

YC1000-3

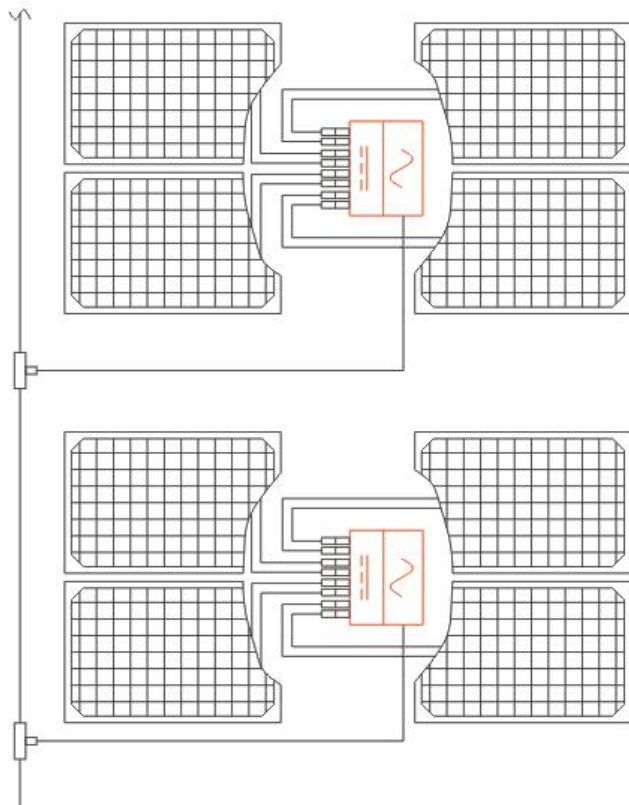
3-Phase Microinverter

- Single unit connects up to four modules
- Maximum 1130W AC output
- True 3-phase output
- ZigBee wireless communication and monitoring
- Up to 44 solar modules (60 or 72-cell) can be linked in a single 15A circuit*

*Please see YC1000-3 user manual on specifications for 208VAC and 277/480VAC.

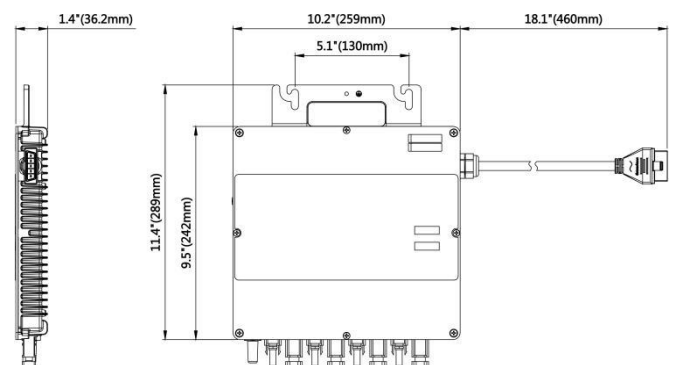
World's first true 3-phase microinverter – only from APsystems

WIRING SCHEMATIC



The YC1000-3 is the industry's first true 3-phase solar microinverter, handling commercial grid voltages of 208, 277/480 with 1130 watts maximum output, ZigBee communication and an integrated ground. Each YC1000-3 supports up to 4 solar modules.

DIMENSIONS



(For North America)

YC1000-3 3-Phase Microinverter Datasheet

Region

North America

Model

YC1000-3-NA

Input Data (DC)

MPPT Voltage Range	16V-55V	
Operation Voltage Range	16V-55V	
Maximum Input Voltage	60V	
Startup Voltage	22V	
Maximum Input Current	14.8A×4	
Max. Input Source Backfeed Current to Input Source	-	38.6A

Output Data (AC)

3-Phase Grid Type	120V/208V	277V/480V
Rated Output Power	900W	
Maximum Output Power	1130W	
Nominal Output Current	2.5A×3	1.08A×3
Nominal Output Voltage	120V×3	277V×3
Default Output Voltage Range	105.6V-132V*	243.8V-304.7V*
Extended Output Voltage Range	82V-152V	190V-350V
Nominal Output Frequency	60Hz	
Default Output Frequency Range	59.3Hz-60.5Hz*	
Extended Output Frequency Range	55.1Hz-64.9 Hz	
Maximum Output Fault Current (ac) and Duration	124.23 Apk, 12.10 ms of duration, 4.97 Arms, over 3 cycles	6.57 Apk, 40 ms of duration, 1.32 Arms, over 3 cycles
Power Factor	>0.99	
Total Harmonic Distortion	<3%	
Maximum Units per Branch	4 for 15A×3 Breaker**	11 for 15A×3 Breaker**

Efficiency

Peak Efficiency	95%	
CEC Weighted Efficiency	94.5%	
Nominal MPPT Efficiency	99.9%	
Night Power Consumption	300mW	
Utility Interconnection Voltage and Frequency Trip Limits and Trip Times	±5% but not less than 160ms	See NOTE 1 Below

Trip Limit and Trip Time Accuracy

Voltage: ±2V_{L-N} Frequency: ±0.05Hz
Alternate Trip Time: See NOTE 1 Below

Mechanical Data

Operating Ambient Temperature Range	-40° F to +149° F (-40°C to +65°C)	
Storage Temperature Range	-40° F to +185° F (-40°C to +85°C)	
Dimensions (W x H x D)	10.2" × 9.5" × 1.4" (259mm × 242mm × 36mm)	
AC Cable	14AWG	
Weight	7.7lbs/3.5kg	
Enclosure Rating	NEMA 6	NEMA 4X
Cooling	Natural Convection - No Fans	

Features & Compliance

Communication (Inverter To ECU)	Zigbee	
Transformer Design	High Frequency Transformers, Galvanically Isolated	
Integrated Ground	The DC circuit meets the requirements for ungrounded PV arrays in NEC690.35. Equipment ground is provided by the PE in the AC cable. No additional ground is required. Ground fault protection (GFP) is integrated into the microinverter.	
Emissions & Immunity (EMC) Compliance	FCC Part15; ANSI C63.4; ICES-003	
Safety Class Compliance	UL1741, CSA C22.2 No.107.1-01	
Grid Connection Compliance	IEEE1547	

* Programmable through ECU in field to meet customer need.

** Depending on the local regulations.

Specifications subject to change without notice - please ensure you are using the most recent update found at www.APsystems.com © All Rights Reserved

Note 1

Note 1: Utility Interconnection Voltage and Frequency Trip Limits and Trip Times

Voltage and frequency limits for utility Interaction

Condition	Simulated utility source		Maximum time (sec) (cycles) at 60 Hza before cessation of current to the simulated utility
	Voltage (V)	Frequency (Hz)	
A	$< 0.50 V_{nor}$	Rated	80ms
B	$0.50 V_{nor} \leq V < 0.88 V_{nor}$	Rated	200ms
C	$1.10 V_{nor} < V < 1.20 V_{nor}$	Rated	200ms
D	$1.20 V_{nor} \leq V$	Rated	80ms
E	Rated	$f > 60.5$	160ms
F	Rated	$f < 59.3$	160ms

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