



Features

- Meet Efficiency Level VI; CoC Version 5 Tier 2
- Operation up to 5,000 meters
- Full Range AC Input from 90 to 264 Vac
- IEC320-C14 AC Inlet
- Single regulated output from 9/12/24dc Output
- Output Power: 30W to 40W
- High efficiency and reliability
- Class I Power Adapter
- OVP, OCP, Short circuit and thermal protection
- UL/cUL, FCC, TUV, EMC safety approvals
- Meet NRCAN, COC Tier 2, GEMS, CONUEE efficiency requirements
- Meet KC, CCC, RCM, BSMI, PSB, BIS, CU, PSE, NOM safety requirements
- 100% burn-in/Hi-Pot/ATE
- Operation in tropical climate environment
- Custom designs available

Level VI



Description

The SPI FSP030/040-DxAN3 series are highly reliable AC-DC switching power supplies with output power from 30W to 40W. All models of adapters provide different output voltages 9VDC, 12VDC, and 24VDC with optional DC plug that fit into the demands for various types of consumer, commercial, and industrial electronic devices. They are enclosed in a 94V-0 rated polycarbonate case with an IEC320-C14 inlet to mate with various AC power cords for world-wide use. All models meet FCC Part 15 class B, IC ICES-003, and EMC emission limitations, and comply with Department of Energy (DOE) and Energy-related Products (ErP) standards.

Applications

- Desktop/All-in-One/Notebook PCs
- LCD/LED Monitors
- POS systems
- Office electronic devices
- Telecommunication devices
- Test measurement equipment
- Industrial equipment



Specifications:

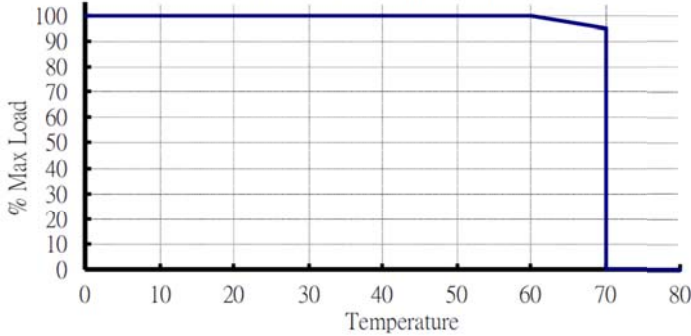
	Model	FSP030-DRAN3	FSP030-DHAN3	FSP036-DHAN3	FSP040-DRAN3	FSP040-DHAN3	FSP040-DAAN3
Output	Rated Voltage	9V	12V	12V	9V	12V	24V
	Current	0 ~ 3.33	0 ~ 2.5A	0 ~ 3.0A	0 ~ 4.44A	0 ~ 3.33A	0 ~ 1.67A
	Watts	30W	30W	36W	40W	40W	40W
	Voltage Regulation	±5%					
	Overshoot	±10%					
	Dynamic Load Change	±10%					
	Ripple & Noise (Max.)	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	120mVp-p
	Turn on Time (Max.)	3Sec					
	Rise Time (Max.)	30ms					
	Hold up Time (Min.)	8ms	10ms	8ms	8ms	10ms	5ms
	Efficiency (Average)	≥87.7% DOE VI & COC tier 2	≥87.7% DOE VI & COC tier 2	≥88.3% DOE VI & COC tier 2	≥88.59% DOE VI & COC tier 2E	≥88.59% DOE VI & COC tier 2	≥88.59% DOE VI & COC tier 2
Input	Voltage Range	90 ~ 264Vac					
	Frequency Range	47 ~ 63Hz(±1Hz)					
	Current (Max.)	1A	1.2A	1.2A	1.2A	1.4A	1.4A
	Inrush Current (cold start, full load,25°C)	58.5A @110Vac 127A@220Vac	45.5A @115Vac 98.0A@230Vac	52.0A @115Vac 118A@230Vac	50.0A @110Vac 95A@220Vac	58A @115Vac 124A@230Vac	105A@220Vac
	Leakage Current (Max.)	0.25mA at 264VAC/50Hz					
	No Load Power Consumption	0.075W					
Protection	Short Circuit Protection	output shut down and auto-recovery after Fault condition removed					
	Over Current Protection	output shut down and auto-recovery after Fault condition removed					
	Over Voltage Protection	output shut down at 160% of voltage and recovery after AC reset					
	Over Temperature Protection	output shut down at abnormal temperature and recovery after AC reset					
Safety & Compliance	Safety Approvals	CB,UL/cUL, TUV					
	EMI/EMC	FCC Part 15 Class B, EMC					
	RoHS	2011/65/EU; (EU) 2015/863					
	Hi Pot	Input to output 1.5KV for 1 minute					
	Insulation Resistance	Input to Output at 500Vdc ≥20MΩ					
Environment	Operating Temperature/ Humidity	0~40°C/20~80% (safety) 40 to 70°C Linearly de-rating, need to check safety with system					
	Storage Temperature/ Humidity	-20~80°C/10~90%					
	Vibration	(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					
Other	Dimension ((L*W*H)	110 x 50 x 32 mm					
	Adapter Weight (Typical)	280g					
	MTBF	Above 300K hours, Telcordia SR-332 (25°C)					
Note	Contact SPI sales for further information						



