



QUAD Q2000

Smartest | Most Reliable | Lowest Cost

The **Quad Q2000** is changing the industry standards for today's solar energy solutions.

With 4 individual DC input channels and independent maximum peak power tracking, it is the most compact and light-weight microinverter in the PV industry.

Four Panels, One Inverter

The **Quad 2000** microinverter uses patented technologies that eliminate the use of short-life electrolytic capacitors, providing high reliability, and a 25-year design life.

Based on a Per-Watt rating, the Quad has the lowest microinverter cost, the highest power output, the highest power density, and the lowest weight in the industry.



- **Maximum energy harvest**
- **Quick installation**
- **Safe operation – all AC , with no high-voltage DC**
- **75% reduction in cable costs**
- **Best in class reliability**
- **No single-point of failure**
- **Cloud-based performance monitoring for each panel**
- **Remote updates and programming**

Model:

Q2000-4102

3 Conductors

Input (DC) Specifications		
DC Input Power (Module STC)	W	2200
Number of channels		4
PV Panel Rating (Module STC)	W	550 W _p per channel
Input Power Clipping		None
Maximum Input DC Current	A	16 per channel
Full Power MPPT Voltage Range	V	34 - 45 per channel
Extended MPPT Voltage Range	V	20 - 50 per channel
Start-up Voltage	V	19 per channel
DC Connection Type		MC4 compatible panel receptacles

Output (AC) Specifications				
Grid Connection Type		208V L-L from 3- ϕ	240V L-L from Split- ϕ	230V L-N from 1- ϕ
Operational Voltage Range	V	183 - 229	211 - 264	184 - 276
Maximum Continuous Power ¹	W	2000 @ 52°C	2000 @ 60°C	2000 @ 60°C
Nominal Output Frequency	Hz	60		50
Operational Frequency Range	Hz	59.3 - 60.5 default		47.5 - 52.5 default
		Extendable according to various standards		
Power Factor		> 0.99 default. Programmable from 0-0.99 leading/lagging		
Output THD	%	< 2, default		
Inrush Current	A	< 8		
Output Wiring Type		14 AWG		
Output Connection Type		T5 AC micro male connector 98053		

Safety and Protection	
Input Reverse Voltage Polarity Protection	Yes, Polarized PV Connectors
Anti-Islanding Protection	Yes, programmable to meet various standards UL1741, UL1741 SA, Rule 21, IEC
Integrated GFDI	Yes
Isolation	Galvanic isolation
Abnormal Voltage/Frequency Trip Time	Less than 200ms

Regulatory	
Regulatory Certifications	UL1741, UL1741 SA/Rule 21/ HECO/Rule 14H, IEEE1547, IEEE1547.1, CSA22.2 No. 107.1, FCC Part 15-Class B, IEC62109-1:2010, IEC 62109-2:2011, IEC 61000-6-3:2007.

Efficiency and Operating Performance	Unit	Q2000-4102
Maximum Efficiency	%	97.5
CEC Efficiency	%	97
MPPT Efficiency	%	Static: 99.85 – Dynamic: 99.8
Stand-by Consumption	mW	< 30

Communication	
Monitoring System	Wireless, Web-based monitoring through SparQLinq and SparQvu

Environmental		
Ambient Operating Temperature Range	°C (°F)	-40 to +65 (-40 to +149)
Relative Humidity	%RH	0 – 100 condensing

Mechanical		
Enclosure Rating		NEMA 6, IP-67
Cooling		Natural Convection
Dimensions (H x W x D)	mm (in)	32 x 186 x 285 (1.25 x 7.3 x 11.2)
Weight	kg (lb)	3.3 (7.3)
Recommended Mounting		Rack mount with two M8, 1/4", or 5/16" bolts

Warranty	
Standard Limited Warranty	12 Years
Extended Warranty	25 Years

Programmable Parameters for Smart Grid		
Voltage Ride-through	Under Voltage	Maximum 4 levels with programmable ride-through time
	Over Voltage	Maximum 3 levels with programmable ride-through time
Frequency Ride-through	Under Frequency	Maximum 6 levels with programmable ride-through time
	Over Frequency	Maximum 4 levels with programmable ride-through time
Reconnect Time		Programmable wait time of 0-5 minutes
Power Ramp Rate		Programmable on both active and reactive power
Volt-VAR		Programmable VAR injection and power factor limit
Frequency-Watt		Programmable active power curtailment with an adjustable rate of Watt per Hz

Off-Grid Operation

Yes. Please contact the company for further information.

