

Sample of Technical Specifications (Part 1)

APsystems YC500A Microinverter Datasheet

INPUT DATA (DC)

MPPT Voltage Range	22-45V
Maximum Input Voltage	55V
Maximum Input Current	12A X 2

OUTPUT DATA (AC)

Rated Output Power	500W
Maximum Output Current	2.08A @ 240V 2.4A @208V
Nominal Output Voltage/Range - 240V	240V/211V-264V*
Nominal Output Voltage/Range - 208V	208V/183V-229V*
Nominal Output Frequency/Range	60Hz/ 59.3-60.5Hz***
Power Factor	>0.99
Total Harmonic Distortion	<3%
Maximum Units Per Branch	7 per 20A @ 240V 6 per 20A @ 208V

EFFICIENCY

Peak Efficiency	95.5%
CEC Weighted Efficiency**	95%
Nominal MPP Tracking Efficiency	99.5%

MECHANICAL DATA

Storage Temperature Range	-40°F to +185°F (-40°C to +85°C)
Operating Temperature Range	-40°F to +149°F (-40°C to +65°C)
Dimensions (WxHxD) inches	8.75" x 6.5" x 1.1"
Dimensions (WxHxD) mm	221mm x 167mm x 29mm
Weight	5.5 lbs (2.5kg)
Enclosure Rating	NEMA 6
Cooling	Natural Convection - No Fans

FEATURES & COMPLIANCE

Communication	Power line (PLC)
Warranty	10 years standard, extendable to 25 years
Emissions & Immunity (EMC) Compliance	FCC PART 15, ANSI C63.4 2003, ICES-003
Safety & Grid Connection Compliance	IEEE1547, CSA C22.2 No. 1071-01, NEC 2014 690.12, NEC 2017 690.12 ***

*Default AC output is 240V mode. Programmable to 208V mode.

**CEC registered as Altenergy Power System Inc.

***Programmable per customer and utility requirements.

**** Meets the standard requirements for Distributed Energy Resources (UL 1741) and identified with the ETL Listed Mark.



Specifications subject to change without notice – please ensure you are using the most recent version found at APsystems.com

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Sample of Technical Specifications (Part 2)

MATRIX
AGM Line
Sealed Heavy Duty Motive Battery

MA-AG1002

Nominal Voltage	12V
Nominal Capacity(20HR)	100.0AH
Dimension	Length 307 ± 2mm (12.09 inches)
	Width 169 ± 2mm (6.66 inches)
	Container Height 211 ± 2mm (8.28 inches)
	Total Height (with Terminal) 215 ± 2mm (8.66 inches)
Approx Weight	Approx. 30.5 kg (67.2lbs)
Terminal	T3
Container Material	ABS
Rated Capacity	102.0 AH/1.12A (100hr, 1.60V/cell, 25°C/77°F)
	106.0 AH/5.00A (20hr, 1.80V/cell, 25°C/77°F)
	90.0 AH/9.00A (10hr, 1.80V/cell, 25°C/77°F)
	79.50 AH/15.9A (5hr, 1.75V/cell, 25°C/77°F)
	72.3 AH/24.10A (3hr, 1.75V/cell, 25°C/77°F)
55.4 AH/55.4A (1hr, 1.60V/cell, 25°C/77°F)	
Max. Discharge Current	1200A (5s)
Internal Resistance	Approx 5.0mΩ
Operating Temp. Range	Discharge : -20~55°C (-4~131°F)
	Charge : 0~40°C (32~104°F)
	Storage : -20~50°C (-4~122°F)
Normal Operating Temp. Range	25 ± 3°C (77 ± 5°F)
Cycle Use	Initial Charging Current less than 28.0A Voltage
	14.4V-15.0V at 25°C(77°F)Temp. Coefficient -30mV/C
Standby Use	No limit on Initial Charging Current Voltage
	13.8V-13.8V at 25°C(77°F)Temp. Coefficient -20mV/C
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	NPM series batteries may be stored for up to 10 months at 25°C(77°F) and then a refreshing charge is required. For higher temperatures the time interval will be shorter.



Voltage: 12 VOLTS

Capacity: 100AH @ 20hr




ISO9001 ISO14001

Constant Current Discharge (Amperes) at 25°C (77°F)

F. V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.80V/cell	154.0	121.1	103.0	86.1	68.5	51.8	42.4	27.0	21.4	17.5	14.1	12.2	9.95	8.50	4.84
1.60V/cell	206.8	154.7	124.4	101.8	80.8	60.3	47.5	29.5	23.0	18.6	15.1	13.1	10.5	9.00	5.20
1.70V/cell	233.1	170.0	135.9	109.5	83.9	62.5	49.7	30.6	23.4	19.1	15.5	13.5	10.7	9.09	5.20
1.70V/cell	256.7	185.3	145.1	115.1	87.3	65.0	51.3	31.8	24.1	19.6	15.9	13.8	10.9	9.18	5.30
1.60V/cell	283.1	200.0	154.3	122.3	92.1	66.7	53.0	32.7	25.1	20.2	16.3	14.1	11.1	9.37	5.40
1.60V/cell	312.2	217.1	165.0	130.3	97.2	69.5	54.9	33.8	25.9	20.9	16.9	14.4	11.2	9.47	5.50

