IDF -UPS Backup Time CALCULATION

SYSTEC101
11871 E 33rd Ave Suite B, Aurora CO 80010
info@systec101.com
303-537-7575

SmartPro 208/120V 5kVA 4kW Line-Interactive Sine Wave UPS.	
Runtime Full Load (min.)	16 min. (4000W)
Runtime Half Load (min.)	38 min. (2000W)

HPE Aruba Networking 2930M 24G PoE+ 1-slot Switch maximum Load consumption = 840W

$$\text{Backup Time} = \frac{2000}{840} \times 38$$

Backup Time = 90.45 mins

* This IDF-UPS Backup Time calculation same for four IDF *

SM5000RT3UTAA Estimated Runtime

Load in Watts

UPS	Battery Pack	200W	400W	600W	800W	1000W	1200W	1400W	1600W	1800W	2000W	2500W	3000W	3500W	4000W
SM5000RT3UTAA	Included Batteries	466	244	160	116	90	72.8	60.6	51.6	44.6	38.0	29.3	23.0	18.7	16.0
SM5000RT3UTAA	1 BP48V60RT3UTAA	842	454	304	225	176	144	120	103	90	79	60	47	39	33
SM5000RT3UTAA	2 BP48V60RT3UTAA	1270	700	475	355	281	231	194	167	146	129	98	78	65	55
SM5000RT3UTAA	3 BP48V60RT3UTAA	1686	943	646	486	387	319	270	234	205	182	139	111	92	78
SM5000RT3UTAA	4 BP48V60RT3UTAA	2088	1182	816	617	493	409	347	301	264	241	181	145	121	103
SM5000RT3UTAA	5 BP48V60RT3UTAA	2479	1417	984	748	599	498	424	368	325	289	223	180	150	128
SM5000RT3UTAA	6 BP48V60RT3UTAA	2857	1648	1150	877	705	587	501	436	385	344	266	216	180	153
SM5000RT3UTAA	7 BP48V60RT3UTAA	3224	1875	1314	1005	810	676	578	504	446	398	310	251	210	180
SM5000RT3UTAA	8 BP48V60RT3UTAA	3580	2098	1476	1132	915	765	655	572	506	453	353	287	240	206
SM5000RT3UTAA	9 BP48V60RT3UTAA	3925	2317	1636	1258	1019	853	732	639	566	508	397	323	271	232
SM5000RT3UTAA	10 BP48V60RT3UTAA	4260	2532	1794	1383	1122	941	808	707	627	562	440	359	302	259

All runtime values are in minutes.

Specifications

	JL319A HPE Aruba Networking 2930M 24G 1-slot Switch	JL320A HPE Aruba Networking 2930M 24G PoE+ 1-slot Switch	JL321A HPE Aruba Networking 2930M 48G 1-slot Switch
Performance			
Routing table size	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP
Mac address table size	32768 entries	32768 entries	32768 entries
Environment			
Operating temperature[1]	32°F to 131°F (0°C to 55°C) up to 5000ft, 32°F to 122°F (0°C to 50°C). Derate -1°C for every 1000 ft from 5000 ft to 10000 ft	32°F to 131°F (0°C to 55°C) up to 5000ft, 32°F to 122°F (0°C to 50°C). Derate -1°C for every 1000 ft from 5000 ft to 10000 ft	32°F to 131°F (0°C to 55°C) up to 5000ft, 32°F to 122°F (0°C to 50°C). Derate -1°C for every 1000 ft from 5000 ft to 10000 ft
Operating relative humidity	15% to 95% (non-condensing) 10,000 ft	15% to 95% (non-condensing) 10,000 ft	15% to 95% (non-condensing) 10,000 ft
Non-operating/ storage temperature	-40°C to +70°C up to 15000 ft	-40°C to +70°C up to 15000 ft	-40°C to +70°C up to 15000 ft
Non-operating/storage relative humidity	90% at 65°C (non-condensing); 15,000 ft	90% at 65°C (non-condensing); 15,000 ft	90% at 65°C (non-condensing); 15,000 ft
Acoustic	Sound Power L_{WaD}=4.0 Bel, Sound Pressure L_{pAm}, Bystander=22.8 dB	Sound Power L_{WaD}=4.6 Bel, Sound Pressure L_{pAm}, Bystander=28.8 dB	Sound Power L_{WaD}=4.1 Bel, Sound Pressure L_{pAm}, Bystander=23.7 dB
Primary airflow direction	Port to Power	Port to Power	Port to Power
Electrical characteristics			
Frequency	50/60Hz	50/60Hz	50/60Hz
Maximum heat dissipation	168 BTU/hr 177 kJ/hr	168 BTU/hr 177 kJ/hr	263 BTU/hr 278 kJ/hr
Voltage	JL085A PSU: 100-127/200-240	JL086A PSU: 100-127/200-240 VAC JL087A PSU: 110-127/200-240 VAC	JL085A PSU: 100-127/200-240
Current	JL085A PSU: 0.5A/0.3A	JL086A PSU (each): 4.8A/2.4A JL087A PSU (each): 8.6A/4.3A	JL085A PSU: 1A/0.5A
Maximum power rating	49W	JL086A PSU (each): 450W JL087A PSU (each): 810W	78W
Idle power	34W	63W	52W
PoE power (max possible)	N/A	840 Watts	N/A
Hibernate power	11W	23W	11W
Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst case theoretical maximum numbers provide for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst case theoretical maximum numbers provide for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst case theoretical maximum numbers provide for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.