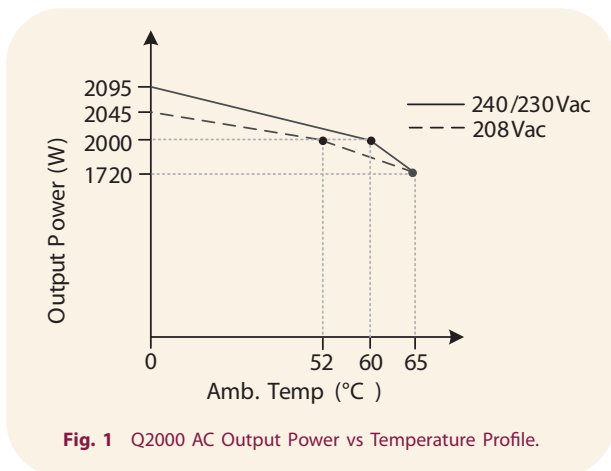
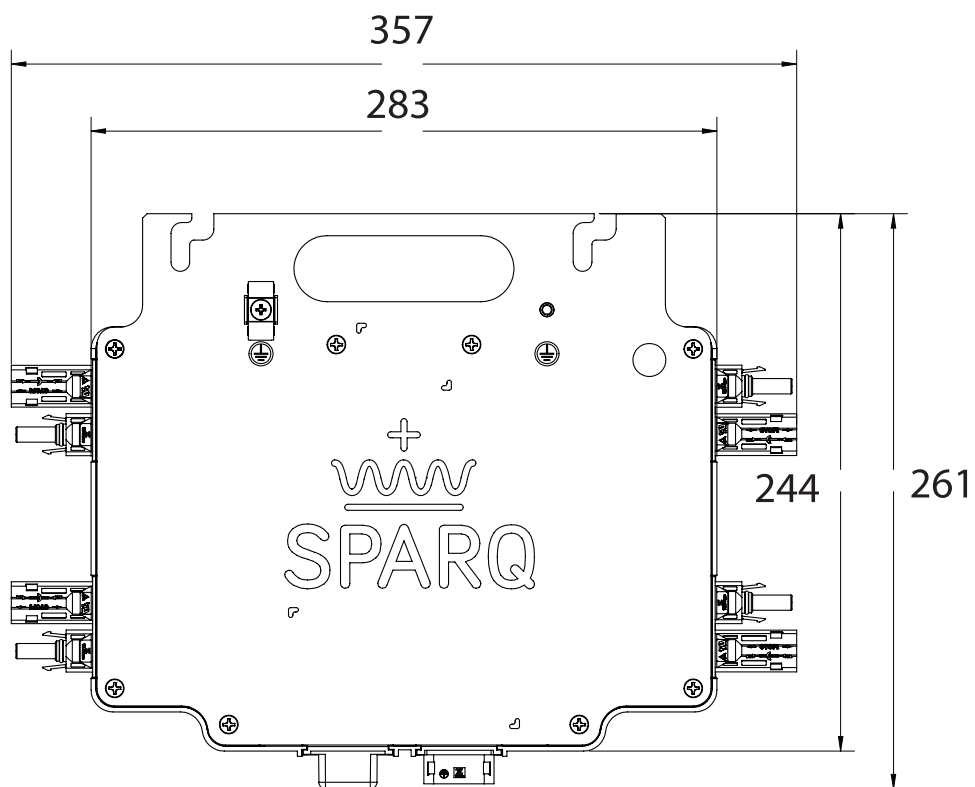
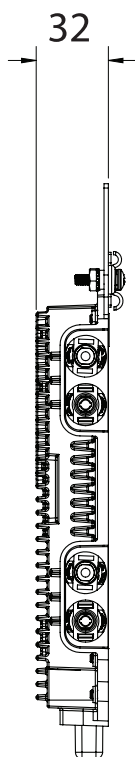


Fig. 1 Q2000 AC Output Power vs Temperature Profile.

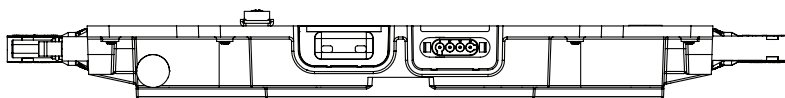
¹ For higher ambient temperature, please refer to the graphs shown in Fig. 1.

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Mechanical Specifications (inverter)



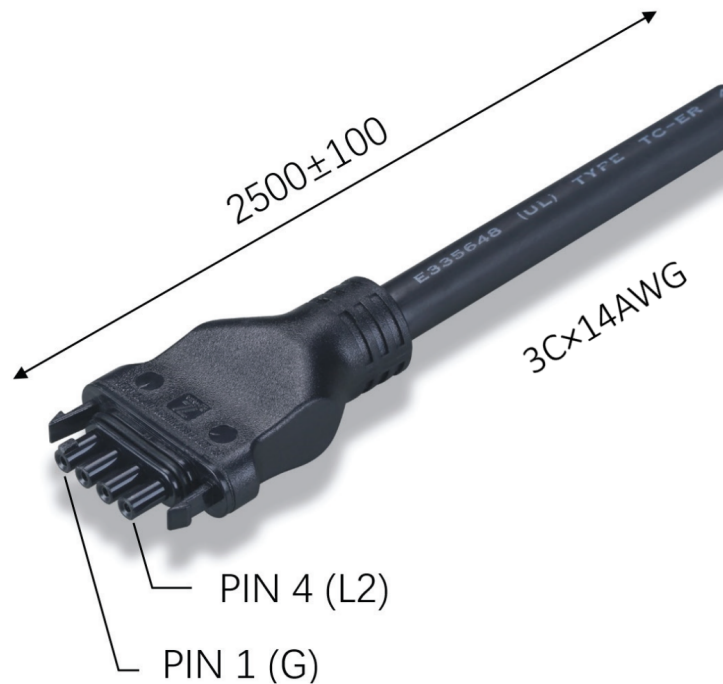
All dimensions in mm



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Mechanical Specifications (cables)

Ti-Lane T5 free connector female 65069-13



All dimensions in mm

PIN1	G: Empty
PIN2	L1: Wire Color Black
PIN3	N: Wire Color White
PIN4	L2: Wire Color Red



AC Cable from T5 female to open, 2C, 3C, AWG 14

Region	Conduct Number	Colour Code	Length	Ti-lane P/N
North America	3C	L1:Black; L2:Red; Neutral: White	2m	65069-17
North America	3C	L1:Black; L2:Red; Neutral: White	2.5m	65069-19
North America	3C	L1:Black; L2:Red; Neutral: White	4m	65069-18
India/Europe	2C	L1:Brown; Neutral:Blue	2m	65069-11
India/Europe	2C	L1:Brown; Neutral:Blue	2.5m	65069-13
India/Europe	2C	L1:Brown; Neutral:Blue	4m	65069-12

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