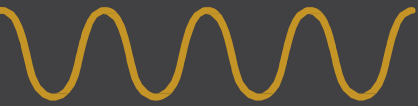


QUAD



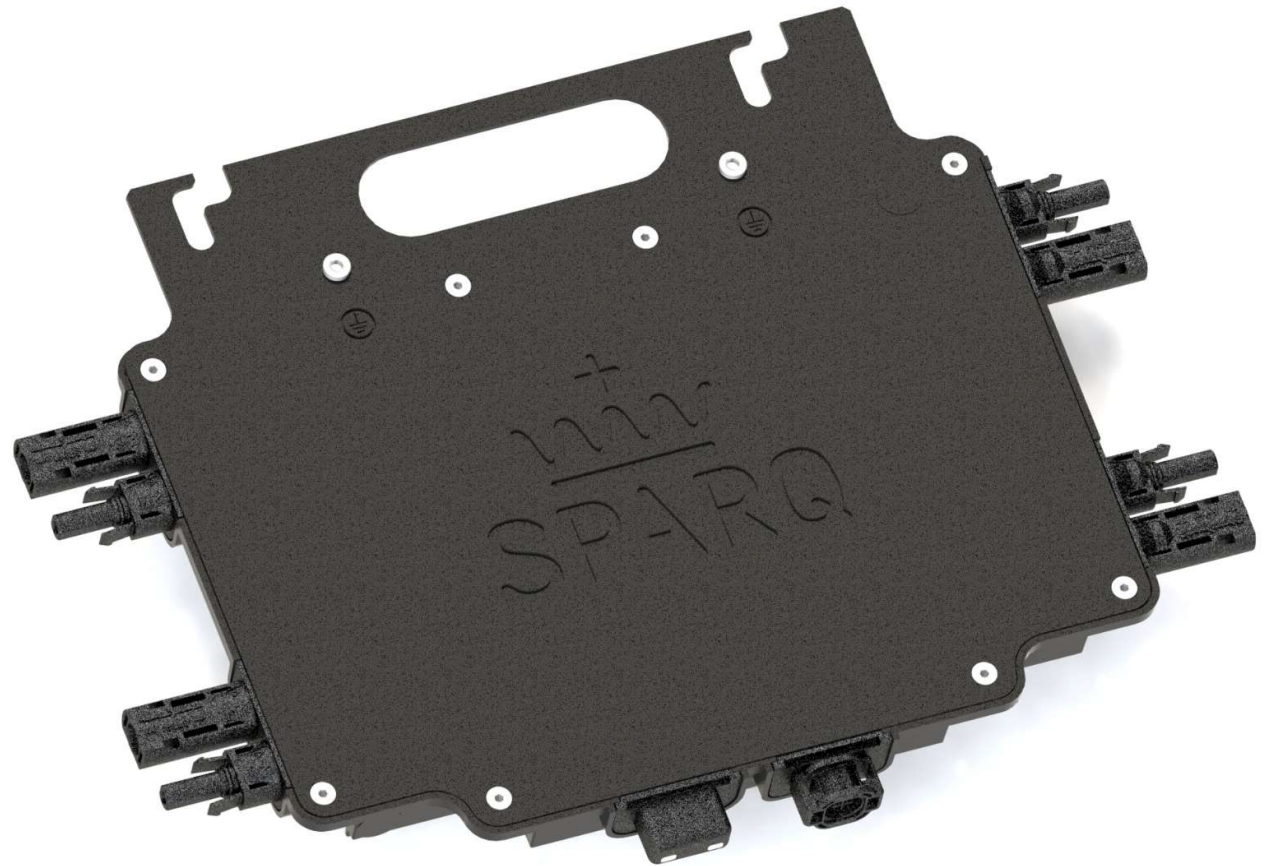
Next Generation
Microinverter

Model:

Q1200-4101

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SPARQ



Smartest | Most Reliable | Lowest Cost



Sparq is pleased to introduce the Quad – a revolutionary, new microinverter that will reset industry standards for low capital cost, ease of installation, high reliability, high energy harvest, and advanced grid functions. These features, backed by a 25-year warranty, offer best-in-class returns on investment.

