

3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
V1 Output Voltage	±0.5% set point accuracy on all outputs	-	12 24 36 48	-	V
V1 Output Power Rating	All models, convection cooling All models, conduction cooling / heat sink All models, peak power (≤ 10 s)	-	-	350 400 440	W
V1 Output Current	* Conduction (with heatsink) V1: 12 V _{DC} V1: 24 V _{DC} V1: 36 V _{DC} V1: 48 V _{DC} ** Convection (without heatsink) V1: 12 V _{DC} V1: 24 V _{DC} V1: 36 V _{DC} V1: 48 V _{DC}			33.3 16.7 11.1 8.3 29.2 14.6 9.7 7.3	A
V1 Voltage Adjustment Range		±5	-	-	%V1
V1 Load-Line-Cross Regulation	V _{AC} : 90 – 264 V _{RMS} 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 _{SB} Load: 0 – 2 A	-	-	±2	%V1
V1 Line Regulation	V _{AC} : 90 – 264 V _{RMS}	-	-	±0.1	%V1
Transient Response (Voltage Deviation) V1, 5V _{SB}	25% load changes at 1 A/μs 12 V at 2200 μF Load / I _{OUT} > 0.5 A 24 V at 1000 μF Load / I _{OUT} > 0.5 A 36 V at 820 μF Load / I _{OUT} > 0.5 A 48 V at 560 μF Load / I _{OUT} > 0.5 A 5V _{SB} at 560 μF Load / I _{OUT} > 0.1 A	-	-	±5	%V1 %5V _{SB}
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 _{IN} < 264, any load conditions.	5	-	85	ms
Start-up Delay	V1 in regulation after PS_ON is asserted V1 in regulation after AC is applied 5V _{SB} in regulation after AC is applied	-	-	200 750 500	ms
Turn-on Overshoot	At 500 mA output current, V1 in regulation within 50 ms.	-	10 10 10	-	%V1 %V2 %V _{SB}
Hold-up Time	At nominal V _{IN} , 400 W, for all outputs At nominal V _{IN} , 365 W, for all outputs At nominal V _{IN} , 200 W, for all outputs	-	16 20 35	-	ms
Minimum Load ***	All models; V1, V2 and 5V _{SB}	0	-	-	A
Maximum Load Capacitance	At nominal V _{IN} , 25 °C ambient	12 V 24 V 36 V 48 V	- - - -	33000 16000 10000 7000	μF
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 _{SB} Output Voltage	All models (3% set point accuracy)	-	5	-	V
5V _{SB} Output Current	All models, convection cooling All models, conduction cooling / heat sink	-	-	1.5 2	A

5V _{SB} Load-Line-Cross Regulation	V _{AC} : 90 – 264 V _{RMS}	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)					
		-	-	±5	%5V _{SB}		
		V2 Load: 0 – 1 A					
		5V _{SB} Load: 0 – 2 A					
5V _{SB} Ripple	Peak-to-Peak measured at 20 MHz Bandwidth.				50	mV	

- * The combined output power of V1, V2 and 5V_{SB} 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 5V_{SB} for all models, when convection cooled and V_{IN} ≥ 180 V_{RMS}, 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

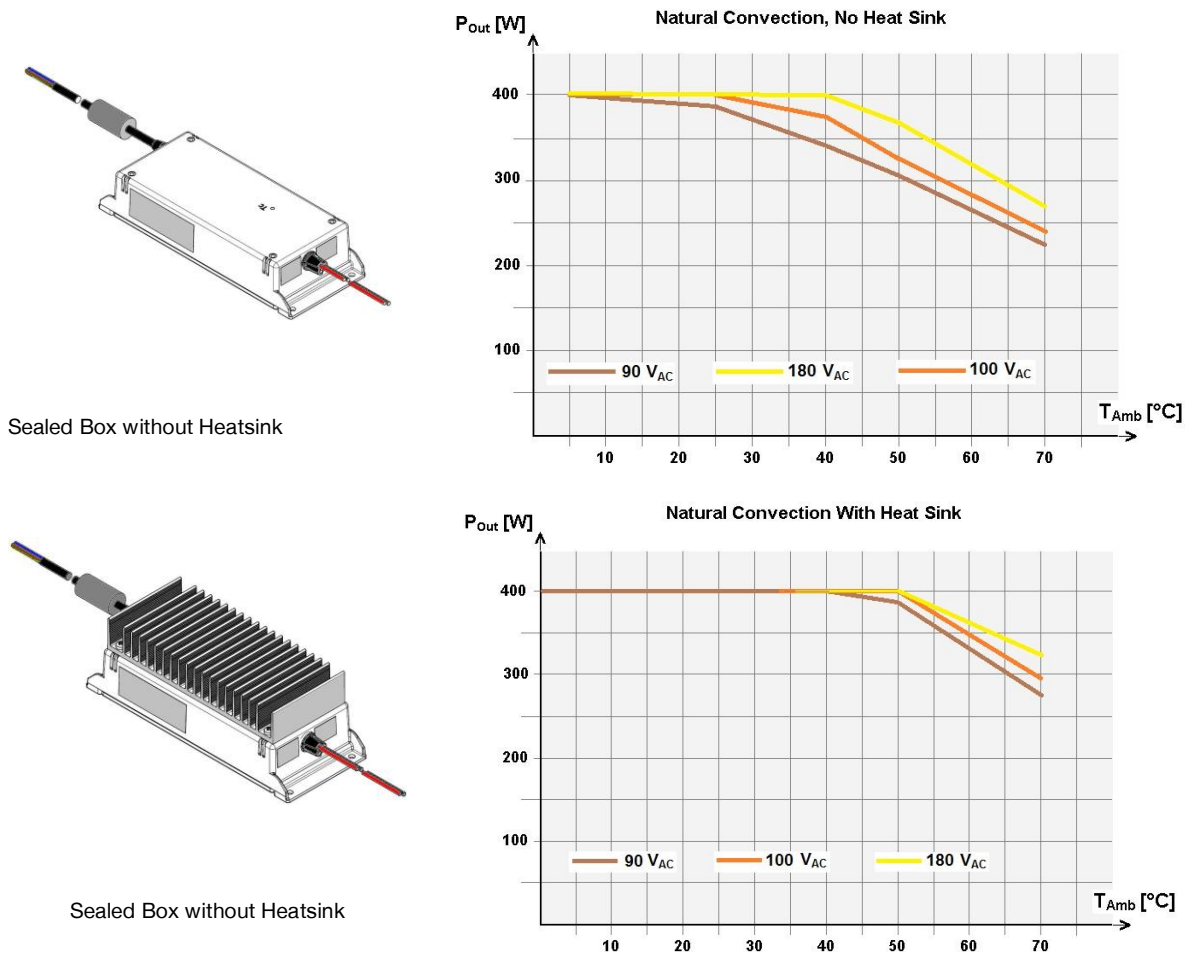


Figure 2. Power Derating Curves