



### **LVPS**

*Low Voltage, Low Profile,  
Multi-Output (3 Outputs Standard)  
Power Supply Module (Up to 125W)*

### **APPLICATIONS**

CME's high-density multi-output power modules are ideal for military, telecommunications, and industrial power applications. The swappable power supply module (PSM) can be used for aircraft mission payloads.

Weighing less than 0.8 pounds (0.363 kg), these highly configurable and stackable modules provide a high degree of system flexibility where high reliability, small size and light weight are essential.

### **DESCRIPTION**

Defense Electronics Corporation™ (DEC™) is a research, engineering, and development small business focused on power electronics innovation especially related to the development of innovative, enabling AC-DC and DC-DC power supplies. Developed through internal investment R&D and test program, this high-density multi-output, nominal 28V input DC-DC power supply modules are designed for mission critical applications while providing high reliability power in adverse environments especially for military, telecommunications or industrial requirements.

This family of power modules provides quality power with a variety of single or multiple output configurations, in a light weight modular package. The LVPS meets the demand for excellent power stability during extreme EMI/EMC conditions and severe environmental conditions. The DC-DC Converter provides 22.0 to 30.0 Vdc Input, 28 Vdc nominal, and has input adjustable current limit. The module provides a differential signal indicating the state of the output voltage. Utilizing the latest in power switching technology these high density light weight power modules can be used in a number of stackable and configurable power bus applications.

### **KEY FEATURES & BENEFITS**

- Modules can be customized to fit custom power configuration requirements
- Excellent power quality under extreme environments
- Available as low voltage regulated supply, or power conversion (AC/DC & DC/DC)
- Adaptive stackable power Bus configuration
- Outputs are electrically and thermally protected
- Over-voltage protection circuitry; current limit protected on each output voltage rail; external power supply output voltage shutdown
- External Synchronization capability available
- MIL-STD-217F MTBF: 88,000 hr

*[www.defense-elec-corp.com](http://www.defense-elec-corp.com)*

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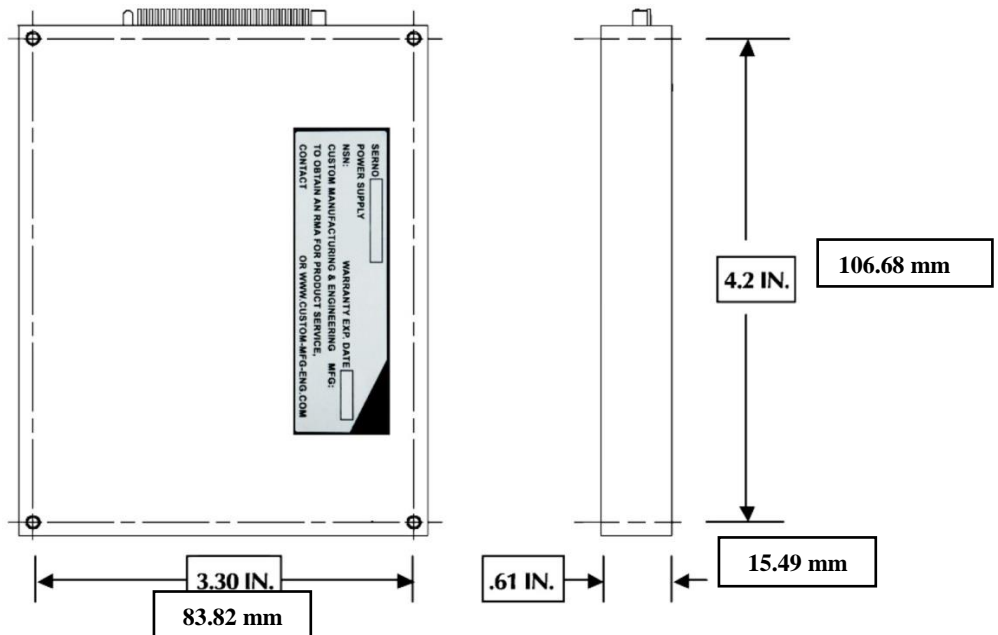
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## LVPS SPECIFICATIONS