Power Derating

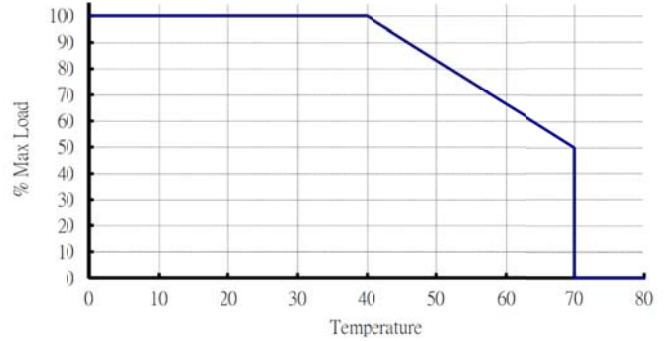
FSP030-DRAN3

Derating Curve of 100Vac/60Hz



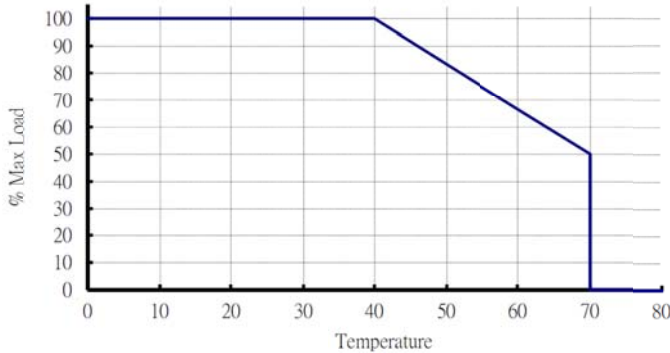
FSP030-DHAN3

Derating Curve



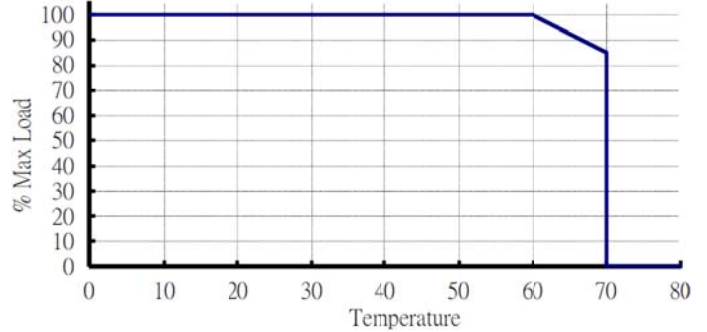
FSP036-DHAN3

Derating Curve



