



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

2020-02-24

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Product Information			
Machine Type(s)	Model(s)	Part Number	Product Type
2077, 2078	12F, 212, 24F, AFF, 92F, A9F	-	Server or Online Data Storage
			Online Data Storage

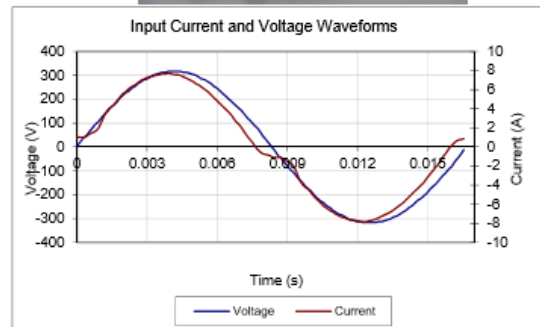
Manufacturer's name, registered trade name and registered trade address:



Year of manufacture: – 2020

Power Supply Unit (PSU) efficiency and power factor:

Ecos ID #	SO-1054
Manufacturer	Delta Electronics (Thailand) PCL
Model Number	TDPS-2400AB A
Serial Number	CCTT15520121
Year	2016
Type	1U
Test Date	01/26/16



Input AC Current Waveform (ITHD = 10.62%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	200-240	Volts
Input Current	14.4	Amps
Input Frequency	50/60	Hz
Rated Output Power	2,400	Watts

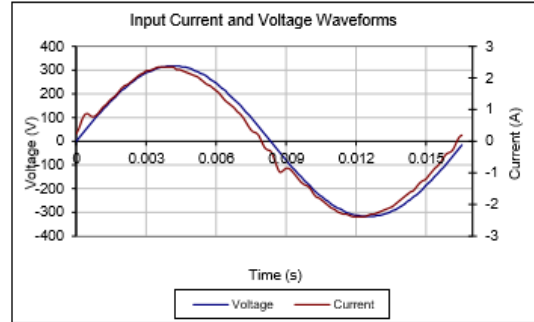
Note: All measurements were taken with input voltage at 230 V nominal and 60 Hz.

I _{RM1} A	PF	I _{THD} (%)	Load (%)	Fraction of Load	Input Watts	External Fan (W)*	DC Terminal Voltage (V)/ DC Load Current (A)				Output Watts	Efficiency %
							12V	5Vsb	5Vsb	5Vsb		
1.36	0.89	22.00	10%	Low	278	17.67	12.08/16.5	5.02/4.13	5.03/0.23	5.02/4.14	242	87.10%
2.40	0.95	17.42	20%	Light	526	17.67	11.86/33.04	5.01/8.28	5.03/0.46	5.01/8.27	477	90.74%
5.67	0.99	10.62	50%	Typical	1289	17.67	12.01/82.64	5.01/20.7	5.01/1.15	5.01/20.68	1206	93.51%
11.53	1.00	4.07	100%	Full	2647	17.67	11.95/165.85	5.01/41.42	4.97/2.29	5.01/41.3	2405	90.87%

* Fan power is not included in the efficiency calculations



Ecos ID #	SO-1161
Manufacturer	IBM
Model Number	SGE006-030G, 01AC454, R0850-F0080-01
Serial Number	N/A
Year	2016
Type	1U
Test Date	09/12/16



Input AC Current Waveform (ITHD = 4.68%, 50% Load)

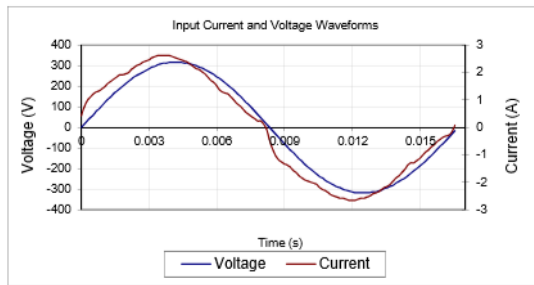
Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	9.4	Amps
Input Frequency	50/60	Hz
Rated Output Power	800	Watts

Note: All measurements were taken with input voltage at 230 V nominal and 80 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 %
							12V	5V	5Vsb		
0.42	0.94	11.91	10%	Low	90	18.96	12/5.19	4.95/3.36	4.98/0.21	80	88.51%
0.76	0.99	11.09	20%	Light	174	18.84	12/10.4	4.95/6.72	4.97/0.42	160	92.15%
1.86	1.00	4.68	50%	Typical	425	18.84	11.99/26	4.94/16.81	4.96/1.05	400	94.16%
3.76	1.00	3.54	100%	Full	864	18.72	11.97/51.99	4.93/33.59	4.94/2.09	798	92.42%

* Fan power is not included in the efficiency calculations

Ecos ID #	SO-1003
Manufacturer	IBM
Model Number	TDPS-800FB A
Serial Number	CCQT1538000260
Year	2015
Type	1U
Test Date	9/28/15



Input AC Current Waveform (ITHD = 6.86%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	9.4	Amps
Input Frequency	47-63	Hz
Rated Output Power	800	Watts

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

I _{RMS} A	PF	I _{THD} (%)	Load (%)	Input Watts	External Fan (W)*	DC Terminal Voltage (V)/ DC Load Current (A)			Output Watts	Efficiency %
						12V	5V	5Vsb		
0.62	0.65	11.85%	10%	92.45	40.43	12.01/5.21	5.01/3.34	5.01/0.21	80.34	86.91%
0.89	0.86	11.32%	20%	174.24	40.43	12/10.39	5/6.67	5/0.42	160.16	91.92%
1.91	0.97	6.86%	50%	424.30	40.43	11.99/26	4.99/16.84	4.99/1.05	399.93	94.26%
3.78	0.99	6.36%	100%	858.90	40.43	11.96/51.92	4.97/33.18	4.96/2.09	796.36	92.72%

* Fan power is not included in the efficiency calculations

Declared operating condition class:

A3

B for model 92F

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

Secure data functionality:

Encryption

https://www.ibm.com/support/knowledgecenter/STHGUJ_8.3.1/com.ibm.flashsystem.5100.831.doc/svc_secure_data_deletion.html

IBM Security Key Lifecycle Manager

https://www.ibm.com/support/knowledgecenter/SSWPVP_3.0.1/com.ibm.skim.doc/overview/top/landing-overview.html

Standards used:



IBM Security Key Lifecycle Manager key servers support Key Management Interoperability Protocol (KMIP), which is a standard for encryption of stored data and management of cryptographic keys.

IBM maintains a product environmental specification, IBM Engineering Specification 46G3772 - Baseline Environmental Requirements for Supplier Deliverables to IBM which mandates part and product compliance to relevant worldwide regulations. The specifications are located for supplier access at: <http://www.ibm.com/ibm/environment/products/> and <http://www-03.ibm.com/procurement/proweb.nsf/ContentDocsByTitle/United+States~Information+for+suppliers>.

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