|                             |   |
|-----------------------------|---|
| <b>INPUT POWER</b>          | Typically 28 VDC (other input ratings available)<br>Input current <4.3A maximum @ 28 VDC<br>Input power sensing for pass/fail reporting                               |
| <b>OUTPUT POWER</b>         | Single or Combination of up to 3 – typical (Multiple) Example:<br>+8.2 VDC, -8.2 VDC, & +5.2 VDC (5.0A max per output-type)   |
| <b>PROTECTION</b>           | Electrical – (O.V., U.V., OC), Self-recovery current limiting<br>isolated input/outputs. Thermal – internal over temperature<br>protection; and external port control |
| <b>LINE/LOAD REGULATION</b> | 1% (no load to full load, -67F (-55°C) to 185°F (85°C))   |
| <b>RIPPLE/NOISE</b>         | 50mVp-p, typical (max 1%)   |
| <b>TEMPERATURE</b>          | -67°F (-55°C) to 185°F (85°C) operating<br>-85°F (-65°C) to 221°F (105°C) non-operating   |
| <b>ENVIRONMENTAL</b>        | Sea level to 60,000 ft. operating, 100 percent humidity   |
| <b>EFFICIENCY</b>           | Up to 80%   |
| <b>SIZE/WEIGHT</b>          | Height: 4.53 in. (115.062 mm) (max)<br>Width: 3.54 in. (89.916 mm) (max)<br>Depth: 0.61 in. (15.49 mm) (max)<br>Weight: <0.8 pounds (0.363 kg)                        |
| <b>RELIABILITY</b>          | MTBF of 88,000 hrs (min), useful life >15 yr requirement  |
| <b>COMPLIANCE</b>           | MIL-STD-704E, MIL-HDBK-5400, MIL-HDBK-454   |
| <b>OPTIONS</b>              | Can be customized for many output combinations; or single and<br>dual outputs   |

## OTHER FEATURES

Enclosed Modular design in an aluminum case with commercially available 30 pin connector.



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## EXAMPLE LVPS PIN ASSIGNMENT

| Pin Number | Input / Output | Signal Name            |
|------------|----------------|------------------------|
| 1          | O              | -8.2 Vdc Output #1     |
| 2          | O              | -8.2 Vdc Output #1 Rtn |
| 3          | O              | -8.2 Vdc Output #1     |
| 4          | O              | -8.2 Vdc Output #1 Rtn |
| 5          | –              | Spare                  |
| 6          | O              | +5.2 Vdc Output #2     |
| 7          | O              | +5.2 Vdc Output #2 Rtn |
| 8          | O              | +8.2 Vdc Output #3     |
| 9          | O              | +8.2 Vdc Output #3 Rtn |
| 10         | –              | Spare                  |
| 11         | O              | Inhibit Rtn            |
| 12         | I              | +28 Vdc Rtn            |
| 13         | I              | +28 Vdc Rtn            |
| 14         | I              | +28 Vdc                |
| 15         | I              | +28 Vdc                |
| 16         | –              | Spare                  |
| 17         | –              | Spare                  |
| 18         | O              | +5.2 Vdc Output #2     |
| 19         | O              | +5.2 Vdc Output #2 Rtn |
| 20         | O              | Volts Good             |
| 21         | O              | Volts Good Bar         |
| 22         | O              | +8.2 Vdc Output #3     |
| 23         | O              | +8.2 Vdc Output #3 Rtn |
| 24         | O              | Volts Good Rtn         |
| 25         | I              | Inhibit                |
| 26         | I              | +28 Vdc Rtn            |
| 27         | I              | +28 Vdc Rtn            |
| 28         | I              | +28 Vdc                |
| 29         | I              | +28 Vdc                |
| 30         | I              | Chassis Ground         |

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