

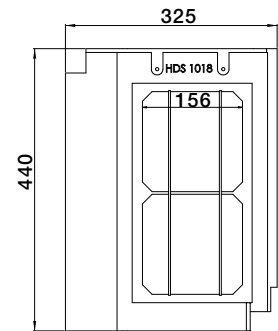
UTICA 8W Solar Millennium Roofing



UTICA Solar Millennium Roofing_01



UTICA Solar Millennium Roofing_02



Electrical Characteristics

All specified Parameters at STC 25°C.

Ambient, 1000W/m² irradiance and AM1.5.

Max-Power Pm (W)	8
Power Tolerance (W)	±3%
Open-Circuit Voltage Voc (V)	1.23
Short-Circuit Current Isc (A)	9.00
Max-Power Voltage Vm (v)	1.02
Max-Power Current Im (A)	8.39
Cell Efficiency (%)	18

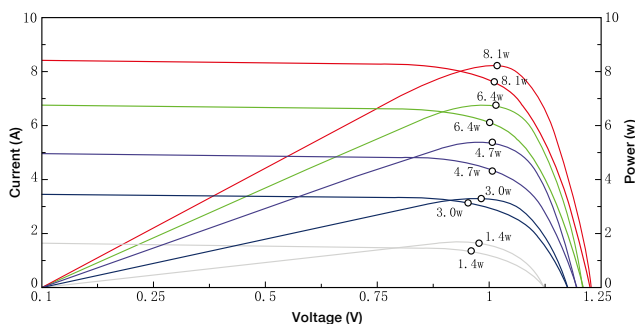
Mechanical Characteristics

Cable type, area and length	2.5mm ² , 350mm
Number, type and arrangement of cells	2
Cell size (mm)	156x156
Dimension (mm)	440x325x47
Weight (kgs)	2.50
Frame material	Ceramic Compound
Glass, type and thickness	High Transmission, Low Irin, Tempered Glass 3.2mm
Compression strength	>2400Pa
Water Permeability	<0.5%

Operating Temperature

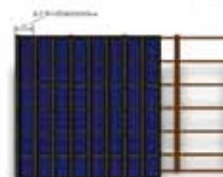
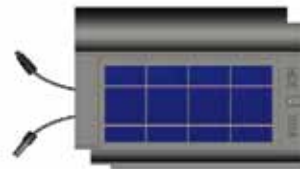
High heat insulation and antflaming function -40- +85°C

I-V Curve



Packaging

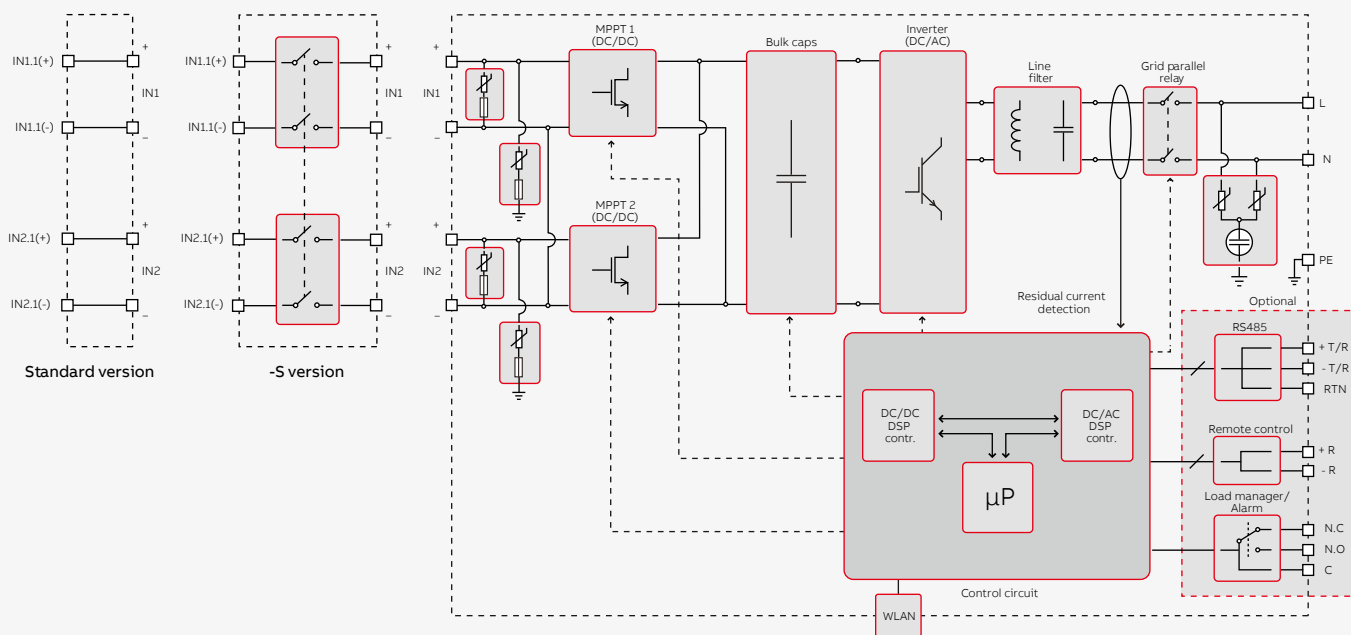
	carton	1 pallet	2 pallet	20' container
size:(mm)	470*355*220 mm	1180*1180*1070mm	1180*1180*2150mm	20 pallets
QTY	6pcs	180pcs	360pcs	3600pcs





