



Technical Documentation for EU Regulation 2019/424 laying down ecodesign requirements for servers and data storage product pursuant to Directive 2009/125/EC

2020-02-08

The following information is based on IBM's knowledge as of the date of this document, which may be based on its records and information from third parties. This documentation applies to finished products that IBM newly puts on the market in the European Union and other jurisdictions which require this Technical Documentation as of the above date.

Product Information			
Machine Type(s)	Model(s)	Part Number	Product Type
9040	MR9	-	4-socket, rack mount, resilient server

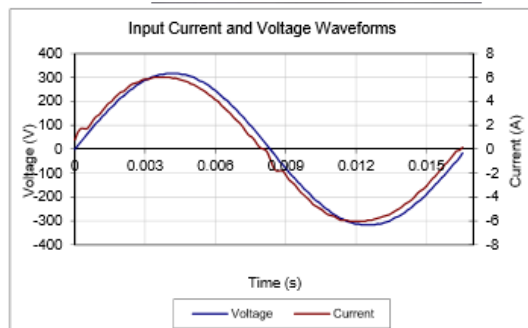
Manufacturer's name, registered trade name and registered trade address:



Year of manufacture
2020

Power Supply Unit (PSU) efficiency, power factor and rated power output:

Ecos ID #	SO-1097
Manufacturer	IBM
Model Number	700-014245-0000
Serial Number	11S00LP861YL10KY64B03L
Year	2016
Type	1U
Test Date	05/05/16



Input AC Current Waveform (ITHD = 2.87%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	100-127, 200-240	Volts
Input Current	11.1, 11.5	Amps
Input Frequency	50/60	Hz
Rated Output Power	2,000	Watts

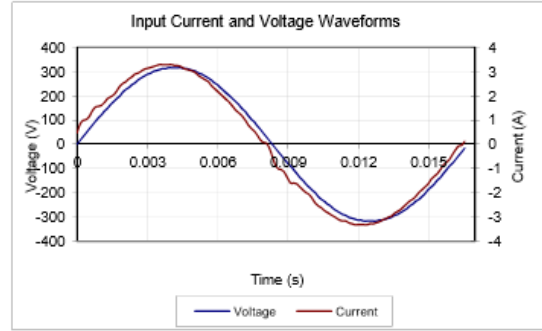
Note: All measurements were taken with input voltage at 230 V nominal and 60 Hz.

I_{RMS} A	PF	I_{THD} (%)	Load (%)	Fraction of Load	Input Watts	External Fan (W)*	DC Terminal Voltage (V)/ DC Load Current (A)		Output Watts	Efficiency %
							12.2V	12.2Vsb		
1.01	0.94	11.13	10%	Low	217	8.52	12.2/16.21	12.19/0.25	201	92.31%
1.90	0.97	7.30	20%	Light	425	8.52	12.2/32.44	12.19/0.49	402	94.60%
4.62	0.99	2.67	50%	Typical	1057	8.52	12.19/81.05	12.17/1.23	1003	94.89%
9.45	1.00	2.11	100%	Full	2171	8.59	12.17/162.03	12.14/2.46	2002	92.24%

* Fan power is not included in the efficiency calculations



Ecos ID #	SO-732
Manufacturer	IBM Corporation
Model Number	MPS1025
Serial Number	YL10KFF23034
Year	2014
Type	CUSTOM
Test Date	04/17/14



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

Rated Specifications	Value	Units
Input Voltage	100-127 / 200-240	Volts
Input Current	12.7	Amps
Input Frequency	50/60	Hz
Rated Output Power	1,025	Watts

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

I _{RMS} A	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		
0.60	0.84	39.26	10%	Low	117	16.92	12.32/6.67	12.3/1.66	103	87.66%
1.02	0.96	27.40	20%	Light	226	16.92	12.32/13.4	12.3/3.32	206	91.22%
2.40	0.99	3.03	50%	Typical	548	16.92	12.33/33.47	12.29/8.29	515	94.00%
4.83	1.00	2.04	100%	Full	1110	16.92	12.34/66.97	12.27/16.58	1030	92.78%

* Fan power is not included in the efficiency calculations

1 socket configuration

Idle State Power High End Configuration

N/A

Idle State Power Low End Configuration

N/A

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : **N/A**
 - > 1 Gb/s and < 10 Gb/s : **N/A**
 - ≥ 10 Gb/s and < 25Gb/s : **N/A**
 - ≥ 25 Gb/s and < 50Gb/s : **N/A**
 - ≥ 50 Gb/s : **N/A**
- Other: **N/A**

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : **N/A**
 - > 1 Gb/s and < 10 Gb/s : **N/A**



- ≥ 10 Gb/s and < 25 Gb/s : **N/A**
- ≥ 25 Gb/s and < 50 Gb/s : **N/A**
- ≥ 50 Gb/s : **N/A**
- Other **N/A**

Maximum power for high end configuration
N/A

Maximum power for low end configuration
N/A

Active state efficiency and performance in active state for high end configuration
N/A

Active state efficiency and performance in active state for low end configuration
N/A

