

全漢企業股份有限公司  
FSP TECHNOLOGY INC.

台灣桃園市桃園區建國東路22號 統一編號：84239055  
No. 22, Jianguo E. Rd., Taoyuan Dist., Taoyuan City 330, Taiwan (R.O.C)  
TEL:+886-3-375-9888 Website:www.FSP-group.com  
FAX:+886-3-375-9965 Email:sales@fsp-group.com.tw

# SPECIFICATION

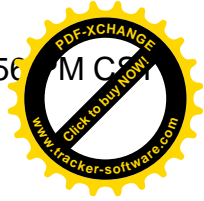
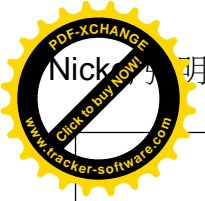


Released Date:2016/08/29-13:47:01



**CODICO GmbH**  
Zwingenstraße 6-8, 2380 Perchtoldsdorf, Austria  
Telefon: +43 1 86 305-0, Fax: +43 1 86 305-5000  
e-mail: office@codico.com, www.codico.com  
FN 436940i, Landesgericht Wr. Neustadt

Zertifiziert nach ISO 9001:2015

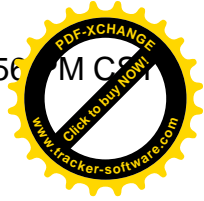
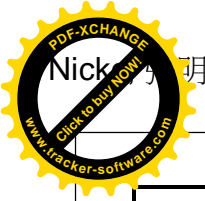


台灣桃園市桃園區建國東路22號 統一編號：84239055  
No. 22, Jianguo E. Rd., Taoyuan Dist., Taoyuan City 330, Taiwan (R.O.C)  
TEL:+886-3-375-9888 Website:www.FSP-group.com  
FAX:+886-3-375-6966 Email:sales@fsp-group.com.tw

# SPECIFICATION

AC Adapter  
FSP065-RAAT3

P.E	R/D	APPROVED	REV.
Zhangch	Zhangch	Tony	01



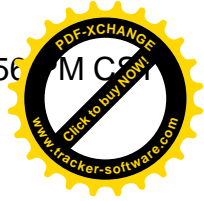
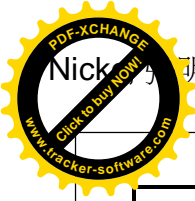
# Electrical Specification

## History

REV.	Description	Date	Drawn	Mechanical	Electrical	Approved
000	SPEC ISSUE	2016-8-16	Huyf	Huyf	Zhangch	Tony

MODEL NO. **FSP065-RAAT3**

SHEET 1 OF 7



# Electrical Specification

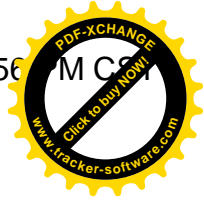
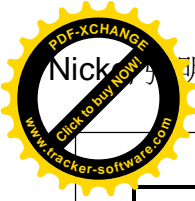
## Electrical Requirements

### 1. Input Characteristics:

ITEM	CONDITION	SPECIFICATION
1.1 Rated Input Voltage:		100Vac~240Vac
1.2 Input Voltage Range:		90Vac to 264Vac
1.3 Input Frequency Range:		47Hz to 63Hz ( ± 1Hz )
1.4 Input Current:	100Vac, 240Vac /2.6A load	≤ 2.0A
1.5 Input Current Harmonic:		IEC61000-3-2
1.6 Efficiency: (Warm up 30minutes later)	115Vac / 2.6A load	≥ 88%
	230Vac / 2.6A load	≥ 88%
1.7 Power Saving:	115Vac, 230Vac / 0 A load	≤ 0.15W
1.8 Inrush Current:	100Vac, 240Vac / 2.6A load	Shall be less than the rating of adapter critical component (including rectifiers, fuse surge and current limiting device)
1.9 Meet DOE(Level VI):	(1)115Vac / 0A load	≤ 0.21W
	(2)115Vac / 25%,50%,75%,100% load (Average Active Mode Efficiency , Warm up 30 minutes later)	≥ 88%
1.10 Meet CoC V5 (Tier 2)*:	(1)230Vac / 0A load	≤ 0.15W
	(2)230Vac / 25%,50%,75%,100% load (Average Active Mode Efficiency , Warm up 30 minutes later)	≥ 89%

MODEL NO. **FSP065-RAAT3**

SHEET 2 OF 7



# Electrical Specification

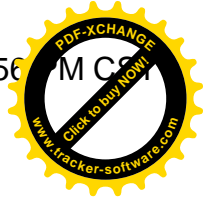
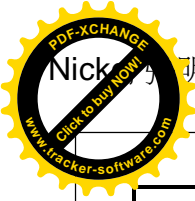
## 2. Output Characteristics:

※Measured at the end of DC cable.

