

Powerware 9330 Specification Details

Electrical Input	
Input Voltage	120/208 VAC, 3 phase + GND (rectifier) 120/208 VAC, 3 phase + N + GND (Bypass)
Voltage Range	-15%, +10%
Frequency	50/60 Hz
Frequency Range	45 - 65 Hz
Input Power Factor	> 0.96, Typical
Surge Protection	Meets IEEE 587, Category A & B and EN 50091-2
Electrical Output	
Output Voltage	120/208
Voltage Regulation	Static: better than $\pm 1\%$ Dynamic: better than Figure one of EN50091-3 (IEC 62040-3)
Voltage Distortion	Less than 3% for 100% linear load Less than 5% for nonlinear load when tested in accordance with EN50091-3
Frequency Regulation	Synchronization: ± 0.5 , ± 1.0 , ± 2.0 Hz, selectable Free-running: ± 0.005 Hz Slew rate: 0.5, 1.0, 2.0, 3.0 Hz / sec, max selectable
Over Current	101 - 110% for 10 min (inverter) 111 - 125% for 1 min (inverter) 126 - 150% for 30 sec (inverter)
Environmental	
Ambient Temperature	Operation 0 to + 40°C (32 to 104°F) Storage -20 to 70°C (-4 to 140°F)
Relative Humidity	95% maximum, non-condensing
Altitude	1500 meters (5000ft) at 40°C ambient without load derating
Audible noise	Less than 55dBA typical at 1 meter; in accordance with ISO 7779
Electrostatic Discharge	Withstands 25kV without damage or disturbance to the load; exceeds requirements of IEC 801-2
EMC	Meets FCC Class A and EN50091-2 (IEC 62040-2)
Safety	
	UL1778 CUL CAN/CSA C22.2 NO.107.1 EN 50091-1
Mechanical	
Cable Entry	Bottom rear, Bottom front
Cooling	Filtered forced air with redundant fans
Access	Front and top only required for service
Communications	
Serial Port	RS-232 communications port standard
Service Port	RS-232 for service of equipment by qualified service personnel standard
Communication Cards	up to four optional cards can be installed in the UPS module at any time and provide the following connectivity: – single RS-232 port – multiple RS-232 ports – Ethernet Interface – SNMP Adapter – Modem Driver
Remote Communications	Four input building alarm contacts Two summary alarm contacts
Relay Interface Module	Optional– provides five relay contacts

Model Selection Guide

POWERWARE 9330-20 PERFORMANCE CHARACTERISTICS			MODEL 10 10KVA/7KW				MODEL 15 15KVA/10.5KW				MODEL 20 20KVA/14KW			
Input Voltage	Volts	208	480	480	600	208	480	480	600	208	480	480	600	
Output Voltage	Volts	208	208	480	208	208	208	480	208	208	208	480	208	
Input/output Frequency	Hz	50/60	60	60	60	50/60	60	60	60	50/60	60	60	60	
Input Voltage Range														
	Minimum	Volts	177	408	408	510	177	408	408	510	177	408	408	510
	Maximum	Volts	228	528	528	660	228	528	528	660	228	528	528	660
AC Input (With input filter)														
	Nominal	Amps	22	10	10	8	32	14	15	11	43	19	20	15
	Maximum	Amps	29	13	13	10	40	18	18	15	51	23	23	19
Bypass Input														
Nominal Amps	Amps	28	12	12	10	42	18	18	14	56	24	24	19	
AC Output														
	Nominal Amps	Amps	28	28	12	28	42	42	18	42	56	56	24	56
	10 Minutes	Amps	35	35	15	35	52	52	23	52	69	69	30	69
Battery														
	Nominal Voltage	Volts	288	288	288	288	288	288	288	288	288	288	288	288
	Float Voltage @ 25°C	Volts	336	336	336	336	336	336	336	336	336	336	336	336
	Charge Current	Amps	7	7	7	7	7	7	7	7	7	7	7	7
	Nominal Discharge Current	Amps	26	26	26	26	39	39	39	39	39	39	39	39
	Total Cell Count		144	144	144	144	144	144	144	144	144	144	144	144
System Efficiency ¹														
	@100%Load		91%	88%	86%	86%	92%	89%	87%	87%	92%	90%	88%	90%
	@75%Load		90%	87%	85%	85%	92%	89%	86%	86%	92%	90%	88%	90%
	@50%Load		88%	85%	83%	83%	91%	88%	85%	85%	92%	90%	88%	90%
	.7pf@100%Load		96%	93%	91%	93%	96%	94%	92%	94%	96%	94%	92%	94%
Max. Heat Dissipation														
	BTU/Hr.(x1000)		3.3	4.2	4.8	4.8	4.1	5.4	6.3	6.3	5.1	6.3	7.5	6.3
	kcal/Hr.(x1000)		0.8	1.1	1.2	1.2	1.0	1.4	1.6	1.6	1.3	1.6	1.9	1.6
Inverter Efficiency (Full Load)	%		93%	93%	90%	93%	94%	94%	92%	94%	94%	94%	92%	94%
Physical Attributes (max.)														
	Width inches		22	39	39	39	22	39	39	39	22	39	39	39

1) Efficiency shown takes into account the output transformer for input or output voltages other than 208V

2) All accessories feature plug and play capability. Shipping pallet and packaging adds 50 lbs. per shipping unit.