Indeed, the world’s first high-reliability and high-performance 1,200 Watt “quad” microinverter has arrived, offering microinverter advantages at string inverter costs. Unlike traditional microinverters that have one PV module inputting into one microinverter, our Quad has four individual DC input channels that enables independent peak power tracking from up to four PV modules. Based on a Per-Watt rating, our Quad has the lowest microinverter cost, the highest power output, the highest power density, and the lowest weight in the industry.

Our Quad has been designed with high reliability, using patented technologies that eliminate the use of short-life electrolytic capacitors. This means that Quad enjoys high reliability, with a design life of 25 years, matching the design life of PV modules.

Our “all AC” solution delivers a safe and easy installation. In addition, our Quad allows individual module monitoring via wireless Zigbee communications. Optional data collection and communications hub allows for robust monitoring, including application for mobile devices.

Key Features

- + Superior Value
 - + Low capital cost
 - + Low design, installation, and BOS costs
 - + High energy harvest
 - + High reliability and 25-year warranty, eliminating inverter replacement costs
- + High Reliability
 - + Electrolyte-free design for longer life
 - + No single point of failure
 - + Advanced power electronics
 - + 25year warranty

- + Easy to install
 - + Quad system design reduces typical 6 kW residential PV system from 20 microinverters to 5 microinverters for fast and easy design and installation
 - + “All AC” solution promotes safe installation and operation with low voltage
 - + Industry-standard Amphenol AC connectors
 - + Wireless Zigbee communication with open protocol for individual module monitoring
- + Smart-Grid Ready
 - + Enables delivery of active and reactive power control upon customer request

- + Maximum Energy Harvest
 - + Provides independent maximum energy harvest for each module
 - + 5% to 20% more energy harvest as compared to string inverters, particularly in cases with module mismatch, shading, and soiling
 - + High system availability and elimination of burst mode operation in low-light level, enhancing energy production

Key Specifications		Unit			Q1200-4101		
Maximum Continuous AC Output Power	W				1200		
Number of Input Channels					4		
Rated Grid AC Voltage	V				208 /220/ 240 auto configurable		
Input (DC) Specifications							
PV Power	W				Up to 350 per channel		
Absolute Maximum Input DC Voltage	V				50 per channel		
Maximum Input DC Current	A				16A per channel		
Full Power MPPT Voltage Range	V				22-35 per channel		
Extended MPPT Voltage Range	V				22-40 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	220V L-N from 1 ϕ			
Operational Voltage Range	V	183 - 229	211 - 264	193 - 242			
Nominal Output Frequency	Hz	60		50			
Operational Frequency Range	Hz	59.3 - 60.5 default		47.5 – 50.5	Extendable according to various standards		
Output Current	A	5 (nominal)					
Power Factor		> 0.99 default, programmable from 0.99 leading to 0.99 lagging					
Output THD	%	< 2, default					
Inrush Current	A	<8					
Output Wiring Type		Branch cable: 18 AWG Trunk Cable: 10/12 AWG					
Output Connection Type		Amphenol SMC Receptacle SPS-04RFMC					
Protection Devices							
Input							
- Reverse Polarity Protection		Yes, Polarized PV Connectors					
Output							
- Anti-Islanding Protection		Yes, programmable to meet various standards UL1741, UL1741 SA, Rule 21,					
- Over-Voltage Protection		Yes					
- Integrated GFDI		Yes					
Safety							
Isolation		Galvanic isolation					
Regulatory Certifications		UL1741, UL1741 SA/Rule 21/HECO/Rule 14H, IEEE1547, IEEE1547.1, CSA22.2 No. 107.1, FCC Part 15-Class B					

Efficiency and Operating Performance		Unit		Q1200-4101	
Maximum Efficiency	%			97.0	
CEC Efficiency	%			96.5	
MPPT Efficiency	%			Static: 99.85 – Dynamic: 99.8	
Stand-by Consumption	mW			< 30	
Communication					
Monitoring System	W	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 – outdoor			
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, extendable to 25 Years			

