

COMMISSION REGULATION (EU) 2019/1782 of 1 October 2019 laying down ecodesign requirements for external power supplies pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulation (EC) No 278/2009

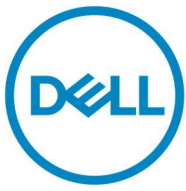
Subject matter and scope

1. This Regulation establishes ecodesign requirements for the placing on the market or putting into service of external power supplies.

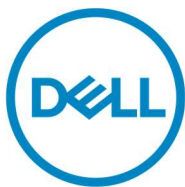
Definitions

For the purpose of this Regulation the following definitions shall apply:

- (1) 'external power supply' means a device which meets all of the following criteria:
 - (a) it is designed to convert alternating current (AC) power input from the mains power source input into one or more lower voltage direct current (DC) or AC outputs;
 - (b) it is used with one or more separate devices that constitute the primary load;
 - (c) it is contained in a physical enclosure separate from the device or devices that constitute the primary load;
 - (d) it is connected to the device or devices that constitute the primary load with removable or hard-wired male/ female electrical connections, cables, cords or other wirings;
 - (e) it has nameplate output power not exceeding 250 watts; and
 - (f) it is used with electrical and electronic household and office equipment;
- (2) 'low voltage external power supply' means an external power supply with a nameplate output voltage of less than 6 volts and a nameplate output current greater than or equal to 550 milliamperes;
- (3) 'multiple voltage output external power supply' means an external power supply able to convert AC power input from the mains power source into more than one simultaneous output at lower DC or AC voltage;
- (4) 'voltage converter' means a device converting the 230 volts mains power source input to 110 volts power output with characteristics similar to mains power source input characteristics;
- (5) 'uninterruptible power supply' means a device that automatically provides backup power when the electrical power from the mains power source drops to an unacceptable voltage level;



- (6) 'battery charger' means a device that connects directly to a removable battery at its output interface;
- (7) 'lighting converter' means an external power supply used with extra low voltage light sources;
- (8) 'active power over Ethernet injector' means a device that converts the mains power source input to a lower DC voltage output, has one or more Ethernet input and/or one or more Ethernet output ports, delivers power to one or several devices connected to the Ethernet output port(s), and provides the rated voltage at the output ports(s) only when compatible devices are detected following a standardised process;
- (9) 'docking station for autonomous appliances' means a device in which a battery-operated appliance that executes tasks requiring the appliance to move without any user intervention is placed for charging, and that can guide the independent movements of the appliance;
- (10) 'mains' means the electricity supply from the grid of 230 (± 10 %) volts of alternating current at 50 Hz;
- (11) 'information technology equipment' means any equipment which has a primary function of either entry, storage, display, retrieval, transmission, processing, switching, or control, of data or of telecommunication messages or a combination of these functions and may be equipped with one or more terminal ports typically operated for information transfer;
- (12) 'domestic environment' means an environment where the use of broadcast radio and television receivers may be expected within a distance of 10 m of the equipment concerned; (13) 'nameplate output power' (PO) means the maximum output power as specified by the manufacturer;
- (14) 'no-load condition' means the condition in which the input of an external power supply is connected to the mains power source, but the output is not connected to any primary load;
- (15) 'active mode' means a condition in which the input of an external power supply is connected to the mains power source and the output is connected to a primary load;
- (16) 'active mode efficiency' means the ratio of the power produced by an external power supply in active mode to the input power required to produce it;
- (17) 'average active efficiency' means the average of the active mode efficiencies at 25 %, 50 %, 75 % and 100 % of the nameplate output power;
- (18) 'equivalent model' means a model which has the same technical characteristics relevant for the technical information to be provided, but which is placed on the market or put into service by the same manufacturer, importer or authorised representative as another model with a different model identifier;



(19) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific product model from other models with the same trade mark or the same manufacturer's, importer's or authorised representative's name.

