

## 2. INPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT	
AC Input Voltage	PS starts and operates at 90 V <sub>AC</sub> at all load conditions	90	100-240	264	V <sub>RMS</sub>	
DC Input Voltage		170	-	270	V <sub>DC</sub>	
Input Frequency		47	50/60	440	Hz	
Input Current	RMS at 180 V <sub>AC</sub> , maximum load, 50 / 60 Hz RMS at 90 V <sub>AC</sub> , maximum load, 50 / 60 Hz	-	-	2.5 5.0	A	
Inrush Current	265 V <sub>AC</sub> , 25 °C ambient, cold start. 24, 28, 36, 48 V, no damage 12 V	-	-	- 20	A	
Fusing	2x Time Lag 6.3 A, 250 V on both L and N	-	-	6.3	A	
Efficiency	At 115 V <sub>AC</sub>	20% rated load	90	-	-	%
		50 – 100 % rated load	92	-	-	
	At 230 V <sub>AC</sub>	20% rated load	90	-	-	
		50 – 100 % rated load	94	-	-	
Input Power Consumption	Power on, 115-230 V <sub>RMS</sub> , no load	-	1	1.5	W	
	Stand by, 115-230 V <sub>RMS</sub> , no load	-	0.4	0.5		
Power Factor	At full rated load, 115 V <sub>AC</sub> , 60 Hz and 230 V <sub>AC</sub> , 50 Hz input voltages	0.95	-	-	-	
Harmonic Current	Complies with EN-61000-3-2 Class C at 230 V <sub>AC</sub> 50 Hz, load >50 W.					
Fluctuations and Flicker	Complies with EN-61000-3-3 at nominal voltages and full load.					
Leakage Current	Normal conditions, 240 V <sub>RMS</sub> , 60 Hz.			300	μA	

### 3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT	
V1 Output Voltage	0.5% set point accuracy for all voltage variants	-	12	-	V	
		-	24	-		
		-	28	-		
		-	36	-		
		-	48	-		
V1 Output Power Rating	All voltages, convection cooled models only			250	W	
	All voltages, fan cooled + forced air cooled (> 400 LFM) models			400		
	All models, peak power ( $\leq 10$ s)			440		
V1 Output Current	* Fan cooled + forced air cooled (> 400 LFM) (All models)	V1: 12 V <sub>DC</sub>		33.3	A	
		V1: 24 V <sub>DC</sub>		16.7		
		V1: 28 V <sub>DC</sub>		14.3		
		V1: 36 V <sub>DC</sub>		11.1		
		V1: 48 V <sub>DC</sub>		8.3		
V1 Output Current	** Convection cooled: (-), -UC, -PC models)	V1: 12 V <sub>DC</sub>		20.8	A	
		V1: 24 V <sub>DC</sub>		10.4		
		V1: 28 V <sub>DC</sub>		8.9		
		V1: 36 V <sub>DC</sub>		6.9		
		V1: 48 V <sub>DC</sub>		5.2		
V1 Voltage Adjustment Range		-	-	$\pm 5$	%V1	
V1 Load-Line-Cross Regulation	V <sub>AC</sub> : 90 – 264 V <sub>RMS</sub>	V1 Load: 0 – 33.3 A (12 V)			%V1	
		0 – 16.7 A (24 V)				
		0 – 14.3 A (28 V)				
V1 Load-Line-Cross Regulation	V <sub>AC</sub> : 90 – 264 V <sub>RMS</sub>	0 – 13.9 A (36 V)		$\pm 2$	%V1	
		0 – 8.3 A (48 V)				
		V2 Load: 0 – 1 A				
V1 Line Regulation	V <sub>AC</sub> : 90 – 264 V <sub>RMS</sub>	5V <sub>SB</sub> Load: 0 – 2 A		$\pm 0.1$	%V1	
Transient Response (Voltage Deviation) V1, 5V <sub>SB</sub>	25% load changes at 1 A/ $\mu$ s 12V at 2200 $\mu$ F Load / I <sub>OUT</sub> > 0.5 A 24 V at 1000 $\mu$ F Load / I <sub>OUT</sub> > 0.5 A 28 V at 1000 $\mu$ F Load / I <sub>OUT</sub> > 0.5 A 36 V at 820 $\mu$ F Load / I <sub>OUT</sub> > 0.5 A 48V at 560 $\mu$ F Load / I <sub>OUT</sub> > 0.5 A 5V <sub>SB</sub> at 560 $\mu$ F Load / I <sub>OUT</sub> > 0.1 A			$\pm 5$	%V1 %5V <sub>SB</sub>	
V1 Ripple and Noise	All models, Peak-to-peak, 20 MHz BW. 100 nF ceramic and 10 $\mu$ F tantalum caps at the load.	-	-	1	%V1	
Start-up Rise Time	90<V <sub>IN</sub> <264, any load conditions.	5	-	85	ms	
Start-up Delay	V1 in regulation after PS_ON is asserted			200	ms	
	V1 in regulation after AC is applied			750		
	5V <sub>SB</sub> in regulation after AC is applied			500		
Turn-on Overshoot	At I1 = 500 mA, V1 in regulation within 50 ms.		10		%V1	
			10		%V2	
			10		%V <sub>SB</sub>	
Hold-up Time	At nominal V <sub>IN</sub> , 400 W, for all models	-	16	-	ms	
	At nominal V <sub>IN</sub> , 365 W, for all models	-	20	-		
	At nominal V <sub>IN</sub> , 200 W, for all models	-	35	-		
Minimum Load ***	All models; V1, V2 and 5 V <sub>SB</sub>	0	-	-	A	
Maximum Load Capacitance	At nominal V <sub>IN</sub> , 25 °C ambient	12 V	-	33000	$\mu$ F	
		24 V	-	16000		
		28 V	-	14300		
		36 V	-	10000		
		48 V	-	7000		
Temperature Drift		-1.2	-	+1.2	mV/°C	
V2 Output Voltage ***	All models.	Load on V2: from 5 to 1000 mA Load on V1: from 0.1 to I1 rated	11.35	11.5	12.65	V
V2 Output Current (I2)	Convection / forced air cooling		-	-	1	A
V2 Ripple	Peak-to-Peak measured at 20 MHz Bandwidth.		-	-	240	mV