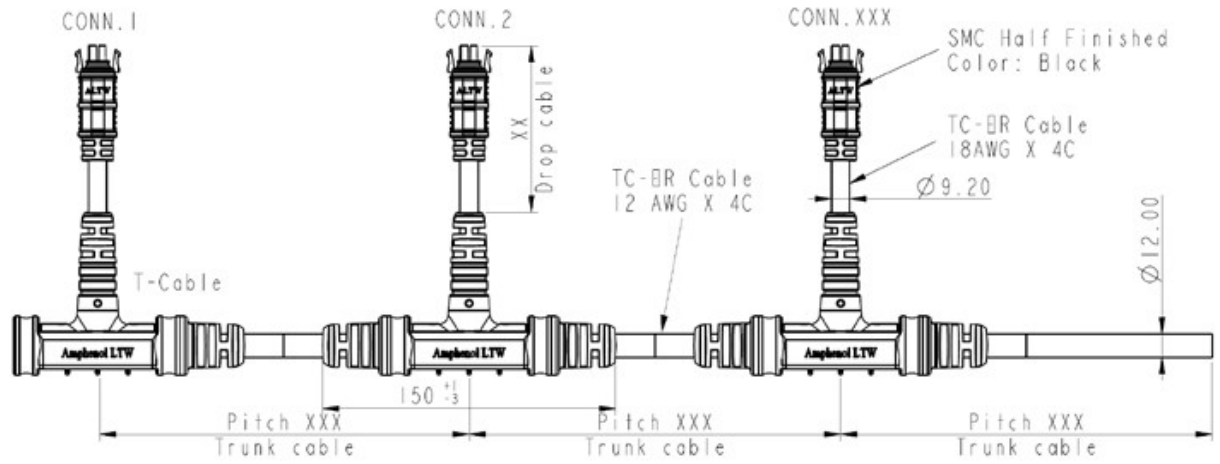
Programmable Parameters for Smart Grid		
Voltage Ride-through	Under Voltage	Maximum 4 levels with programmable ride-through time
	Over Voltage	Maximum 3 levels with programmable ride-through time
Frequency Ride-through	Under Frequency	Maximum 6 levels with programmable ride-through time
	Over Frequency	Maximum 4 levels with programmable ride-through time
Reconnect Time		Programmable wait time of 0-5 minutes
Power Ramp Rate	Reconnecting	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

Model:

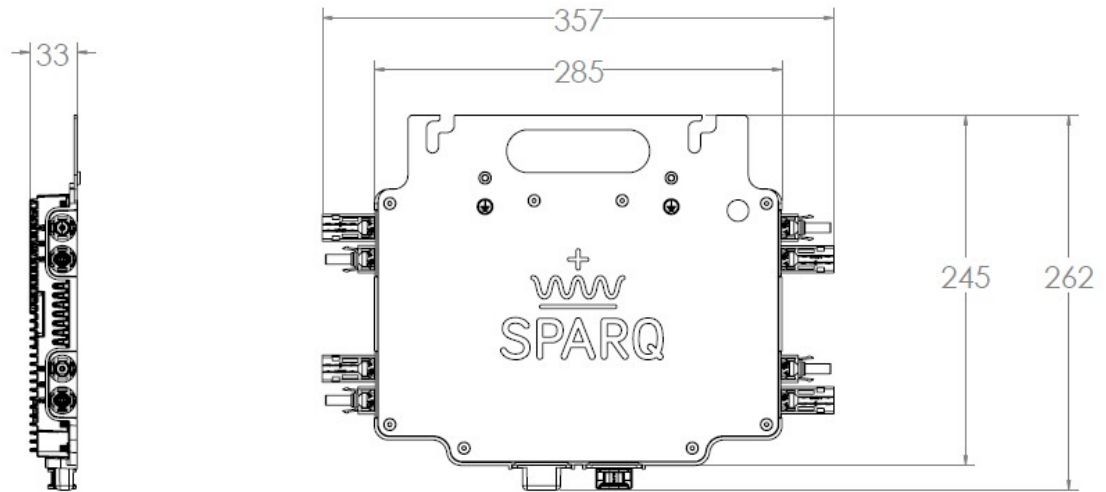
Q1200-4101

Model:
Q1200-4101

Mechanical Specifications



all dimensions in mm



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