Ecodesign requirements for external power supplies

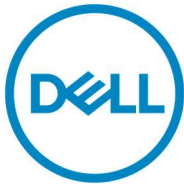
1. Energy efficiency requirements:

(a) from 1 April 2020, the no-load condition power consumption shall not exceed the following values:

	AC-AC external power supplies, except low voltage and multiple voltage output external power supplies	AC-DC external power supplies, except low voltage and multiple voltage output external power supplies	Low voltage external power supplies	Multiple voltage output external power supplies
$P_o \leq 49,0 \text{ W}$	0,21 W	0,10 W	0,10 W	0,30 W
$P_o > 49,0 \text{ W}$	0,21 W	0,21 W	0,21 W	0,30 W

(b) from 1 April 2020, the average active efficiency shall be not less than the following values:

	AC-AC external power supplies, except low voltage and multiple voltage output external power supplies	AC-DC external power supplies, except low voltage and multiple voltage output external power supplies	Low voltage external power supplies	Multiple voltage output external power supplies
$P_o \leq 1,0 \text{ W}$	$0,5 \times P_o/1\text{W} + 0,160$	$0,5 \times P_o/1\text{W} + 0,160$	$0,517 \times P_o/1\text{W} + 0,087$	$0,497 \times P_o/1\text{W} + 0,067$
$1 \text{ W} < P_o \leq 49,0 \text{ W}$	$0,071 \times \ln(P_o/1\text{W}) - 0,0014 \times P_o/1\text{W} + 0,67$	$0,071 \times \ln(P_o/1\text{W}) - 0,0014 \times P_o/1\text{W} + 0,67$	$0,0834 \times \ln(P_o/1\text{W}) - 0,0014 \times P_o/1\text{W} + 0,609$	$0,075 \times \ln(P_o/1\text{W}) + 0,561$
$P_o > 49,0 \text{ W}$	0,880	0,880	0,870	0,860



The relevant load conditions are as follows:

Percentage of nameplate output current	
Load condition 1	100 % \pm 2 %
Load condition 2	75 % \pm 2 %
Load condition 3	50 % \pm 2 %
Load condition 4	25 % \pm 2 %
Load condition 5	10 % \pm 1 %
Load condition 6	0 % (no-load condition)

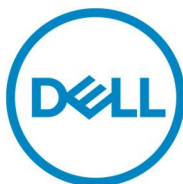
Verification tolerances

Parameters	Verification tolerances
No-load condition	The determined value (*) shall not exceed the declared value by more than 0,01 W.
Active mode efficiency at each of the applicable load conditions	The determined value (*) shall not be lower than the declared value by more than 5 %.
Average active efficiency	The determined value (*) shall not be lower than the declared value by more than 5 %.

(*) In the case of three additional units tested as prescribed in point 4, the determined value means the arithmetical mean of the values determined for these three additional units.

Manufacturer's name or trade mark	DELL
Model identifier	DA180PM111
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	9.23A
Output power	180.0W
Average active efficiency	90.2%
Efficiency at low load (10 %)	86.0%
No-load power consumption	0.16W

Manufacturer's name or trade mark	DELL
Model identifier	ATA45NM180
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 9.0V / 15.0V / 20.0V (DC)
Output current	3.0A / 3.0A / 3.0A / 2.25A
Output power	15.0W / 27.0W / 45.0W / 45.0W
Average active efficiency	88.0%
Efficiency at low load (10 %)	72.8%
No-load power consumption	0.13W



Manufacturer's name or trade mark	DELL
Model identifier	DA45NM140
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	2.31A
Output power	45.0W
Average active efficiency	88.2%
Efficiency at low load (10 %)	86.8%
No-load power consumption	0.68W

Manufacturer's name or trade mark	DELL
Model identifier	DA130PE1-00
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	6.7A
Output power	130.0W
Average active efficiency	90.0%
Efficiency at low load (10 %)	84.8%
No-load power consumption	0.13W

Manufacturer's name or trade mark	DELL
Model identifier	DA90PM111
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	4.62A
Output power	90.0W
Average active efficiency	88.3%
Efficiency at low load (10 %)	73.5%
No-load power consumption	0.06W

Manufacturer's name or trade mark	DELL
Model identifier	DA65NM190
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 9.0V / 15.0V / 20.0V (DC)
Output current	3.0A / 3.0A / 3.0A / 3.25A
Output power	15.0W / 27.0W / 45.0W / 65.0W
Average active efficiency	89.7%
Efficiency at low load (10 %)	87.2%
No-load power consumption	0.05W

Manufacturer's name or trade mark	DELL
Model identifier	DA65NM170
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 9.0V / 15.0V / 20.0V (DC)
Output current	3.0A / 3.0A / 3.0A / 3.25A
Output power	15.0W / 27.0W / 45.0W / 65.0W
Average active efficiency	89.7%
Efficiency at low load (10 %)	84.2%
No-load power consumption	0.05W