Technical data and types

Type code	PVI-4kW	PVI-4.5kW	PVI-5kW
Input side			
Absolute maximum DC input voltage ($V_{max,abs}$)	600 V		
Start-up DC input voltage (V_{start})	200 V (adj. 120...350 V)		
Operating DC input voltage range ($V_{dmin}...V_{dmax}$)	0.7 x $V_{start}...580$ V (min 90 V)		
Rated DC input voltage (V_{dcr})	360 V		
Rated DC input power (P_{dcr})	4250 W	4750 W	5150 W
Number of independent MPPT	2		
Maximum DC input power for each MPPT ($P_{MPPTmax}$)	3000 W	3000 W	3500 W
DC input voltage range with parallel configuration of MPPT at P_{acr}	130...530 V	150...530 V	145...530 V
DC power limitation with parallel configuration of MPPT	Linear derating from Max to Null [$530V \leq V_{MPPT} \leq 580V$]		
DC power limitation for each MPPT with independent configuration of MPPT at P_{acr} , max unbalance example	3000 W [$190 V \leq V_{MPPT} \leq 530 V$] the other channel: P_{dcr} -3000 W [$90 V \leq V_{MPPT} \leq 530 V$]	3000 W [$190 V \leq V_{MPPT} \leq 530 V$] the other channel: P_{dcr} -3000 W [$90 V \leq V_{MPPT} \leq 530 V$]	3500 W [$200 V \leq V_{MPPT} \leq 530 V$] the other channel: P_{dcr} -3500 W [$90 V \leq V_{MPPT} \leq 530 V$]
Maximum DC input current (I_{dmax}) / for each MPPT ($I_{MPPTmax}$)	32.0 / 16.0 A	32.0 / 16.0 A	38.0 / 19.0 A
Maximum input short circuit current for each MPPT	20.0 / 40.0 A	20.0 / 40.0 A	22.0 / 44.0 A
Number of DC input pairs for each MPPT	1		
DC connection type ¹⁾	Quick Fit PV Connector		
Input protection			
Reverse polarity protection	Yes, from limited current source		
Input over voltage protection for each MPPT-varistor	Yes		
Photovoltaic array isolation control	According to local standard		
DC switch rating for each MPPT (version with DC switch)	25 A / 600 V		
Output side			
AC grid connection type	Single-phase		
Rated AC power ($P_{acr} @ \cos\phi=1$)	4000 W	4600 W	5000 W
Maximum AC output power ($P_{acmax} @ \cos\phi=1$)	4000 W ²⁾	4600 W	5000 W
Maximum apparent power (S_{max})	4000 VA ²⁾	4600 VA	5000 VA
Rated AC grid voltage ($V_{ac,r}$)	230 V		
AC voltage range ³⁾	180...264 V		
Maximum AC output current ($I_{ac,max}$)	17.2 A	20.0 A	22.0 A
Contributory fault current	19.0 A	22.0 A	24.0 A
Rated output frequency (f.) ⁴⁾	50/60 Hz		
Output frequency range ($f_{min}...f_{max}$) ⁴⁾	47...53/57...63 Hz		
Nominal power factor and adjustable range	> 0.995, adj. \pm 0.1 - 1 (over/under excited)		
Total current harmonic distortion	< 3.5		
AC connection type	Female connector from panel		
Output protection			
Anti-islanding protection	According to local standard		
Maximum external AC overcurrent protection	25.0 A	25.0 A	32.0 A
Output overvoltage protection - varistor	2 (L - N / L - PE)		



Technical data and types

Type code	PVI-4kW	PVI-4.5kW	PVI-5kW
Operating performance			
Maximum efficiency (η_{\max})	97.0%	97.0%	97.4%
Weighted efficiency (EURO/CEC)	96.5% / -	96.5% / -	97.0% / -
Feed in power threshold	8 W		
Night consumption	<0.4 W		
Embedded communication			
Embedded communication interface ⁵⁾	Wireless		
Embedded communication protocol	ModBus TCP (SunSpec)		
Commissioning tool	Web User Interface, Display, Aurora Manager Lite		
Monitoring	Plant Portfolio Manager, Plant Viewer, Plant Viewer for Mobile		
Optional communication interface	RS485 (use with meter for dynamic feed-in control), Alarm/Load manager relay, Remote ON/OFF		
Optional communication protocol	ModBus RTU (SunSpec), Aurora Protocol		
Optional communication interface	Ethernet, RS485 (use with meter for dynamic feed-in control), Alarm/Load manager relay, Remote ON/OFF		
Optional communication protocol	ModBus TCP (SunSpec), ModBus RTU (SunSpec), Aurora Protocol		
Environmental			
Ambient temperature range	-25...+60°C /-13...140°F with derating above 50°C/122°F	-25...+60°C /-13...140°F with derating above 45°C/113°F ⁶⁾	-25...+60°C /-13...140°F with derating above 45°C/113°F
Relative humidity	0...100 % condensing		
Maximum operating altitude without derating	2000 m / 6560 ft		
Physical			
Environmental protection rating	IP 65		
Cooling	Natural		
Dimension (H x W x D)	553 x 418 x 175 mm / 21.8" x 16.5" x 6.9"		
Weight	15 kg / 33 lbs		
Mounting system	Wall bracket		
Safety			
Isolation level	Transformerless		
Marking	CE , RCM		
Safety and EMC standard	IEC/EN 62109-1, IEC/EN 62109-2, AS/NZS 4777.2, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12		
Grid standard (check your sales channel for availability) ⁷⁾	CEI 0-21, DIN V VDE V 0126-1-1, VDE-AR-N 4105, G83/2, G59/3, RD 413, ITC-BT-40, AS/NZS 4777.2, C10/11, IEC 61727, IEC 62116		

