

## 3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT	
V1 Output Voltage	±0.5% set point accuracy on all outputs	-	12	-	V	
		-	24	-		
		-	36	-		
		-	48	-		
V1 Output Power Rating	All models, convection cooling	-	-	350	W	
	All models, conduction cooling / heat sink	-	-	400		
	All models, peak power (≤ 10 s)	-	-	440		
V1 Output Current	* Conduction (with heatsink)	V1: 12 V <sub>DC</sub>	-	33.3	A	
		V1: 24 V <sub>DC</sub>	-	16.7		
		V1: 36 V <sub>DC</sub>	-	11.1		
	** Convection (without heatsink)	V1: 48 V <sub>DC</sub>	-	8.3	A	
		V1: 12 V <sub>DC</sub>	-	29.2		
		V1: 24 V <sub>DC</sub>	-	14.6		
		V1: 36 V <sub>DC</sub>	-	9.7		
		V1: 48 V <sub>DC</sub>	-	7.3		
V1 Voltage Adjustment Range		±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) 0 – 16.7 A (24 V) 0 – 11.1 A (36 V) 0 – 8.3 A (48 V) V2 Load: 0 – 1 A 5V <sub>SB</sub> Load: 0 – 2 A	-	-	±2	%V1	
V1 Line Regulation	V <sub>AC</sub> : 90 – 264 V <sub>RMS</sub>	-	-	±0.1	%V1	
Transient Response (Voltage Deviation) V1, 5V <sub>SB</sub>	25% load changes at 1 A/μs 12 V at 2200 μF Load / I <sub>OUT</sub> > 0.5 A 24 V at 1000 μF Load / I <sub>OUT</sub> > 0.5 A 36 V at 820 μF Load / I <sub>OUT</sub> > 0.5 A 48 V at 560 μF Load / I <sub>OUT</sub> > 0.5 A 5V <sub>SB</sub> at 560 μF Load / I <sub>OUT</sub> > 0.1 A	-	-	±5	%V1 %5V <sub>SB</sub>	
V1 Ripple & Noise	All models, Peak-to-peak, 20 MHz BW. 100 nF ceramic and 10μF tantalum to 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 5V <sub>SB</sub> in regulation after AC is applied	-	-	750 500		
Turn-on Overshoot	At 500 mA output current, 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 outputs	-	16	-	ms	
	At nominal V <sub>IN</sub> , 365 W, for all outputs	-	20	-		
	At nominal V <sub>IN</sub> , 200 W, for all outputs	-	35	-		
Minimum Load ***	All models; V1, V2 and 5V <sub>SB</sub>	0	-	-	A	
Maximum Load Capacitance	At nominal V <sub>IN</sub> , 25 °C ambient	12 V	-	-	33000	μF
		24 V	-	-	16000	
		36 V	-	-	10000	
		48 V	-	-	7000	
Temperature Drift		-1.2	-	+1.2	mV/°C	
V2 Output Voltage	All versions. Load on V2: from 5 to 1000 mA Load on V1: from 0.1 to 16.7 A	11.25	12.5	13.75	V	
V2 Output Current	All models, convection/forced air cooling	-	-	1	A	
V2 Ripple	Peak-to-Peak measured at 20 MHz Bandwidth.			240	mV	
5V <sub>SB</sub> Output Voltage	All models (3% set point accuracy)	-	5	-	V	
5V <sub>SB</sub> Output Current	All models, convection cooling	-	-	1.5	A	
	All models, conduction cooling / heat sink	-	-	2		

5V <sub>SB</sub> Load-Line-Cross Regulation	V <sub>AC</sub> : 90 – 264 V <sub>RMS</sub>	V1 Load: 0 – 33.3 A (12 V)	-	-	±5	%5V <sub>SB</sub>
		0 – 16.7 A (24 V)				
5V <sub>SB</sub> Ripple	Peak-to-Peak measured at 20 MHz Bandwidth.	0 – 11.1 A (36 V)	50	mV		
		0 – 8.3 A (48 V)				
		V2 Load: 0 – 1 A				
		5V <sub>SB</sub> Load: 0 – 2 A				

- \* The combined output power of V1, V2 and 5V<sub>SB</sub> for all models, when conduction cooled or convection cooled with heat sink mounted, must not exceed 400 W up to 50 °C, and 300 at 70 °C ambient temperature.
- \*\* The combined output power of V1, V2 and 5 V<sub>SB</sub> for all models, when convection cooled and V<sub>IN</sub> ≥ 180 V<sub>RMS</sub>, must not exceed 350 W up to 50 °C, and 240 W at 70 °C ambient temperature. See de-rating curves below.
- \*\*\* When the load on the main output is less than 100 mA, V2 output voltage might regulate below its minimum value. Contact Bel for details.

