



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

07/25/2025

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Product Information			
Machine Type(s)	Model(s)	Part Number	Product Type
9824, 9856	22A, 22H	-	Computer server

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

**IBM**  
Marca Registrada  
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International Business Machines Corporation  
New Orchard Road Armonk, New York 10504

Year of manufacture  
2025

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

Table 6. Noise emissions for the 9824-22B, and 9856-22H

**Declared noise emission values in accordance with ISO 9296<sup>(1-8)</sup>**

Model 9824-22B and 9856-22H	Mean A-weighted sound power level, $L_{WA,m}$ (B)	
	Operating	Idle
– Typical configuration: 2x16 core processors, 1 TB memory, low power PCIe cards – Typical workload – 23°C (73.4°F), 500 m (1640 ft) environment	7.5	6.9

<ul style="list-style-type: none"> <li>– Typical configuration: 2x16 core processors, 1 TB memory, low power PCIe cards</li> <li>– Typical workload</li> <li>– 23°C (73.4°F), 500 m (1640 ft) environment</li> <li>– Front acoustic door<sup>9</sup></li> </ul>	7.4	6.7
<ul style="list-style-type: none"> <li>– Typical configuration: 2x16 core processors, 1 TB memory, low power PCIe cards</li> <li>– Typical workload</li> <li>– 25°C (77°F), 500 m (1640 ft) environment</li> </ul>	7.6	7.4
<ul style="list-style-type: none"> <li>– Typical configuration: 2x16 core processors, 1 TB memory, low power PCIe cards</li> <li>– Typical workload</li> <li>– 25°C (77°F), 500 m (1640 ft) environment</li> <li>– Front acoustic door<sup>9</sup></li> </ul>	7.4	7.3
<ul style="list-style-type: none"> <li>– Typical configuration: 2x16 core processors, 1 TB memory, low power PCIe cards</li> <li>– Typical workload</li> <li>– 40°C (104°F), 500 m (1640 ft) environment</li> </ul>	8.3	8.3
<ul style="list-style-type: none"> <li>– Typical configuration: 2x16 core processors, 1 TB memory, low power PCIe cards</li> <li>– Typical workload</li> <li>– 40°C (104°F), 500 m (1640 ft) environment</li> <li>– Front acoustic door<sup>9</sup></li> </ul>	8.1	8.1
<ul style="list-style-type: none"> <li>– Typical configuration: 2x16 core processors, 1 TB memory, low power PCIe cards</li> <li>– Heavy workload</li> <li>– 40°C (104°F), 500 m (1640 ft) environment</li> </ul>	8.5	8.5



#### Notes:

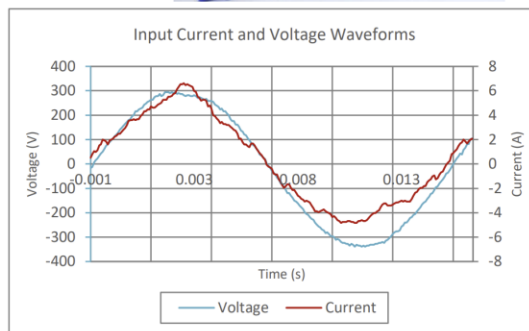
1. Declared level  $L_{WA,m}$  is the mean A-weighted sound power level.
2. Declared level  $L_{pA,m}$  is the mean A-weighted sound pressure level computed as the arithmetic average of the measurements made at the 1-meter bystander positions, or it is measured as the maximum 0.5-meter operator position at the front or rear face with the doors opened.
3. The statistical adder for verification,  $K_v$ , is a quantity to be added to the declared mean A-weighted sound power level,  $L_{WA,m}$ , such that there is a 95% probability of acceptance, when using the verification procedures of ISO 9296, if no more than 6.5% of the batch of new equipment has A-weighted sound power levels greater than  $(L_{WA,m} + K_v)$ .
4. The quantity  $L_{WA,c}$  (formerly called  $L_{WA,d}$ ), can be computed from the sum of  $L_{WA,m}$  and  $K_v$ .
5. Measurements are made in conformance with ISO 7779 and declared in conformance with ISO 9296 except for the inclusion of some modeled results that are derived from ISO 7779 measurements and system performance assessments.
6. B and dB stand for bels and decibels. 1 B equals 10 dB.
7. Under certain environments, configurations, system settings, or workloads, there is an increase in fan speeds that results in higher noise levels.
8. Notice: Government regulations (such as those prescribed by OSHA or European Community Directives) might govern noise level exposure in the workplace and might apply to you and your server installation. The actual sound pressure levels in your installation depend upon various factors, including the number of racks in the installation; the size, materials, and configuration of the room where you designate the racks to be installed; the noise levels from other equipment; the room ambient temperature, and employees' location in relation to the equipment. Further, compliance with such government regulations also depends upon various extra factors, including the duration of employees' exposure and whether employees wear hearing protection. IBM recommends that you consult with qualified experts in this field to determine whether you are in compliance with the applicable regulations.
9. Acoustical doors for IBM Enterprise Slim Rack (Model 7965-S42).