ITEM	CONDITION	SPECIFICATION
2.1 Output Rated Voltage:		24.8V
2.2 Output Current:	at constant voltage mode	0A to 2.6A
2.3 Output Voltage Setting:	at the output end of DC cable	24.8V ± 5%
2.4 Output Voltage Ripple and Noise: (0.1uF Ceramic Cap. and 35V 47uF Aluminum Cap. Paralleled between the end of output cable)	100Vac, 240Vac / 0A~2.6A load	≤ 240mVp-p
2.5 Turn-On Delay Time:	At 100Vac / 2.6A load, output voltage shall remain regulation	≤ 3Sec
2.6 Hold Up Time:	At 100Vac or 240Vac /2.6A load, output voltage shall remain regulation	≥ 10ms
2.7 Rise Time:	At 100Vac / 2.6A load, DC output rise time from 5% to 95% of Vo	≤ 50ms
2.8 Dynamic Load Change:	(1) Output load step is : 【1】 0 % ~50 % 【2】 50 %~100 % (2) S/R=0.5A/us (3) Frequency is 100Hz and 1KHz	24.8V ± 10%
2.9 Overshoot:	100Vac, 240Vac / 0A and 2.6A load	24.8 ± 10%

MODEL NO. **FSP065-RAAT3**

SHEET 3 OF 7



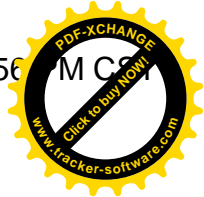
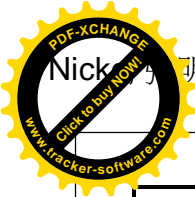
# Electrical Specification

### 3. Protection Characteristics:

ITEM	CONDITION	SPECIFICATION
3.1 Short Circuit Protection:	When an internal fault occurs, or an external fault is applied to the power supply, such that an overload or short circuit is applied to the output, the power supply shall shut down . That will be return to normal state by AC reset.	Shutdown and no damage
3.2 Over Voltage Protection:	The adapter will enter into shut down that means no output while over voltage happened at output terminal that caused by internal fault, the output trip voltage shall not exceed 31 volts. That will be return to normal state by AC reset.	Shutdown and no damage
3.3 Over Power Protection:	When an internal fault occurs, or an external fault is applied to the power supply, such that an overload or short circuit is applied to the output, the power supply shall shut down. That will be return to normal state by AC reset.	Shutdown and no damage
3.4 Over Temperature Protection:	The power supply will enter into shut down while the abnormal thermal rise occurs. That will be return to normal state by AC reset.	No fire, no smoke

MODEL NO. **FSP065-RAAT3**

SHEET 4 OF 7

全漢企業股份有限公司  
FSP TECHNOLOGY INC.

# Electrical Specification

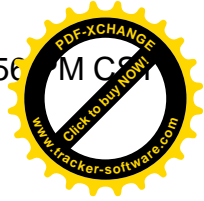
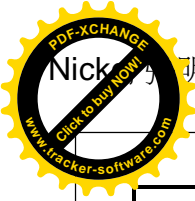
## 4. Environmental Characteristics:

ITEM	CONDITION	SPECIFICATION
4.1 Electric Fast Transients: Refer to IEC61000-4-4	Impulse: $\pm 1\text{kV}$ applied to L,N	Normal operation shall be continued
4.2 Lightning Surge: Refer to IEC61000-4-5	$\pm 2\text{kV}$ applied differential mode $\pm 4\text{kV}$ applied common mode	Normal operation shall be continued Normal operation shall be continued
4.3 Electron Static Discharge: (Refer to IEC61000-4-2 Energy Storage Capacitor 150pF; Discharge Resistor 330 $\Omega$ )	Air Discharge: $\pm 15\text{KV}$ Contact Discharge: $\pm 8\text{KV}$	Normal operation shall be continued
4.4 Cooling:	Natural air cooling	
4.5 EMI: Adapter comply with the following national standards:  EMI Conducted Emission  EMI Radiated Emission	1.Full Load 2. The power supply with internal filter can meet.	FCC PART 15J CLASS B CISPR22 EN55022 CLASS B VCCI LEVEL II
4.6 Safety conforming:  4.6.1 Energy-related Products 【ErP】 Department of Energy 【DOE】		Regulated by customer Comply with ErP standard Comply with DOE standard
4.7 Leakage Current:	264Vac / 50Hz	$\leq 0.25\text{mA}$
4.8 Dielectric Strength: (Hi-Pot)	Between AC input and secondary applied AC 1.5KV / test time 1 minute / cut off current shall be less than 10mA	
4.9 Temperature:	Operating Storage	0 to 40°C (safety) -20 to +80°C
4.10 Humidity:	Operating Storage	10% ~ 90% 5% ~ 95%
4.11 MTBF	(1) Full load (2) 230 Vac (3) 25 °C	200,000Hrs Min. Telcordia SR-332 Issue2

