

## 250-500W, Wide Range Input, Non-isolated, DIN Rail DC-DC Converters



The DDA DIN rail mount, non-isolated step-down converters are ideal for creating additional high current output voltages from a single output 12V, 24V or 48V AC-DC power supply. The highly efficient DDA series accepts a very wide DC input and has a wide output adjustment range, with a choice of single or dual output models.

Features	Benefits
• 250W Single Output, 325W and 500W Dual Output Power Levels	• High Power Density
• High Efficiency up to 95%	• Less Waste Heat
• Wide Input Range - 9 up to 53V	• One Part For Multiple Applications
• Wide 3.3 to 24V Output Adjustment	• Accommodates Non-Standard Voltages
• Narrow 36.5mm Width	• More Space Available For Other DIN Rail Devices
• Convection Cooled	• Easy To Cool In End System

### Model Selector

Part Number	Output Voltage 1		Output Voltage 2		Maximum Output Current	Maximum Output Power
	Nominal (V) <sup>(1)</sup>	Adjust Range (V)	Nominal (V) <sup>(1)</sup>	Adjust Range (V)		
<a href="#">DDA250N-S1PX-12-001</a>	12V	3.3 to 15V	NA	NA	20A / NA	250W / NA
<a href="#">DDA500N-D2PP-1205-001</a>	12V	3.3 to 15V	5V	3.3 to 15V	20A / 20A	250W / 250W
<a href="#">DDA325N-D2PN-1212-001</a>	12V	3.3 to 24V	-12V	-3.3 to -24V	14A / 8A	250W / 75W

Consult factory for other output voltage combinations.

### Specification

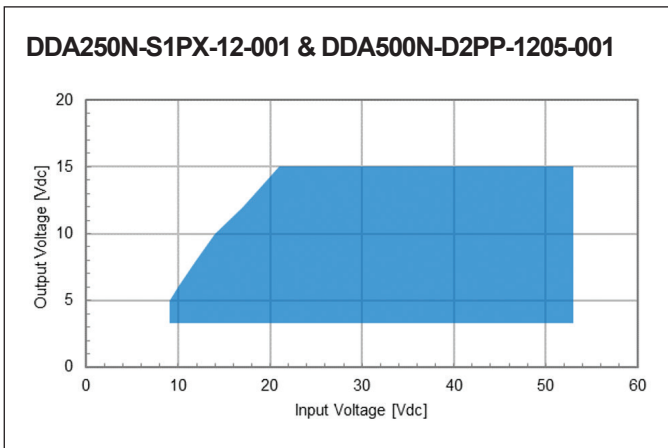
Model(s)		DDA250	DDA500	DDA325
<b>Input</b>				
Input Voltage range	Vdc	9 to 53V (Turn on at 10V or greater)		9 to 40V (Turn on at 10V or greater)
Input Current (Max.)	A	20A	40A	35A
Efficiency	-	92 - 95%		88 - 94%
Conducted & Radiated EMI	-	EN55032 Class A		
Immunity	-	EN55024		
Safety Certifications and Markings	-	IEC/UL/CSA/EN 62368-1, CE Mark and UKCA Mark		
<b>Output</b>				
Switching Frequency	kHz	400		
Line Regulation	mV	25mV		20mV
Load Regulation	mV	150mV		100mV
External Load Capacitance	uF	0 - 1000uF each output voltage		
Output Ripple & Noise (pk-pk)	mV	60mV		50mV each output voltage
Overcurrent Protection Threshold	A	28A		22 / 15A
Overvoltage Protection	V	None		
Remote On / Off	-	To enable the output(s), connect the on/off pins to the GND pin(s) on the top connector		
Remote Sense	-	(+) Sense, compensating up to 5% of output voltage		
Power Good	-	Open collector(s), low on fail		
Indicators	-	A green LED indicates the output is OK		
Parallel Operation	-	Not possible		
Series operation	-	Not possible		

Specification			
Model(s)	DDA250	DDA500	DDA325
<b>Environmental</b>			
Operating Temperature	°C	-40 to 100 (see full technical datasheet on website)	
Storage Temperature	°C	-55 to 125	
Cooling	-	Convection or forced air	
<b>Other</b>			
MTBF - Telcordia SR-332	-	>5Mhrs; 100% Load, Ta = 40°C	
Weight	g	450	
Size (WxHxD)	mm	36.5 x 123.4 x 115	
Size (WxHxD)	In	1.44 x 4.86 x 4.53	
Case Material	-	Metal	
DIN Rail type	-	Suitable for mounting on DIN Rail TS-35/7.5 or TS35/15	
Warranty	yrs	3	

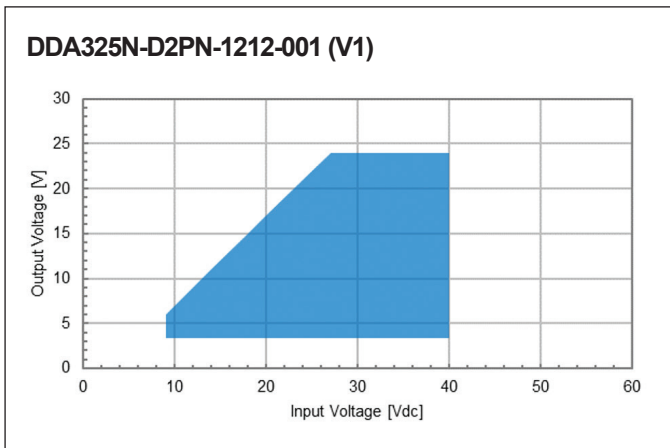
See website for detailed specifications, test methods and installation manual.

- (1) Output voltage cannot exceed input voltage (see graphs below).
- (2) For Output Derating, check the Installation Manual and detailed Specifications.

