

 **MAROTTA**

POWER DISTRIBUTION UNIT | DATASHEET



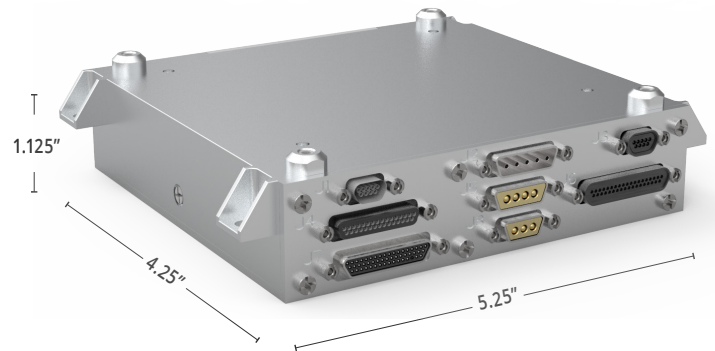
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PRODUCT OVERVIEW

The PDU300 combines four 300W power converters and a number of smaller converters in a high density package. It provides 18 output voltages that are controlled and monitored by the vehicle management system. Rigid flex technology, which eliminates internal wiring and connectors, enables unparalleled power density.

The PDU300 is qualified for extreme combined environments, ensuring a highly reliable, mission ready package.



TECHNICAL DATA

INPUT SPECIFICATIONS	
Voltages	+28VDC, 270VDC
Power Quality	MIL-STD-704A-F
OUTPUT SPECIFICATIONS	
See page 2.	
ENVIRONMENTAL SPECIFICATIONS	
Random, Gunfire Vibration	10grms 60 min/axis; 21grms 2.5 min/axis
Shock	11g 10Hz 55ms; 100, 2000Hz, 55msec
Pyrotechnic Shock	Axial, 750g 6.5ms; Radial 1050g, 6.5 msec
Operating Temperature	-54°C to +71°C -129° F to 160° F
Altitude	-1,312' to 150,000' -400m to 45,720m
Humidity	95% RH at +2°C to +60°C (35°F to 140°F) per MIL STD 810, Method 507.5
EMI/EMC	MIL-STD-461F
MECHANICAL SPECIFICATIONS	
Size	5.25" x 4.25" x 1.125" 13.3cm x 10.79 cm x 2.85 cm
Weight	1.75 lbs (0.79 kg)

Note: The listed data does not represent the design limitations of the device.

DESIGN ADVANTAGES

- ▶ Unprecedented functionality and power density
- ▶ Small size and low weight
- ▶ Power conversion, distribution & control in one unit
- ▶ Single integrated rigid flex assembly

BENEFITS

- ▶ 28V & 270V or +/-135VDC inputs
- ▶ 18 power outputs, all current limited
- ▶ MIL-STD-1760 power interrupt hold up capacitor
- ▶ Built In Test (BIT)
- ▶ RS422 logic interfaces for enables and BIT
- ▶ Operates through extreme combined environments

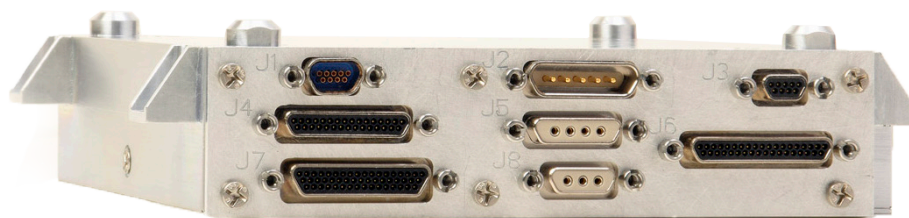
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TECHNICAL DATA

OUTPUT SPECIFICATIONS						
Input Source	Output Voltage (VDC)	Power Output (W) (avg/peak)	Tolerance (V)	Ripple & Noise	Enable	Topology
270VDC	28	28/250	±2	250 mV	No	Forward
270VDC	±135 x 1	100/150	Follows input	10Vp-p	Yes	Current limited only
270VDC	±135 x 1	150/225	Follows input	10Vp-p	No	Pass thru
270VDC	28	200/240	±2	250 mV	Yes	Forward
28VDC	15	48	±0.75	300 mV	Yes	Flyback
270VDC	28V Internal	200/300	±2	250 mV	Yes	Forward
28V	28	20	±2	250 mV	No	Flyback
28V	28	15	±2	250 mV	Yes	Boost
28V	5.2	3.5	±0.25	50 mV	Yes	Flyback
28V	5	8	±0.25	150 mV	Yes	Buck
28V	15	4	±0.75	300 mV	Yes	Buck
28V	-15	4	±0.75	300 mV	Yes	Buck-Boost
28V	28	10	Follows input	250 mV	No	Current limited only
28V	28	10	±2	250 mV	Yes	Current limited only
28V	28	10	±2	250 mV	Yes	Current limited only
28V	28	90	A/C or Prime In	A/C or Prime In	Yes	Current limited only

Note: The listed data does not represent the design limitations of the device.



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78 Boonton Ave.
P.O. Box 427
Montville, NJ 07045
+1.973.334.7800
www.marotta.com