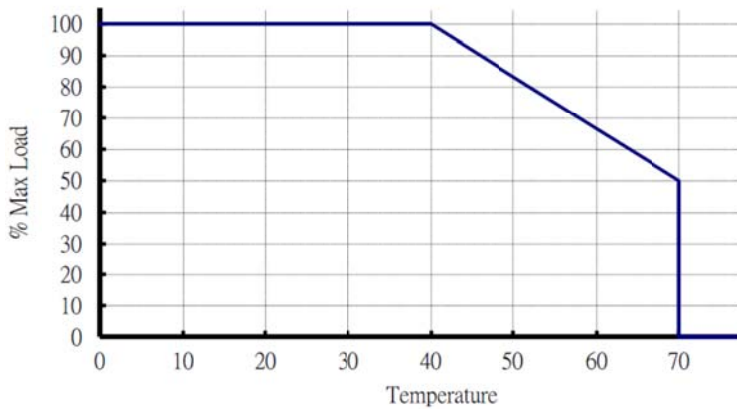
FSP040-DRAN3

Derating Curve of 100Vac/60Hz



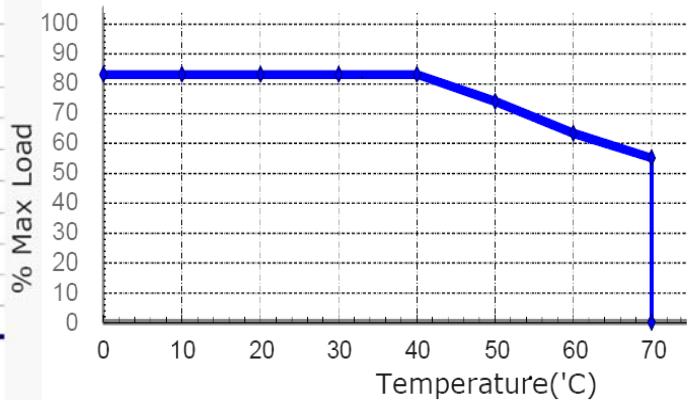
FSP040-DHAN3

Derating Curve



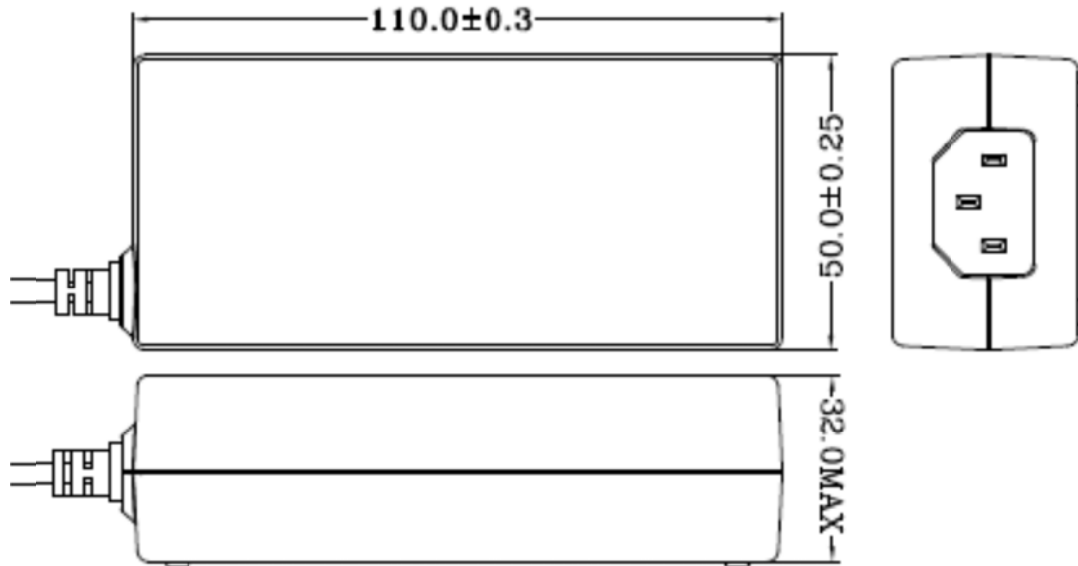
FSP040-DAAN3

Derating Curve





Mechanical Drawing (mm)