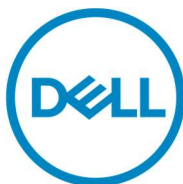
Manufacturer's name or trade mark	DELL
Model identifier	HA45NM140
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	2.31A
Output power	45.0W
Average active efficiency	88.7%
Efficiency at low load (10 %)	86.5%
No-load power consumption	0.06W

Manufacturer's name or trade mark	DELL
Model identifier	HA45NM170
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 9.0V / 15.0V / 20.0V (DC)
Output current	3.0A / 3.0A / 3.0A / 2.25A
Output power	15.0W / 27.0W / 45.0W / 45.0W
Average active efficiency	90.1%
Efficiency at low load (10 %)	86.5%
No-load power consumption	0.04W

Manufacturer's name or trade mark	DELL
Model identifier	HA45NM180
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 9.0V / 15.0V / 20.0V (DC)
Output current	3.0A / 3.0A / 3.0A / 2.25A
Output power	15.0W / 27.0W / 45.0W / 45.0W
Average active efficiency	90.2%
Efficiency at low load (10 %)	83.9%
No-load power consumption	0.02W

Manufacturer's name or trade mark	DELL
Model identifier	HA65NS5-00
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	3.34A
Output power	65.0W
Average active efficiency	88.9%
Efficiency at low load (10 %)	86.1%
No-load power consumption	0.06W

Manufacturer's name or trade mark	DELL
Model identifier	HA65NM130
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	3.34A
Output power	65.0W
Average active efficiency	89.1%
Efficiency at low load (10 %)	86.2%
No-load power consumption	0.04W



Manufacturer's name or trade mark	DELL
Model identifier	DA180PM180
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	9.23A
Output power	180.0W
Average active efficiency	90.7%
Efficiency at low load (10 %)	85.4%
No-load power consumption	0.11W

Manufacturer's name or trade mark	DELL
Model identifier	GA240PE1-00
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	12.3A
Output power	240.0W
Average active efficiency	90.9%
Efficiency at low load (10 %)	85.6%
No-load power consumption	0.11W

Manufacturer's name or trade mark	DELL
Model identifier	DA45NM180
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 9.0V / 15.0V / 20.0V (DC)
Output current	3.0A / 3.0A / 3.0A / 2.25A
Output power	15.0W / 27.0W / 45.0W / 45.0W
Average active efficiency	89.2%
Efficiency at low load (10 %)	85.4%
No-load power consumption	0.06W

Manufacturer's name or trade mark	DELL
Model identifier	DA90PM170
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 9.0V / 15.0V / 20.0V (DC)
Output current	3.0A / 3.0A / 3.0A / 4.5A
Output power	15.0W / 27.0W / 45.0W / 90.0W
Average active efficiency	90.2%
Efficiency at low load (10 %)	87.1%
No-load power consumption	0.04W

Manufacturer's name or trade mark	DELL
Model identifier	DA130PM170
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 20.0V (DC)
Output current	1.0A / 6.5A
Output power	5.0W / 130.0W
Average active efficiency	90.9%
Efficiency at low load (10 %)	84.4%
No-load power consumption	0.14W

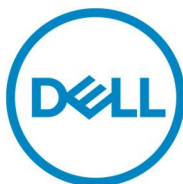
Manufacturer's name or trade mark	DELL
Model identifier	HA65NM170
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 9.0V / 15.0V / 20.0V (DC)
Output current	3.0A / 3.0A / 3.0A / 3.25A
Output power	15.0W / 27.0W / 45.0W / 65.0W
Average active efficiency	91.5%
Efficiency at low load (10 %)	89.7%
No-load power consumption	0.06W

Manufacturer's name or trade mark	DELL
Model identifier	HA90PM180
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	4.62A
Output power	90.0W
Average active efficiency	89.1%
Efficiency at low load (10 %)	84.0%
No-load power consumption	0.03W

Manufacturer's name or trade mark	DELL
Model identifier	HA130PM130
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	6.67A
Output power	130.0W
Average active efficiency	90.5%
Efficiency at low load (10 %)	86.9%
No-load power consumption	0.14W

Manufacturer's name or trade mark	DELL
Model identifier	HA130PM160
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	6.7A
Output power	130.0W
Average active efficiency	89.6%
Efficiency at low load (10 %)	82.7%
No-load power consumption	0.16W

