Technical Documentation for Ukraine Technical Regulation on Ecodesign Requirements for Computers and Computer Servers, Resolution No. 737

7/22/2022

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Product Information			
Machine Type(s)	**Model(s)**	**Part Number**	**Product Type**
9105, 9786	42A, 42H	-	Computer server

Manufacturer's name, registered trade name and registered trade address:

IBM®
Marca Registrada
® Registered Trademark of
International Business Machines Corporation
New Orchard Road Armonk, New York 10504

Year of manufacture
2022

Noise levels (declared A-weighted sound power level of the computer)

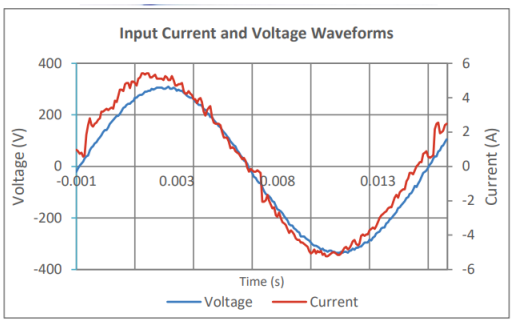
	Operating	Idle
– Typical configuration – Typical workload – 23°C (73.4°F), 500 m (1640 ft) environment	7.7	7.7
– Typical configuration – Typical workload – 23°C (73.4°F), 500 m (1640 ft) environment – Front acoustic door[9]	7.3	7.3
– Typical configuration – Typical workload – 25°C (77°F), 500 m (1640 ft) environment	7.9	7.9
– Typical configuration – Typical workload – 25°C (77°F), 500 m (1640 ft) environment – Front acoustic door[9]	7.4	7.4
– High power PCIe adapter – Typical workload – 23°C (73.4°F), 500 m (1640 ft) environment	8.3	8.3
– High power PCIe adapter – Typical workload – 23°C (73.4°F), 500 m (1640 ft) environment – Front acoustic door[9]	7.8	7.8
– Typical configuration with high power PCIe adapter – Typical workload – 40°C (104°F), 3050 m (10000 ft) environment	8.5	8.5
– Typical configuration with high power PCIe adapter – Typical workload 40°C (104°F), 3050 m (10000 ft) environment – Front acoustic door[9]	8.2	8.2

Internal/external power supply efficiency

ID Number	SO-2020.1
Manufacturer	IBM
Model Number	AWF2DC1600W-I
Serial Number	02PX119YL30NH22R186
Year	2022
Type	1U
Test Date	04/18/22

Rated Specifications	Value	Units
Input Voltage	100-127/200-240	Volts
Input Current	12/9	Amps
Input Frequency	50/60	Hz
Rated Output Power	1,600	Watts

Note: All measurements were taken with input voltage at 230 V nominal and 60 Hz.



Input AC Current Waveform (ITHD = 5.052%, 50% Load)

I_{RMS}	PF	I_{THD}	Load	Fraction of Load	Input Watts	External Fan (W)*	DC Terminal Voltage (V)/ DC Load Current (A)		Output Watts	Efficiency
							12.3V	12.3Vsb		
0.822	0.9224	21.08%	10%	Low	174.44	1.92	12.27/12.48	12.25/0.57	160.15	91.80%
1.531	0.9597	9.13%	20%	Light	338.06	1.80	12.26/24.95	12.21/1.15	319.96	94.65%
3.643	0.9900	5.05%	50%	Typical	829.42	1.92	12.22/62.39	12.15/2.86	797.46	96.15%
7.277	0.9969	4.13%	100%	Full	1668.89	8.52	12.16/124.77	12.05/5.73	1586.12	95.04%

* Fan power is not included in the efficiency calculations

Maximum power (watts)
2219 watts

Idle State power (watts)
1139 watts

Sleep mode power (watts)
Not applicable for computer servers

Off mode power (watts)
42 watts

Test parameters	Properties
Test voltage and frequency	230 V ac at 50 Hz or 60 Hz
Total harmonic distortion of the electricity supply system	The maximum harmonic content of the input voltage waveform is equal to or less than 2%. The qualification is compliant with EN 61000-3-2.
Information and documentation on the instrumentation setup and circuits that are used for electrical testing	SPEC SERT suite version 2.x. ECOVA Generalized Test Protocol for Calculating the Energy Efficiency of Internal Ac-Dc and Dc-Dc Power Supplies
Measurement methodology that is used to determine information in this document	SPEC SERT suite version 2.x. ECOVA Generalized Test Protocol for Calculating the Energy Efficiency of Internal Ac-Dc and Dc-Dc Power Supplies

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