

# PS SERIES PSD28V32CEC-X

## 32 CHANNELS, POWER DISTRIBUTION UNIT



- Modular
- Miniature
- Single input
- 32 ECB outputs
- Up to 200A total

### STANDARD CONFIGURATIONS

Part Number	Current Switch	Special Features
PSD28V16CBPC -0	See Output Rating Table for PSD28V16CBPC-0	
PSD28V16CBPC -1	See Output Rating Table for PSD28V16CBPC-1	Two channels are configured in parallel to achieve 40A.

### Output Rating Table for PSD28V16CBPC -0:

Output	Current Rating	Output	Current Rating
1	30	9	15
2	30	10	15
3	15	11	7.5
4	30	12	15
5	15	13	30
6	15	14	15
7	15	15	30
8	15	16	30

### Output Rating Table for PSD28V16CBPC -1:

TBD

- \* Additional standard configurations available. **Contact factory for more details.**
- \* All of our products can be configured to comply with **EU REACH** regulations.

## Markets & Applications



Military (Airborne, ground-fix, shipboard, vehicle), Ruggedized



Telecom, Industrial

### SPECIAL FEATURES

- User defined maximum current per channel – Current Limit Protection
- Large capacitance charge capability
- 1 input; 16 outputs Power Distribution Unit.
- Configurable current breaker per Switch – Overload Protection Switch
- I<sup>2</sup>t curve for overload switching delay duration.
- Configurable turn-on sequence by card wakeup and by discrete input
- Meets MIL-STD-704A-F, DO160G & EN2282
  - Steady state Voltage levels 16V - 55V
  - Reverse voltage protection for both card and Loads.
- Meets MIL-STD- 461E/F.
- Interface and control:
  - Ethernet Interface (Static & Dynamic IP configurations)
  - 3 Discrete inputs (DCI, RAT, WP)
  - 1 Discrete output (Trip error output)
  - Manual shutdown input

# PDU28V32CEC-X SERIES

## SPECIFICATIONS

<b>Input</b>	<b>Voltage</b>	16 to 55VDC steady state. Compliant with MIL-STD-704A-F, DO-160G, EN2282
	<b>Surges and Spikes</b>	IAW MIL-STD-704F and DO-160G, section 16.0 cat Z. Input clamp at 80V for device and loads.
	<b>Reverse Polarity Protection</b>	Device and loads protected on occasion of reverse voltage application.
	<b>Under Voltage Lockout</b>	Device and outputs turn off when input voltage drops below 5.5 V. Device turns back on when input voltage rises above 6 V.
	<b>Quiescent Current</b>	80mA maximum at 28V input.
<b>Current Switch</b>	<b>Rating</b>	See Outputs Rating Table on page 2
	<b>Drop Voltage</b>	175mV maximum at rated current.
	<b>Overload Protection</b>	Configurable from 2A up to outputs rated current with 5% accuracy using OVERLOAD register. Trip by $I^2t$ curve see overload curve.
	<b>Short Circuit Protection</b>	Configurable from 10A to 125A with 20% accuracy using CURR_LIMIT parameter.. Protection is active, preventing from the short to spread through system. See short circuit curve.
	<b>Capacitive Load Charge</b>	3mF @ $V_{in} = 33V$ , $I_{LIM} = 125A$ Option to charge much greater capacitance, consult factory.
	<b>Paralleling Outputs</b>	Outputs can be paralleled to achieve one common channel with large current limit
<b>Control &amp; Indication</b>	<b>Ethernet</b>	100Base-TX fast ethernet. Communication through simple UDP messages. IP can be static or dynamic.
	<b>Discrete Inputs</b>	Three inputs for functionality control: DCI – Enables a Macro. RAT – Resets all tripped channels. WP – Write protect for the non-volatile RAM. See overview.
	<b>Discrete Output</b>	Has one fault indication (see overview)
	<b>Measurements</b>	Input and outputs voltages Outputs current Device Temperature

## SPECIFICATIONS (Cont.)

<b>Environment</b>	<b>Ambient Temperature</b>	Non-operating ambient : -55°C to +125°C Operating : -55°C to + 85°C. (at baseplate)		
	<b>Humidity</b>	DO-160G, section 6.3.2, Category B		
	<b>Salt-fog</b>	Per MIL-STD-810H, Method 509.7		
	<b>Altitude</b>	MIL-STD-810H, Method 500.6 Procedures I – Storage/Air transport: up to 70,000 ft. (non-operational) Procedure II – Operation/Air Carriage: up to 50,000 ft. (operational)		
	<b>Mechanical Shock</b>	Saw-tooth, 40 g peak, 11 ms.		
	<b>Vibration</b>	MIL-STD-810H Method 514.8 Category 7: Aircraft – Jet, IAW figure C-6, 13.7grams, 1 hour per axis. Category 24: Minimum integrity, IAW figure E-3, 7.7 grams, 1 hour per axis		
<b>EMI</b>	<b>MIL-STD-461G</b>	CE101, CE102, CS101 CS114 (10 kHz to 400 MHz, Curve #5), CS115, CS116, RE101, RE102 (Fixed wing external), RS101 and RS103 (2 MHz to 18 GHz 50 V/m). All tests are at full load and in accordance with the provisions of MIL-STD-461G – with shielded signals.		
<b>MTBF</b>	78,000 hours, calculated per MIL-STD-217F N2 at +85 °C at baseplate, Ground Fixed			
<b>Weight</b>	8.8 lb. (4kg)			
<b>Connectors</b>	Connector	PDU Connector P/N	Mating Connector	Manufacture
	J1	HE30800T2544PN7M OR EQ	HE30806T2544SN7M	AMPHENOL
	J2	D38999/20WJ19SN Or EQ	D38999/26WJ19PN	QPL
	J3&J4	TVP00RW25-8SF478 OR EQ	TV06RW25-8PF478	AMPHENOL
	J5	D38999/20WB35SN OR EQ.	D38999/26WB35PN	QPL

Default settings for -100 from factory and after ERASE\_DATA command:

- Static IP mode
- Static IP address: 192.168.0.51
- OVERLOAD current limits set to channel maximum values.
- Short-circuit current limit set to 125A for 30A channels, 80A for 15A channels, 40A for 7.5A channel
- All channels off
- No Groups
- DCI is empty