Manufacturer's name or trade mark	DELL
Model identifier	HA130PM170
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 20.0V (DC)
Output current	1.0A / 6.5A
Output power	5.0W / 130.0W
Average active efficiency	91.3%
Efficiency at low load (10 %)	88.2%
No-load power consumption	0.08W



Manufacturer's name or trade mark	DELL
Model identifier	DA240PM180
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	12.31A
Output power	240.0W
Average active efficiency	90.5%
Efficiency at low load (10 %)	87.1%
No-load power consumption	0.13W

Manufacturer's name or trade mark	DELL
Model identifier	DA240PM190
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	12.31A
Output power	240.0W
Average active efficiency	90.2%
Efficiency at low load (10 %)	86.2%
No-load power consumption	0.15W

Manufacturer's name or trade mark	DELL
Model identifier	DA90PM190
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	4.62A
Output power	90.0W
Average active efficiency	89.6%
Efficiency at low load (10 %)	86.2%
No-load power consumption	0.05W

Manufacturer's name or trade mark	DELL
Model identifier	DA65NM192
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	3.34A
Output power	65.0W
Average active efficiency	90.6%
Efficiency at low load (10 %)	88.2%
No-load power consumption	0.05W

Manufacturer's name or trade mark	DELL
Model identifier	DA65NM191
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	3.34A
Output power	65.0W
Average active efficiency	89.8%
Efficiency at low load (10 %)	85.6%
No-load power consumption	0.06W

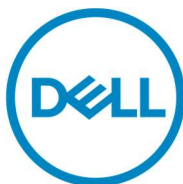
Manufacturer's name or trade mark	DELL
Model identifier	HA180PM180
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	9.23A
Output power	180.0W
Average active efficiency	90.8%
Efficiency at low load (10 %)	81.3%
No-load power consumption	0.18W

Manufacturer's name or trade mark	DELL
Model identifier	HA180PM181
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	9.23A
Output power	180.0W
Average active efficiency	91.5%
Efficiency at low load (10 %)	86.0%
No-load power consumption	0.08W

Manufacturer's name or trade mark	DELL
Model identifier	HA240PM190
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	12.31A
Output power	240.0W
Average active efficiency	91.8%
Efficiency at low load (10 %)	91.7%
No-load power consumption	0.11W

Manufacturer's name or trade mark	DELL
Model identifier	HA65NM190
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	5.0V / 9.0V / 15.0V / 20.0V (DC)
Output current	3.0A / 3.0A / 3.0A / 3.25A
Output power	15.0W / 27.0W / 45.0W / 65.0W
Average active efficiency	90.8%
Efficiency at low load (10 %)	88.5%
No-load power consumption	0.04W

Manufacturer's name or trade mark	DELL
Model identifier	HA130PM190
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	6.7A
Output power	130.0W
Average active efficiency	90.6%
Efficiency at low load (10 %)	88.7%
No-load power consumption	0.11W



Manufacturer's name or trade mark	DELL
Model identifier	DA130PM130
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	6.67A
Output power	130.0W
Average active efficiency	90.9%
Efficiency at low load (10 %)	84.3%
No-load power consumption	0.14W

Manufacturer's name or trade mark	DELL
Model identifier	LA45NM131
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	2.31A
Output power	45.0W
Average active efficiency	88.5%
Efficiency at low load (10 %)	86.7%
No-load power consumption	0.05W

Manufacturer's name or trade mark	DELL
Model identifier	LA45NM140
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	2.31A
Output power	45.0W
Average active efficiency	87.9%
Efficiency at low load (10 %)	85.3%
No-load power consumption	0.05W

Manufacturer's name or trade mark	DELL
Model identifier	LA45NM150
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	20.0V / 5.0V (DC)
Output current	2.25A / 2.0A
Output power	45.0W / 10.0W
Average active efficiency	88.4%
Efficiency at low load (10 %)	85.2%
No-load power consumption	0.04W

Manufacturer's name or trade mark	DELL
Model identifier	LA45NM171
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	20.0V / 15.0V / 9.0V / 5.0V (DC)
Output current	2.25A / 3.0A / 3.0A / 3.0A
Output power	45.0W / 45.0W / 27.0W / 15.0W
Average active efficiency	90.0%
Efficiency at low load (10 %)	86.0%
No-load power consumption	0.04W

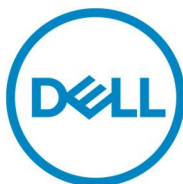
Manufacturer's name or trade mark	DELL
Model identifier	HA90PM190
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	4.62A
Output power	90.0W
Average active efficiency	88.6%
Efficiency at low load (10 %)	84.9%
No-load power consumption	0.04W