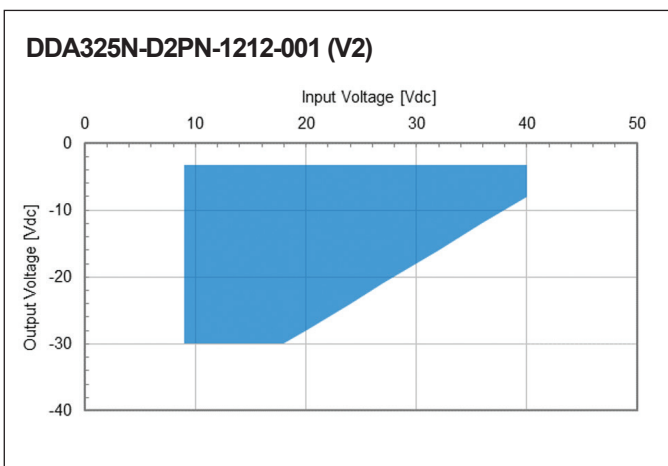
**Output vs. Input Voltage Operating Range**



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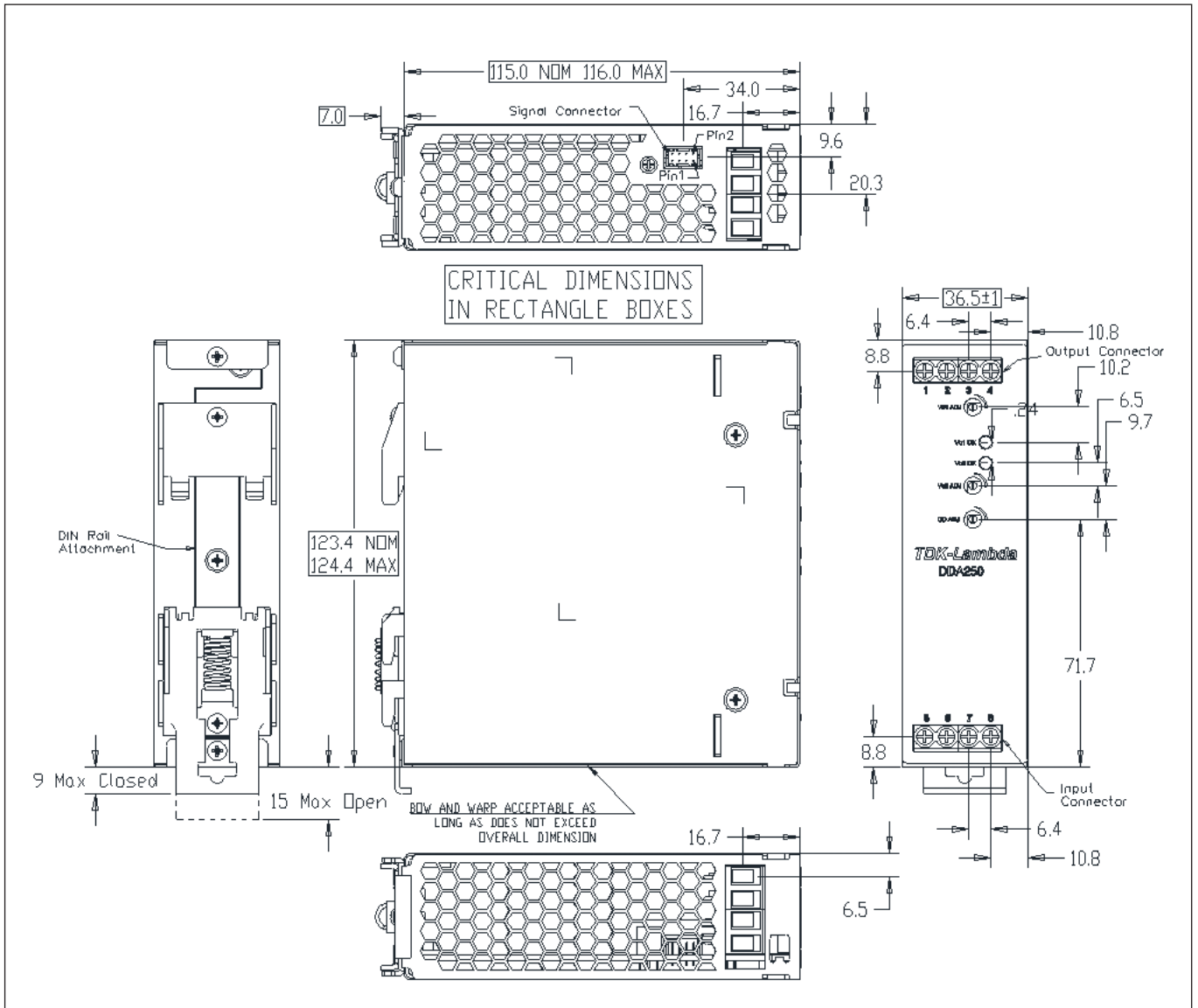


**Output vs Input Voltage Operating Range**



## Mechanical Specification

### Recommended Hole Pattern (top view)



Front Panel Connectors			
#	Function	#	Function
1	Vo2 (-)	5	On/Off Vo2
2	Vo2 (+)	6	On/Off Vo1
3	Vo1 (-)	7	VIN (-)
4	Vo1 (+)	8	VIN (+)

Signal Collector Pinout			
PIN	Function	PIN	Function
1	Vo1 SENSE (+)	5	Vo1 PWR GOOD
2	Vo2 SENSE (+)	6	Vo2 PWR GOOD
3	N/C	7	CC Ref (N/C)
4	Signal GND	8	Signal GND



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