Optional Output DC Plugs

Profile & Dimension	Pinouts	Description	Suitable for SPI Models	Suggested Mating Connector
	1: -V 2: -V 3: -V 4: +V 5: +V 6: +V	6-pin connector Molex receptacle housing 39-01-2060 with female terminal #5556 series or equivalent	FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3	Molex plug housing 39-01-2066 with male terminal #5558 series or equivalent
	1: -V 2: -V 3: -V 4: +V 5: +V 6: +V	6-pin connector Molex receptacle housing 39-01-2065 with female terminal #5556 series or equivalent	FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3	Molex plug housing 39-01-2066 with male terminal #5558 series or equivalent
	1: +V 2: +V 3: -V 4: -V Shell: -V & AC GND	Female 4-pin plug without lock (molding type) Singatron 3MP-3432 or equivalent	FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3	4-pin connector Singatron 2MJ3002, 2MJ-3432, or equivalent
	1: +V 2: +V 3: -V 4: -V Shell: -V & AC GND	Male 4-pin plug without lock (molding type)	FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3	4-pin socket Kycon P/N: KPJX-4S-S or equivalent



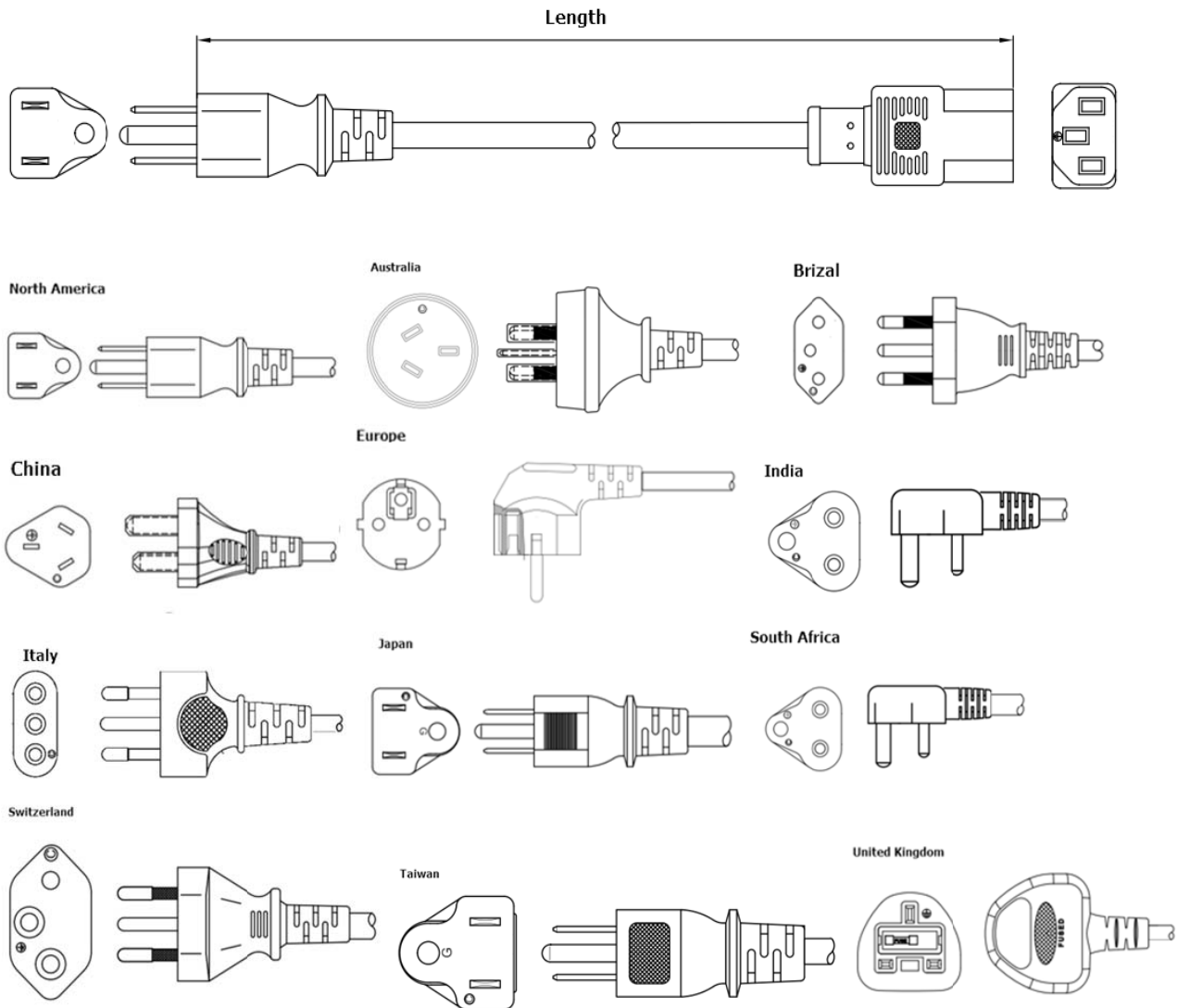
FSP030/040-DxAN3 Series AC-DC POWER SUPPLY