Manufacturer's name or trade mark	DELL
Model identifier	HA65NM191
Input voltage	100-240 V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	3.34A
Output power	65.0W
Average active efficiency	91.4%
Efficiency at low load (10 %)	89.6%
No-load power consumption	0.05W

Manufacturer's name or trade mark	DELL
Model identifier	HK45NM140
Input voltage	100V-240V
Input AC frequency	50- 60 Hz
Output voltage	19.5V (DC)
Output current	2.31A
Output power	45.0W
Average active efficiency	90.1%
Efficiency at low load (10 %)	89.6%
No-load power consumption	0.05W

Manufacturer's name or trade mark	DELL
Model identifier	HKA65NM190
Input voltage	100V-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	3.34A
Output power	65.0W
Average active efficiency	90.2%
Efficiency at low load (10 %)	87.7%
No-load power consumption	0.05W

Manufacturer's name or trade mark	DELL
Model identifier	LA90PM130
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	4.62A
Output power	90.0W
Average active efficiency	89.2%
Efficiency at low load (10 %)	89.9%
No-load power consumption	0.04W



Manufacturer's name or trade mark	DELL
Model identifier	LA65NS2-01
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	3.34A
Output power	65.0W
Average active efficiency	89.2%
Efficiency at low load (10 %)	86.9%
No-load power consumption	0.06W

Manufacturer's name or trade mark	DELL
Model identifier	LA65NM130
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	3.34A
Output power	65.0W
Average active efficiency	88.9%
Efficiency at low load (10 %)	87.3%
No-load power consumption	0.06W

Manufacturer's name or trade mark	DELL
Model identifier	LA65NM170
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	20.0V / 15.0V / 9.0V / 5.0V (DC)
Output current	3.25A / 3.0A / 3.0A / 3.0A
Output power	65.0W / 45.0W / 27.0W / 15.0W
Average active efficiency	90.3%
Efficiency at low load (10 %)	87.6%
No-load power consumption	0.04W

Manufacturer's name or trade mark	DELL
Model identifier	LA65NM190
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	20.0V / 15.0V / 9.0V / 5.0V (DC)
Output current	3.25A / 3.0A / 3.0A / 3.0A
Output power	65.0W / 45.0W / 27.0W / 15.0W
Average active efficiency	90.0%
Efficiency at low load (10 %)	84.7%
No-load power consumption	0.05W

Manufacturer's name or trade mark	DELL
Model identifier	LA65NM191
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	3.34A
Output power	65.0W
Average active efficiency	91.3%
Efficiency at low load (10 %)	88.1%
No-load power consumption	0.06W

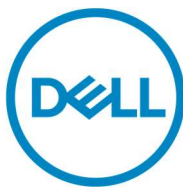
Manufacturer's name or trade mark	DELL
Model identifier	LA90PM170
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	20.0V / 15.0V / 9.0V / 5.0V (DC)
Output current	4.5A / 3.0A / 3.0A / 3.0A
Output power	90.0W / 45.0W / 27.0W / 15.0W
Average active efficiency	88.2%
Efficiency at low load (10 %)	87.4%
No-load power consumption	0.04W

Manufacturer's name or trade mark	DELL
Model identifier	LA130PM121
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	6.67A
Output power	130.0W
Average active efficiency	90.2%
Efficiency at low load (10 %)	88.4%
No-load power consumption	0.19W

Manufacturer's name or trade mark	DELL
Model identifier	LA130PM190
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	6.67A
Output power	130.0W
Average active efficiency	91.7%
Efficiency at low load (10 %)	81.7%
No-load power consumption	0.12W

Manufacturer's name or trade mark	DELL
Model identifier	LA180PM180
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	9.23A
Output power	180.0W
Average active efficiency	91.2%
Efficiency at low load (10 %)	87.0%
No-load power consumption	0.10W

Manufacturer's name or trade mark	DELL
Model identifier	LA240PM160
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	12.31A
Output power	240.0W
Average active efficiency	91.4%
Efficiency at low load (10 %)	86.2%
No-load power consumption	0.16W



Manufacturer's name or trade mark	DELL
Model identifier	LA90PM111
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	4.62A
Output power	90.0W
Average active efficiency	88.2%
Efficiency at low load (10 %)	88.2%
No-load power consumption	0.05W

