

## ADC100S Series

100 Amp & 120 Amp PSA Satellite DC/DC Converter

### Preliminary Data Sheet

**Total Power:** 1.0 V @ 120 A  
1.8 V @ 100 A  
**Input Voltage:** 40 - 60 Vdc  
**Single Output Versions:**  
0.8 - 1.1 V  
1.6 - 2.0 V



### SPECIAL FEATURES

- Up to 120 Amp peak current
- PSA compliant
- Up to 91% efficient
- Low ripple and noise
- Data center 48 Vdc input range
- Open frame optimized for air cooling
- Surface mount termination
- Fixed switching frequency
- High capacitive load capability
- Pre-bias startup capability
- High reliability
- RoHS 3.0 (2011/65/EU) compliant
- UL94 V-0 materials
- Two year warranty (consult factory for extended terms)

### SAFETY

- EN62368
- UL/CSA62368
- CE



### Electrical Specifications

Input	
Input voltage	40 to 60 Vdc
Input undervoltage shutdown/startup	39 Vdc startup 37 Vdc shutdown
Efficiency	91%
I/O insulation	Functional insulation
I/O isolation	500 Vdc
Output	
Output voltage	1.0 V nominal (-04J variant) 1.8 V nominal (-04Y variant)
Output voltage adjustment	0.8 V to 1.1 V (-04J variant) 1.6 V to 2.0 V (-04Y variant)
Output current maximum	1.0 V at 120 Amps (-04J variant) 1.8 V at 100 Amps (-04Y variant)
Noise and ripple	±22 mV (04Y variant) TBD (04J variant)
Overtemperature protection (Open frame)	125 °C hot spot Latch protection, configurable
Overvoltage protection method/OVP operation	400 mV above Vout (-04Y variant) TBD (-04J variant) Latch protection, configurable
Overcurrent protection method/OCP operation	Latch protection, configurable
Control	
Enable	Positive enable
Columbus™ communication	All control functions supported from Main-Stamp control
Switching frequency	TBD

ADC = Artesyn Direct Conversion  
100 = 100/120 A peak current  
04 = 40-60 V<sub>in</sub>

Y = 1.8 V output version

## Environmental Specifications

## Mechanical Diagrams

18 x 12  
1/4 PLACES

13  
2 PL

PIN 1 INDEX

52  
2 PL

2.75  
2 PL

14  
2 PL

4  
2 PL

DATUM A

DETAIL A

165  
2 PL

23 x 16  
4 PLACES

DATUM B

5  
2 PL

22  
2 PL

4.9  
2 PL

185

4.2

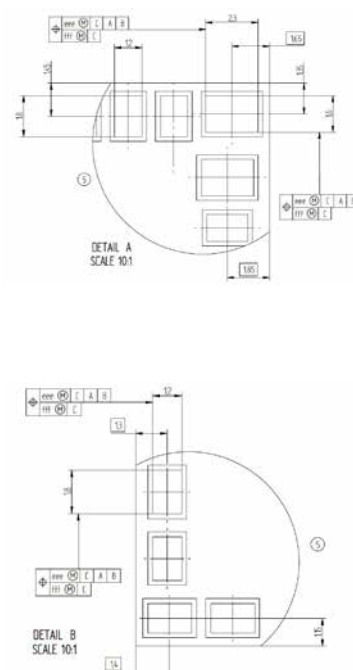
6.2

8.2

2 PLACES

DETAIL B

BOTTOM VIEW

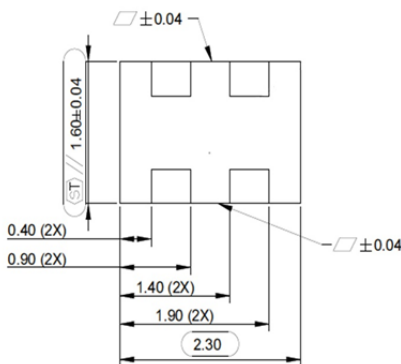


## Pin 1-18 Functions

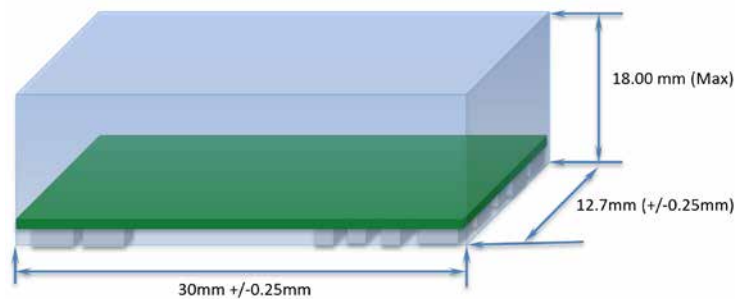
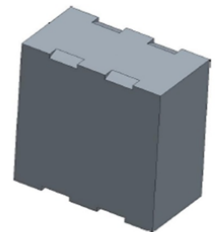
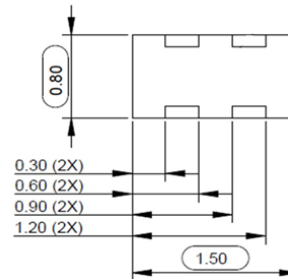
Pin #	Pin Name	Pin Function	Pin #	Pin Name	Pin Function
1	-IN	Primary side ground connection	10	CSP	Positive current sense signal
2	+IN	Positive input voltage supply connection	11	GND	Secondary side ground connection
3	PWM_Y	PWM input Y connection	12	VOUT	Positive output voltage connection
4	VSS	Primary auxiliary voltage supply	13	CSN	Negative current sense signal
5	PWM_X	PWM input X connection	14	VOUT	Positive output voltage connection
6	+IN	Positive input voltage supply connection	15	GND	Secondary side ground connection.
7	-IN	Primary side ground connection	16	TMP	Positive temperature sense signal
8	PWM_S	Reserved for non-resonant topology; Short to GND	17	TMN	Negative temperature sense signal
9	VCC	Secondary side auxiliary voltage supply	18	START	START signal for secondary driver

## Block Pin Termination Design

### Block power pin dimensions



### Block signal pin dimensions



## WORLDWIDE OFFICES

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