3) Options cabinet is required for voltages other than 208/208 V In/Out.

Model Selection Guide

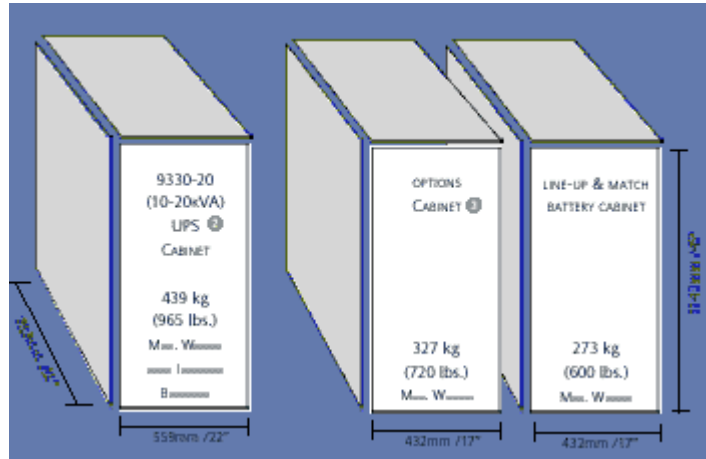
POWERWARE 9330-40 PERFORMANCE CHARACTERISTICS			MODEL 25 25KVA/17.5KW				MODEL 30 30KVA/21KW				MODEL 35 35KVA/24.5KW				MODEL 40 40KVA/28KW			
Input Voltage	Volts	208	480	480	600	208	480	480	600	208	480	480	600	208	480	480	600	
Output Voltage	Volts	208	208	480	208	208	208	480	208	208	208	480	208	208	208	480	208	
Input/output Frequency	Hz	50/60	60	60	60	50/60	60	60	60	50/60	60	60	60	50/60	60	60	60	
Input Voltage Range																		
	Minimum	Volts	177	408	408	510	177	408	408	510	177	408	408	510	177	408	408	510
	Maximum	Volts	229	528	528	660	229	528	528	660	229	528	528	660	229	528	528	660
AC Input																		
	Nominal	Amps	55	24	24	19	66	29	29	23	77	34	34	27	82	38	38	30
	Maximum	Amps	70	30	30	24	83	36	36	29	97	42	42	34	100	48	48	38
Bypass Input																		
Nominal Amps	Amps	69	30	30	24	83	36	36	29	97	42	42	34	111	48	48	38	
AC Output																		
	Nominal Amps	Amps	69	69	30	69	83	83	36	84	97	97	42	96	111	111	48	112
	10 Minutes	Amps	86	86	38	86	104	104	45	105	121	121	53	120	139	139	60	140
Battery																		
	Nominal Voltage	Volts	288	288	288	288	288	288	288	288	288	288	288	288	288	288	288	288
	Float Voltage @ 25°C	Volts	336	336	336	336	336	336	336	336	336	336	336	336	336	336	336	336
	Charge Current	Amps	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Nominal Discharge Current	Amps	64	64	64	64	78	78	78	78	91	91	91	91	100	100	100	100
System Efficiency ¹																		
	@100%Load		92%	90%	88%	90%	92%	90%	88%	90%	92%	90%	88%	90%	93%	91%	89%	91%
	@75%Load		91%	89%	87%	89%	92%	90%	88%	90%	92%	90%	88%	90%	92%	90%	88%	90%
	@50%Load		89%	87%	85%	87%	91%	89%	87%	89%	91%	89%	87%	89%	92%	90%	88%	90%
	.7pf@100%Load		97%	93%	91%	93%	96%	94%	92%	94%	96%	94%	92%	94%	96%	94%	92%	94%
Max. Heat Dissipation																		
	BTU/Hr.(x1000)		4.8	6.0	7.2	6.0	5.7	7.2	8.6	7.2	6.7	8.4	10.0	8.4	6.7	8.6	10.5	8.6
	kcal/Hr.(x1000)		1.2	1.5	1.8	1.5	1.4	1.8	2.2	1.8	1.7	2.1	2.5	2.1	1.7	2.2	2.6	2.2
Inverter Efficiency (Full Load)	%		93%	93%	91%	93%	93%	93%	91%	93%	93%	93%	91%	93%	94%	94%	92%	94%
Physical Attributes (max.)																		
	Width	inches	39	61	61	61	39	61	61	61	39	61	61	61	39	61	61	61
	Height	inches	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
	Depth ¹	inches	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

1) Efficiency shown takes into account the output transformer for input or output voltages other than 208V

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3) Options cabinet is required for voltages other than 208/208 V In/Out.

UPS Battery Run Times



UPS Battery Run Times (in minutes)

	9330-20 Series			9330-40 Series			
	Model 10 10kVa 7kW	Model 15 15kVa 10.5kW	Model 20 20kVa 14kW	Model 25 25kVa 17.5kW	Model 30 30kVa 21kW	Model 35 35kVa 24.5kW	Model 40 40kVa 28kW
Base Unit	35	20	12	26	20	15	12
+1 Battery Cabinet	95	50	35	49	38	33	26
+2 Battery Cabinets	150	95	60	64	50	44	35
+3 Battery Cabinets	200	130	95	98	76	62	49
+4 Battery Cabinets	n/a	n/a	n/a	122	95	75	60
+5 Battery Cabinets	n/a	n/a	n/a	146	114	100	79