Manufacturer's name or trade mark	SIMSUKIAN
Model identifier	SK03T1-2000150Z
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	20.0V (DC)
Output current	1.5A
Output power	30.0W
Average active efficiency	87.5%
Efficiency at low load (10 %)	84.3%
No-load power consumption	0.09W

Manufacturer's name or trade mark	Delta Electronics, Inc.
Model identifier	ADP-40DD B
Input voltage	AC 100-240V
Input AC frequency	1.5A, 50-60Hz
Output voltage	12V (DC)
Output current	3.33A
Output power	40W
Average active efficiency	88.4%
Efficiency at low load (10 %)	88.5%
No-load power consumption	0.05W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WA-15I05R-GEAE
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	5.0V (DC)
Output current	3.0A
Output power	15.0W
Average active efficiency	81.922%
Efficiency at low load (10 %)	80.510%
No-load power consumption	0.07W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WA-15I05RG-GEAE
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	5.0V (DC)
Output current	3.0A
Output power	15.0W
Average active efficiency	81.922%
Efficiency at low load (10 %)	80.510%
No-load power consumption	0.07W

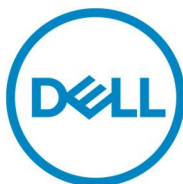
Manufacturer's name or trade mark	DELL
Model identifier	LA240PM180
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	12.31A
Output power	240.0W
Average active efficiency	91.3%
Efficiency at low load (10 %)	84.2%
No-load power consumption	0.11W

Manufacturer's name or trade mark	DELL
Model identifier	LA240PM190
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	12.31A
Output power	240.0W
Average active efficiency	91.7%
Efficiency at low load (10 %)	90.6%
No-load power consumption	0.11W

Manufacturer's name or trade mark	DELL
Model identifier	LA330PM160
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	16.9A
Output power	330.0W
Average active efficiency	92.9%
Efficiency at low load (10 %)	85.6%
No-load power consumption	0.18W

Manufacturer's name or trade mark	DELL
Model identifier	LA330PM190
Input voltage	100-240V
Input AC frequency	50-60 Hz
Output voltage	19.5V (DC)
Output current	16.92A
Output power	330.0W
Average active efficiency	93.3%
Efficiency at low load (10 %)	85.3%
No-load power consumption	0.10W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WB-24J12RK-CLAB
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	12.0V (DC)
Output current	2.0A
Output power	24.0W
Average active efficiency	88.006%
Efficiency at low load (10 %)	86.483%
No-load power consumption	0.054W



Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WA-15I05RG-GEAG
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	5.0V (DC)
Output current	3.0A
Output power	15.0W
Average active efficiency	81.922%
Efficiency at low load (10 %)	80.510%
No-load power consumption	0.07W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WA-15I05RK-GEAE
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	5.0V (DC)
Output current	3.0A
Output power	15.0W
Average active efficiency	81.922%
Efficiency at low load (10 %)	80.510%
No-load power consumption	0.07W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WB-24J12FG-CLAC
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	12.0V (DC)
Output current	2.0A
Output power	24.0W
Average active efficiency	88.006%
Efficiency at low load (10 %)	86.483%
No-load power consumption	0.054W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WB-24J12RK-CLAJ
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	12.0V (DC)
Output current	2.0A
Output power	24.0W
Average active efficiency	88.006%
Efficiency at low load (10 %)	86.483%
No-load power consumption	0.054W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WB-24J12R-CLAA
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	12.0V (DC)
Output current	2.0A
Output power	24.0W
Average active efficiency	88.006%
Efficiency at low load (10 %)	86.483%
No-load power consumption	0.054W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WB-24J12FG-CLAA
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	12.0V (DC)
Output current	2.0A
Output power	24.0W
Average active efficiency	88.006%
Efficiency at low load (10 %)	86.483%
No-load power consumption	0.054W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	WB-24J12FG-CLAA
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	12.0V (DC)
Output current	2.0A
Output power	24.0W
Average active efficiency	88.006%
Efficiency at low load (10 %)	86.483%
No-load power consumption	0.054W

Manufacturer's name or trade mark	Asian Power Devices Inc.
Model identifier	DA-30E12-BAAA
Input voltage	100-240V
Input AC frequency	50/60Hz
Output voltage	12.0V (DC)
Output current	2.5A
Output power	30.0W
Average active efficiency	88.297%
Efficiency at low load (10 %)	86.246%
No-load power consumption	0.081W

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