Constant Power Discharge (Watts/cell) at 25°C (77°F)

F. V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.80V/cell	281.6	223.7	192.2	162.4	130.5	99.6	81.6	62.5	41.6	34.1	27.6	24.1	19.6	16.8	9.18
1.60V/cell	374.0	282.5	229.1	189.1	151.6	114.9	91.2	56.9	44.6	36.2	29.5	25.7	20.6	17.8	9.26
1.70V/cell	412.7	305.4	247.1	201.5	156.1	118.1	95.0	58.8	45.2	36.9	30.2	26.4	21.1	17.9	9.33
1.70V/cell	441.9	325.3	260.2	210.2	161.8	122.4	97.6	61.0	46.4	37.8	30.9	26.9	21.3	18.1	9.51
1.60V/cell	480.4	347.8	274.5	221.6	169.1	124.3	100.2	62.3	48.1	38.0	31.6	27.4	21.6	18.4	9.62
1.60V/cell	517.6	369.1	288.7	233.5	177.2	128.9	103.2	64.1	49.4	40.1	32.5	27.9	21.8	18.6	9.66

www.matrixbattery.com
SPEC 02 201707 15

Sample of Technical Specifications (Part 3)

CS6P-220/225/230/235/240/245/250P

Electrical Data

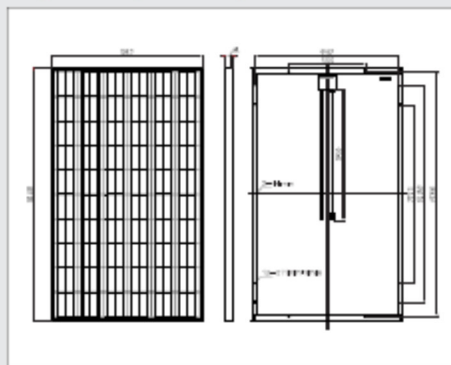
	CS6P-220P	CS6P-225P	CS6P-230P	CS6P-235P	CS6P-240P	CS6P-245P	CS6P-250P
Nominal Maximum Power at STC (Pmax)	220W	225W	230W	235W	240W	245W	250W
Optimum Operating Voltage (Vmp)	29.2V	29.4V	29.8V	29.8V	29.9V	30.0V	30.1V
Optimum Operating Current (Imp)	7.53A	7.65A	7.78A	7.90A	8.03A	8.17A	8.30A
Open Circuit Voltage (Voc)	36.6V	36.7V	36.8V	36.9V	37.0V	37.1V	37.2V
Short Circuit Current (Isc)	8.09A	8.19A	8.34A	8.46A	8.59A	8.74A	8.87A
Operating Temperature	-40°C~+85°C						
Maximum System Voltage	1000V (IEC) /600V (UL)						
Maximum Series Fuse Rating	15A						
Power Tolerance	+5W						
Temperature Coefficient	Pmax	-0.43%/°C					
	Voc	-0.34 %/°C					
	Isc	0.065 %/°C					
	NOCT	45°C					

Under Standard Test Conditions (STC) of irradiance of 1000W/m², spectrum AM 1.5 and cell temperature of 25°C

Mechanical Data

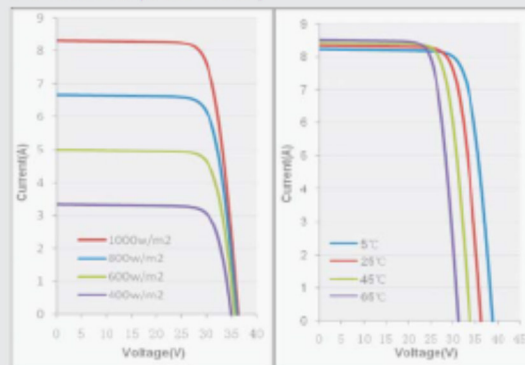
Cell Type	Poly-crystalline
Cell Arrangement	60 (6 x 10)
Dimensions	1638 x 982 x 40mm (64.5 x 38.7 x 1.57in)
Weight	20kg (44.1 lbs)
Front Cover	Tempered glass
Frame Material	Anodized aluminium alloy
Standard Packaging (Modules per Pallet)	20pcs

Engineering Drawings



*Specifications included in this datasheet are subject to change without prior notice.

I-V Curves (CS6P-250P)



1000 w/m² STC Copyright © 2012 EnerNas Inc. All Rights Reserved