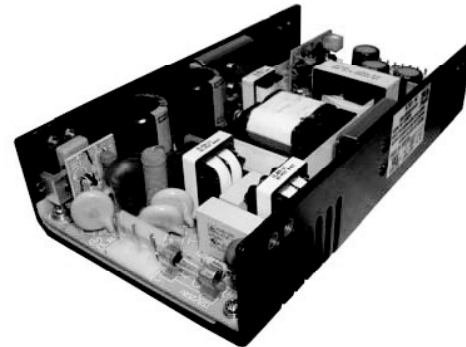


PART NUMBER: VPF-S200-XXRI series

DESCRIPTION: switching power supply

features

- power factor correction
- power good signal
- short circuit protection
- over load, voltage, temperature protection
- approved to UL/cUL, TUV, CE with CB scheme
- N+1 parallel redundancy
- extended temperature range: -40 ~ +75°C available



MODEL

MODEL	output ^{1, 2, 3} (V)	preset voltage (V)	max. output ⁴ power / current (A)		regulation ⁵	ripple & noise ^{5, 6} (Vp-p)
			with force air	convection		
VPF-S200-03RI	3 - 4 V	3.3 V	30 A	22 A	±1%	±1%
VPF-S200-05RI	5 - 6 V	5 V	200W	22 A	±1%	±1%
VPF-S200-12RI	12 - 18 V	12 V	200W	150W	±1%	±1%
VPF-S200-24RI	24 - 30 V	24V	200W	150W	±1%	±1%
VPF-S200-36RI	32 - 46 V	36 V	200W	150W	±1%	±1%
VPF-S200-48RI	48 - 56 V	48 V	200W	150W	±1%	±1%

- notes:
1. customer must specify output voltage on PO
 2. output is fully isolated
 3. output voltage is measured at output power connector
 4. maximum 200 W with 18. cfm forced ventilation
 5. **1% minimum load is required to maintain the ripple and regulation**
 6. ripple and noise are measured from 10 KHz to 20 MHz at output terminals with a 0.1 µF ceramic capacitor and a 22 µF capacitor in parallel.



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INPUT

parameter	conditions/description	min	nom	max	units
input frequency		47		63	Hz
input voltage	90~132 / 180~264 auto-selectable	90		264	VAC
input current	AC input of 115 VAC			5	A
	AC input of 230 VAC			2.5	A
inrush current	peak measured at 115 VAC at full load, cold start			35	A
	peak measured at 230 VAC at full load, cold start			70	A
power factor	active power factor correction meets EN61000-3-2 class A (total output power not to exceed 200 W)				

OUTPUT

parameter	conditions/description	min	nom	max	units
transient response	output voltage returns to within 1% in less than 2.5ms for a 50% load change. peak transient does not exceed 5%.				
overshoot	turn-on and turn-off overshoot will not exceed 5% over nominal voltage				
efficiency	measured at 230 V and full load:				
	3.3 V model			70	%
	5 V model			75	%
	12 V model			80	%
	all other models			83	%
start up time	at 120 V ac, full load			1	S
hold up time	at 120 V ac, full load			20	mS
adjustability	output use adjustable	- 5		+5	%
LED display	when green (LED1) is on, power supply is operating normally				
power good	designated as PG on the CN1. this signal goes high 100-500 mS after the output reaches regulation. low at least 1 mS before loss of regulation.				

PROTECTION CIRCUITS

parameter	conditions/description
input fuse	one T5A / 250V fuse inserted in primary
overload	current limiting starts at 110~135% of the rated output current in foldback mode and recovers automatically
output over-voltage	output is protected against overvoltage. Unit shuts down and latches when voltage at output terminals exceeds 130%. ac input needs to be reset to restart the power supply.
short circuit	trip without damage and auto-recovery.
over temp.	Power supply shuts down when temperature is in excess of 85 °C. auto recovery.

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GENERAL & SAFETY

parameter	conditions/description	min	nom	max	units
operating temp.	derates linearly from 100% load at 50°C to 50% load at 70°C	0		40	°C
optional operating temp.	derates linearly from 100% load at 50°C to 37.5% load at 75°C	-40		75	°C
storage temp.		-20		85	°C
optional storage temp.		-40		85	°C
operating humid.	non-condensing	5%		90%	RH
storage humid.	non-condensing	5%		95%	RH
operating altitude				3,000	m
				10,000	ft
storage altitude				9,000	m
				30,000	ft
EMI safety	conducted emissions comply with FCC part 15, CISPR 22 class B approved to UL 1950(E222889), CSA C22.2 No. 60950-1-03, TUV EN60950-1, CE Mark (LVD), EN61000-3-2, & IEC61000-4 series regulations, CB				
leakage current	at 240 V ac			1.5	mA
vibration	acceleration ± 7.35 M/(SxS), on X, Y, and Z axis	5		50	Hz
isolation voltage (HI-POT)	applied for 3 seconds. primary to secondary: primary to transformer core: primary to earth ground:	3000			VAC
		1500			VAC
		1500			VAC
grounding test	allowable resistance measured when 25 A current is applied from the ground pin of the three pronged plug to the farthest earthed connection point.			0.1	Ω
RoHS	yes				
warranty	standard warranty length			2	years
MTBF	according to MIL-HDBK-217 at 30°C			100,000	hours
burn-in	full load, at 45 \pm 5°C, 230 V ac			1	hours
cooling	built-in dc fan speed control				

Note: Customer must specify extended temperature on PO.

MECHANICAL

parameter	conditions/description	min	nom	max	units
dimensions	6.8"(172.7mm) x 3.8"(96.5mm) x 1.5"(38.1mm) U-case				
weight				600	g
mountin screws	one set of 8 threaded mounting holes available on the enclosure A:M4, maximum insertion depth of 0.2 inches.				

MATING CONNECTORS

parameter	conditions/description
AC input(option 1)	Molex Part No. 26-48-1201 or similar (5 pin). Suggested mating plug: Molex Part No. 09-91-0500 or equivalent (5 pin, 3 used)
AC input(option 2)	Terminal block Part No. FTB-702-3P (3 pin, M3 Screw) 7.62mm spacing Suggested mating connector: Molex 19198-0016 or similar

Note: Input connector must be specified on PO.



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OUTPUT CONNECTOR - (CN2)

parameter	conditions/description	min	nom	max	units
output (option 1)	Molex Part No. 09-91-1200 or similar. (12 pin) Output pin assignment, VO+ (Pins 1-6), VO- (Pins 7-12) Suggested mating connector: Molex 12 pin (part No. 09-91-1200)				
output (option 2)	Howder Terminal block Part No. HD-301-4P (4 pin, M3.5 Screw) 11mm spacing Output pin assignment, VO+ (Pins 1-2), VO- (Pins 3-4) Suggested mating connector: Molex 19198-0045 or similar.				

Note: Output connector must be specified on PO.

LOGIC CONNECTOR - (CN3)

parameter	conditions/description	min	nom	max	units
Logic	JS B6B-XH-A Suggested mating connector: JS-2001-06 or equivalent , Contact: SXH-002T-P0.6.				
Pin Assignments:	1. FAN+ 2. FAN- 3. RTN 4. PG 5. REMO 6. RTN				

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OUTLINE DRAWING

