

# FSP240-A2AR3

## FEATURES

- Meet USB PD R3.1
- Certified IEC 62368-1
- Meet Energy Efficiency DOE Level VI
- Meet Code of Conduct Version 5 Tier 2
- High Reliability
- Over Current Protection
- Over Temperature Protection
- Over Voltage Protection
- With PFC Circuit

## SAFETY STANDARD APPROVAL



## DESCRIPTION

This product is an 180 watts AC to DC PD adapter intended for use in systems with Type-C input, such as laptop application. This adapter operates at 90 to 264 VAC input voltage with PD 3.1 standard outputs from 5V to 36V. The unit meets CIS-PR32 EN55032 CLASS B, and FCC PART 15B Class B emission limits, and is designed for ITE application.

## INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	100Vac, 240Vac / full load $\leq$ 2.4A
No load power consumption:	115Vac, 230Vac $\leq$ 0.1W
Touch current:	264Vac / 50Hz $\leq$ 0.25mA

## OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart
Max. output power:	240W
Protection:	
Over voltage:	The adapter will shut down caused by internal fault. That will be return to normal state by AC reset. See chart.
Over current:	The power will shutdown without damage.
Over Temperature:	The power supply will enter into shut down while the abnormal thermal rise occurs.

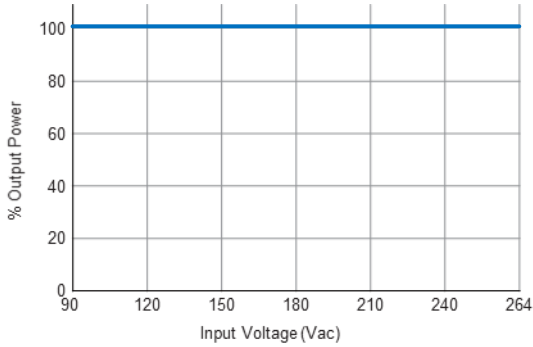
## ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0~70°C (> 40°C derating )
Storage temperature:	-20~+80°C
Operating humidity:	10~85% RH non-condensing
Storage humidity:	10~95% RH non-condensing

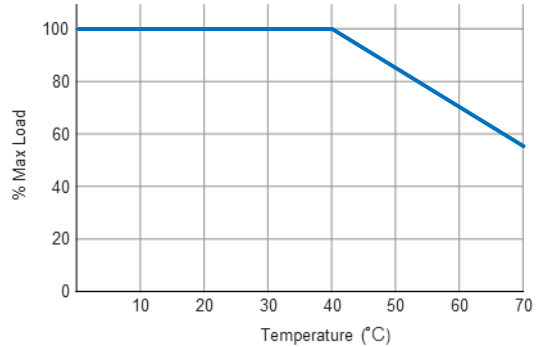
## GENERAL SPECIFICATIONS

Power factor:	PF $\geq$ 0.9 at 100Vac/240Vac input (48V/5.0A)
Efficiency:	See the chart at next page
Hold-up time	$\geq$ 5ms at 100 or 240Vac with max. load
Inrush current:	No damage, I <sup>2</sup> T Shall be less than 29% of the rating of adapter critical component
Operating altitude:	5,000 meters
MTBF:	$\geq$ 100,000Hrs with 115Vac / Max. load at 40°
EMC Performance	
EN55032:	Class B conducted, class B radiated
FCC:	Class B conducted, class B radiated
VCCI:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, Class A & D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, $\pm$ 15 KV air & $\pm$ 8 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient / burst, $\pm$ 1 KV
EN61000-4-5:	Surge, $\pm$ 1 KV diff., $\pm$ 2 KV com.
EN61000-4-6:	Conducted immunity, 3 Vrms
EN61000-4-8:	Magnetic field immunity, 1A/m
EN61000-4-11:	Voltage dip immunity, 30% reduction for 500 ms, >95% reduction for 10 ms, and 100% reduction for 5000 ms

**INPUT VOLTAGE DERATING CURVE**



**OUTPUT POWER DERATING CURVE**



**OUTPUT VOLTAGE / CURRENT RATING CHART**

Model	Output Voltage	Output Current	AC Inlet	Efficiency: DoE L6 & CoC V5 T2		Over Voltage Protection
				115V	230V	
FSP240-A2AR3	5/9/15/20/28/36/48V	3/3/3/5/5/5/5A	C14	SPR Mode	SPR Mode	5V: 7.5V Max. 9V: 12.6V Max. 15V: 21.0V Max. 20V: 26.0V Max. 28V: 33.6V Max. 36V: 43.2V Max. 48V: 55.0V Max.
				5V: 81.39% 9V: 86.62% 15V: 87.73% 20V: 88.00% EPR Mode: 28V: 88.00% 36V: 88.00% 48V: 88.00%	5V: 81.39% 9V: 86.62% 15V: 87.73% 20V: 88.00% EPR Mode: 28V: 88.00% 36V: 88.00% 48V: 88.00%	

**MECHANICAL & AC CONNECTOR SPECIFICATIONS**

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