
Cooling		Convection			
Environmental					
Environmental category		Outdoor			
Pollution degree		2			
Maximum operating altitude		9843 ft (3000 m)			
Overvoltage category		OVII			
Ingress protection		IP66 / 4X			
General					
Compliance		ETL to UL 1741; IEC 61000-6-1, 61000-6-3, 62109; CE; Giteki 2-1-19; FCC Part 15, class A			

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i50 String Optimizer

600V Systems

maximum output **32A**

Vxxx-i50-32 models		V525	V550	V575	V600
Electrical					
Input					
Maximum voltage per input	V	600	600	600	600
Maximum current (Imp) per input	A	25.6	25.6	25.6	25.6
Maximum short-circuit current (Isc) per input	A	27.6	27.6	27.6	27.6
MPP tracking voltage range	V	300 - 470	300 - 495	300 - 520	300 - 545
Startup voltage per input	V	390	390	390	390
Number of inputs		2	2	2	2
Output					
Output voltage range	V	0 - 525	0 - 550	0 - 575	0 - 600
Maximum output voltage at full power	V	470	495	520	545
Output voltage at zero power	V	525	550	575	600
Maximum output current	A	32	32	32	32
Maximum continuous output power	kWdc	15.0	15.8	16.6	17.4
Efficiency (max / CEC / Euro)	%	99.45 / 99.4 / 99.3			
Mechanical					
Input & output connector	Stäubli MC4-Evo 2				
Dimensions	20.18" x 9.45" x 4.26" (513 mm x 240 mm x 108 mm)				
Weight	22.6 lbs. (10.25 kg)				
Ambient temperature operating range	-40 °F – 131 °F (-40 °C – 55 °C)				
Cooling	Convection				
Environmental					
Environmental category	Outdoor				
Pollution degree	2				
Maximum operating altitude	9843 ft (3000 m)				
Overvoltage category	OVII				
Ingress protection	IP66 / 4X				
General					
Compliance	ETL to UL 1741; IEC 61000-6-1, 61000-6-3, 62109; CE; Giteki 2-1-19; FCC Part 15, class A				

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