	<p>1: +V 2: +V 3: -V 4: -V Shell: -V & AC GND</p>	<p>Male 4-pin plug with lock (molding type)</p>	<p>FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3</p>	<p>4-pin socket Kycon P/N: KPJX-4S-S or equivalent</p>
	<p>1: -V 2: +V</p>	<p>2-pin receptacle housing Molex 39-01-3025 with female terminal #5556 series or equivalent</p>	<p>FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3</p>	<p>Molex plug housing 39-01-2021 with male terminal #5558 series or equivalent</p>
	<p>Center: +V Sleeve: -V</p>	<p>Barrel female connector (Fork & Groove type)</p>	<p>FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3</p>	<p>Switchcraft, Type: RA712 or equivalent</p>
	<p>Center: +V Sleeve: -V</p>	<p>Barrel female connector (Fork & Groove type)</p>	<p>FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3</p>	<p>Switchcraft, Type: RA722 or equivalent</p>
	<p>Center: +V Sleeve: -V</p>	<p>Barrel right angle female connector (Fork & Groove type)</p>	<p>FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3</p>	<p>Switchcraft, Type: RA712 or equivalent</p>
	<p>Center: +V Sleeve: -V</p>	<p>Barrel right angle female connector (Fork & Groove type)</p>	<p>FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3</p>	<p>Barrel right angle female connector (Fork & Groove type)</p>
	<p>Center: +V Sleeve: -V</p>	<p>EIAJ RC-5320A plug type B with internal pin EIAJ-05 plug</p>	<p>FSP030-DRAN3 FSP030-DHAN3 FSP036-DHAN3 FSP040-DRAN3 FSP040-RHAN3 FSP040-DAAN3</p>	<p>Lumberg 1613 11 or Lumberg 1614 05 or equivalent</p>

Note: Contact SPI sales for further information

Optional AC Power Cords

Country	Cable Type	Length	SPI P/N
North America	SVT	1830 mm +/- 50	PCR-B3US-183C
Australia	H05VV-F	1830 mm +/- 50	PCR-B3AU-183B
Brazil	H05VV-F	1830 mm +/- 50	PCR-B3BR-183B
China	RVV 300/500	1830 mm +/- 50	PCR-B3CN-183B
India	H05VV-F	1830 mm +/- 50	PCR-B3OUK-183B
Italy	H05VV-F	1830 mm +/- 50	PCR-B3IT-183B
Japan	VCTF	1830 mm +/- 50	PCR-B3JP-183A
South Africa	H05VV-F	1830 mm +/- 50	PCR-B3SA-183B
Switzerland	H05VV-F	1830 mm +/- 50	PCR-B3SW-183B
Taiwan	VCTF	1830 mm +/- 50	PCR-B3TW-183A
United Kingdom	H05VV-F	1830 mm +/- 50	PCR-B3UK-183B



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