#### Internal/external power supply efficiency

ID Number	SO-1799
Manufacturer	IBM CORPORATION
Model Number	AWF2DC1500W
Serial Number	02YJ111YS30NH09G076
Year	2020
Type	1U
Test Date	11/19/20

Rated Specifications	Value	Units
Input Voltage	200-240	Volts
Input Current	9	Amps
Input Frequency	50/60	Hz
Rated Output Power	1,500	Watts

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



Input AC Current Waveform (ITHD = 4.91%, 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
							12.1V	3.3Vsb		
0.77	0.93	7.09%	10%	Low	165	19.08	12.28/12.37	3.33/0.2	153	92.28%
1.43	0.98	6.78%	20%	Light	321	19.08	12.26/24.75	3.31/0.4	305	94.96%
3.48	0.99	4.91%	50%	Typical	789	19.08	12.2/61.86	3.27/1	758	96.08%
7.23	0.95	4.48%	100%	Full	1582	18.60	12.1/123.71	3.19/2	1503	94.99%

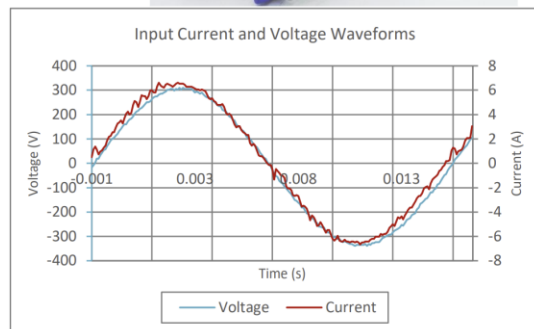
\* Fan power is not included in the efficiency calculations



<b>ID Number</b>	SO-1948
<b>Manufacturer</b>	IBM
<b>Model Number</b>	700-015217
<b>Serial Number</b>	11S03FP379YL30KY1860Z8
<b>Year</b>	2021
<b>Type</b>	1U
<b>Test Date</b>	11/23/21

Rated Specifications	Value	Units
Input Voltage	100-127/200-240	Volts
Input Current	12/10	Amps
Input Frequency	50/60	Hz
Rated Output Power	2,000	Watts

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



Input AC Current Waveform (ITHD = 3.03%, 50% Load)

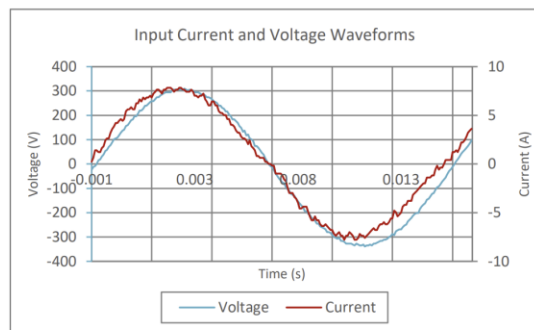
I <sub>RMS</sub>	PF	I <sub>THD</sub>	Load	Fraction of Load	Input Watts	External Fan (W)*	DC Terminal Voltage (V)/ DC Load Current (A)		Output Watts	Efficiency
							12.3V	12Vsb		
0.98	0.96	9.62%	10%	Low	216	1.17	12.32/15.72	12.3/0.58	201	93.02%
1.86	0.99	3.84%	20%	Light	422	1.17	12.31/31.38	12.29/1.17	401	95.05%
4.55	1.00	3.03%	50%	Typical	1045	1.56	12.3/78.66	12.24/2.92	1003	96.02%
9.21	1.00	4.19%	100%	Full	2108	20.99	12.27/157.32	12.17/5.84	2001	94.94%

\* Fan power is not included in the efficiency calculations

<b>ID Number</b>	SO-1946
<b>Manufacturer</b>	IBM
<b>Model Number</b>	700-015218
<b>Serial Number</b>	11S00E5464YL30KY1750UM
<b>Year</b>	2021
<b>Type</b>	1U
<b>Test Date</b>	11/23/21

Rated Specifications	Value	Units
Input Voltage	200-240	Volts
Input Current	10	Amps
Input Frequency	50/60	Hz
Rated Output Power	2,300	Watts

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



Input AC Current Waveform (ITHD = 4.69%, 50% Load)

I <sub>RMS</sub>	PF	I <sub>THD</sub>	Load	Fraction of Load	Input Watts	External Fan (W)*	DC Terminal Voltage (V)/ DC Load Current (A)		Output Watts	Efficiency
							12.3V	12Vsb		
1.11	0.96	7.33%	10%	Low	247	1.17	12.32/18.2	12.3/0.59	231	93.71%
2.13	0.99	2.93%	20%	Light	484	1.17	12.31/36.34	12.29/1.18	462	95.42%
5.28	0.99	4.69%	50%	Typical	1204	4.17	12.32/90.86	12.27/2.95	1156	96.01%
10.72	1.00	2.51%	100%	Full	2462	11.34	12.36/181.67	12.25/5.91	2317	94.14%

\* Fan power is not included in the efficiency calculations

Maximum power (watts)

**1772.5 watts**

Idle State power (watts)

**860.1 watts**

Sleep mode power (watts)

**Not applicable for computer servers**

Off mode power (watts)

**27.9 watts**

Test parameters	Properties
Test voltage and frequency	230 V ac at 50 Hz or 60 Hz



Test parameters	Properties
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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