## 5. Mechanical Characteristics:

ITEM	CONDITION	SPECIFICATION
------	-----------	---------------

MODEL NO. **FSP065-RAAT3**SHEET 5 OF 7

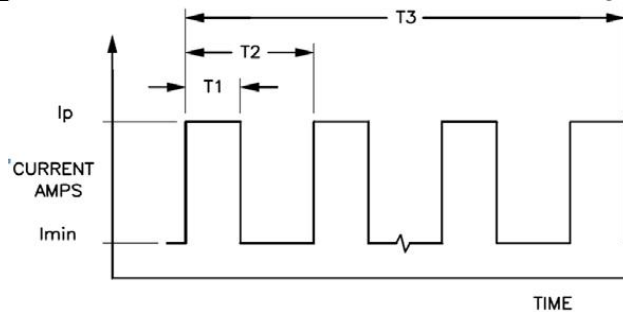


# Electrical Specification

5.1 Dimension (Length x Width x Height):		137.0X 59.5 X 35.5 mm
5.2 Input AC socket Type:		IEC 320-C14 Type
5.3 Vibration Test:	(1) Non-operating, 0.01g2/Hz at 5Hz slopping to 0.02g2/Hz at 20Hz, And maintain 0.02g2/Hz from 20Hz ~ 500Hz (2) PSD=3.13grms, 15 minutes/axis (3) Vibration duration:15minutes (4) Vibration waveform:Random (5) Force Direction X,Y,Z	Normal operation shall be continued.
5.4 Acoustic Noise:	(1) Position the microphone 30 centimeters above the x-y center of the AC adapter (2) Input voltage:110Vac/60Hz 220Vac/50Hz	The EUT < 30dB

## 6. Peak load conditions

Peak load conditions	I <sub>max</sub>	I <sub>min</sub>	T1	T2	T3	di/dt	V <sub>omin</sub> & 1000uF Capacitive
90Vac/50Hz	15A	4A	2ms	4.4ms	1s	2.5A/uS	19.84V

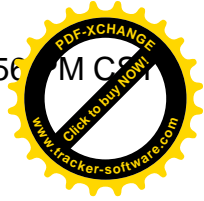
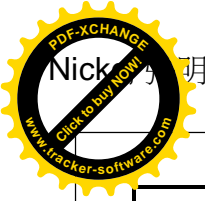


Note : Acoustic Noise

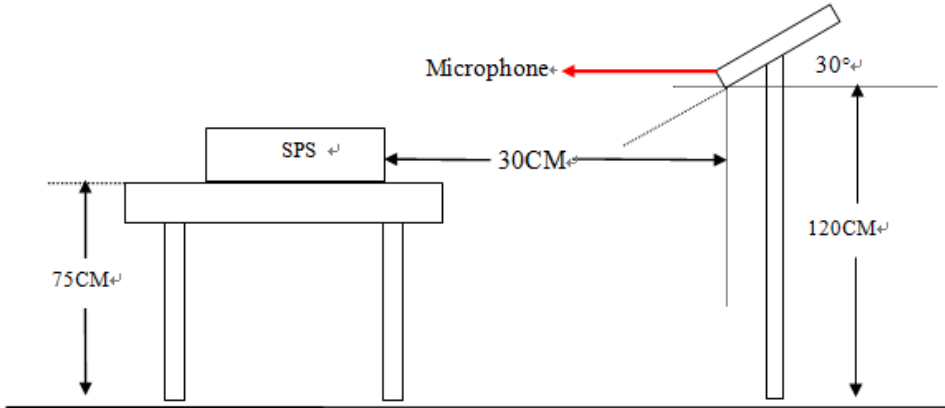
MODEL NO. **FSP065-RAAT3**

SHEET 6 OF 7





# Electrical Specification



**CODICO GmbH**  
 Zwingenstraße 6-8, 2380 Perchtoldsdorf, Austria  
 Telefon: +43 1 86 305-0, Fax: +43 1 86 305-5000  
 e-mail: office@codico.com, www.codico.com  
 FN 436940i, Landesgericht Wr. Neustadt

Zertifiziert nach ISO 9001:2015

MODEL NO. **FSP065-RAAT3**

SHEET 7 OF 7