Declared operating condition class for high end configuration
N/A

Declared operating condition class for low end configuration
N/A

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):
N/A

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):
N/A

2 socket configuration

Idle State Power High End Configuration
820.8 Watts

Idle State Power Low End Configuration
513.9 Watts

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : 2
- Additional PSU installed explicitly for power redundancy : 2
- HDD installed : 0
- SSD installed : 2
- Installed memory greater than 4 GB : 4092 GB
- Installed buffered DDR channels greater than 8 channels : 24
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : 1
 - > 1 Gb/s and < 10 Gb/s : 0
 - ≥ 10 Gb/s and < 25 Gb/s : 0



- ≥ 25 Gb/s and < 50 Gb/s : 0
- ≥ 50 Gb/s : 0
- Other: 0

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : 2
- Additional PSU installed explicitly for power redundancy : 2
- HDD installed : 2
- SSD installed : 0
- Installed memory greater than 4 GB : 252 GB
- Installed buffered DDR channels greater than 8 channels : 24
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : 1
 - > 1 Gb/s and < 10 Gb/s : 0
 - ≥ 10 Gb/s and < 25 Gb/s : 0
 - ≥ 25 Gb/s and < 50 Gb/s : 0
 - ≥ 50 Gb/s : 0
- Other :0

Maximum power for high end configuration

1271.9 Watts

Maximum power for low end configuration

1059.5 Watts

Active state efficiency and performance in active state for high end configuration

14.0

Active state efficiency and performance in active state for low end configuration

8.6

Declared operating condition class for high end configuration

A2

Declared operating condition class for low end configuration

A2

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):

843.8 Watts

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):

536.9 Watts

3 socket configuration

Idle State Power High End Configuration

1126.5 Watts



Idle State Power Low End Configuration

666.1 Watts

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : N/A
- Additional PSU installed explicitly for power redundancy : 2
- HDD installed : 0
- SSD installed : 2
- Installed memory greater than 4 GB : 6140 GB
- Installed buffered DDR channels greater than 8 channels : 40
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : 1
 - > 1 Gb/s and < 10 Gb/s : 0
 - ≥ 10 Gb/s and < 25 Gb/s : 0
 - ≥ 25 Gb/s and < 50 Gb/s : 0
 - ≥ 50 Gb/s : 0
- Other: 0

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : N/A
- Additional PSU installed explicitly for power redundancy : 2
- HDD installed : 2
- SSD installed : 0
- Installed memory greater than 4 GB : 380 GB
- Installed buffered DDR channels greater than 8 channels : 40
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : 1
 - > 1 Gb/s and < 10 Gb/s : 0
 - ≥ 10 Gb/s and < 25 Gb/s : 0
 - ≥ 25 Gb/s and < 50 Gb/s : 0
 - ≥ 50 Gb/s : 0
- Other: 0

Maximum power for high end configuration

1788.9 Watts

Maximum power for low end configuration

1528.1 Watts

Active state efficiency and performance in active state for high end configuration

15.0

Active state efficiency and performance in active state for low end configuration

9.2

Declared operating condition class for high end configuration

A2

Declared operating condition class for low end configuration

A2



This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):

1149.5 Watts

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):

689.1 Watts

4 socket configuration

Idle State Power High End Configuration

1,445.8 Watts

Idle State Power Low End Configuration

855.6 Watts

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : N/A
- Additional PSU installed explicitly for power redundancy : 2
- HDD installed : 0
- SSD installed : 2
- Installed memory greater than 4 GB : 8,099.2 GB
- Installed buffered DDR channels greater than 8 channels : 56
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : 1
 - > 1 Gb/s and < 10 Gb/s : 0
 - ≥ 10 Gb/s and < 25Gb/s : 0
 - ≥ 25 Gb/s and < 50Gb/s : 0
 - ≥ 50 Gb/s : 0
- Other: 0

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : N/A
- Additional PSU installed explicitly for power redundancy : 2
- HDD installed : 2
- SSD installed : 0
- Installed memory greater than 4 GB : 508 GB
- Installed buffered DDR channels greater than 8 channels : 56
- Installed I/O devices greater than two ports of ≥ 1 Gbit, onboard Ethernet
 - = 1 Gb/s : 1
 - > 1 Gb/s and < 10 Gb/s : 0
 - ≥ 10 Gb/s and < 25Gb/s : 0
 - ≥ 25 Gb/s and < 50Gb/s : 0
 - ≥ 50 Gb/s : 0
- Other: 0

Maximum power for high end configuration

2,339.5 Watts



Maximum power for low end configuration
2025.2 Watts

Active state efficiency and performance in active state for high end configuration
15.9

Active state efficiency and performance in active state for low end configuration
9.4

Declared operating condition class for high end configuration
A2

Declared operating condition class for low end configuration
A2

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):
1,468.8 Watts

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):
878.6 Watts

Secure data functionality:

http://www.ibm.com/support/knowledgecenter/POWER9/p9eah/p9eah_secure_data_deletion.htm

http://www.ibm.com/support/knowledgecenter/en/linuxonibm/liaau/Linux_secure_delete.html



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