### 3.1 OUTPUT POWER DE-RATING CURVES

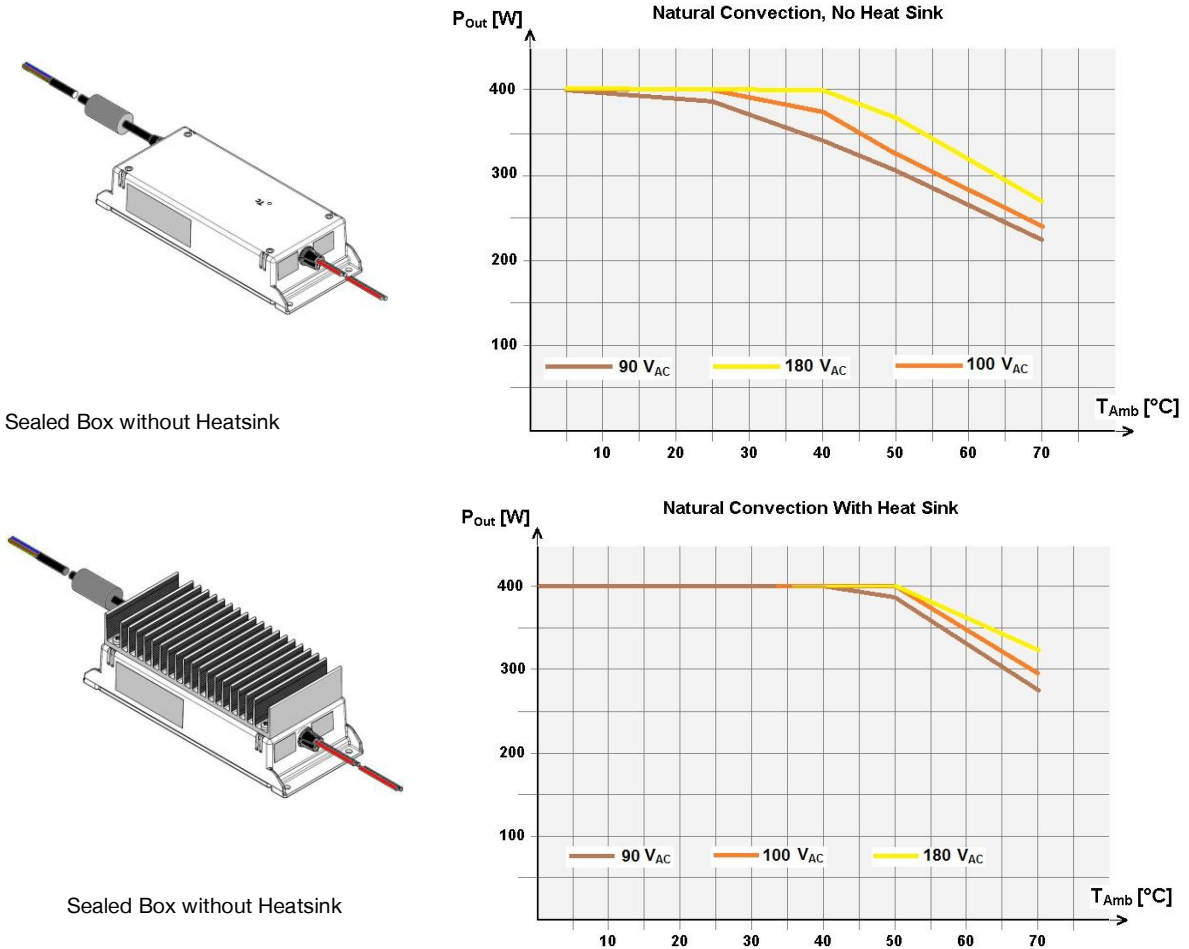


Figure 2. Power Derating Curves