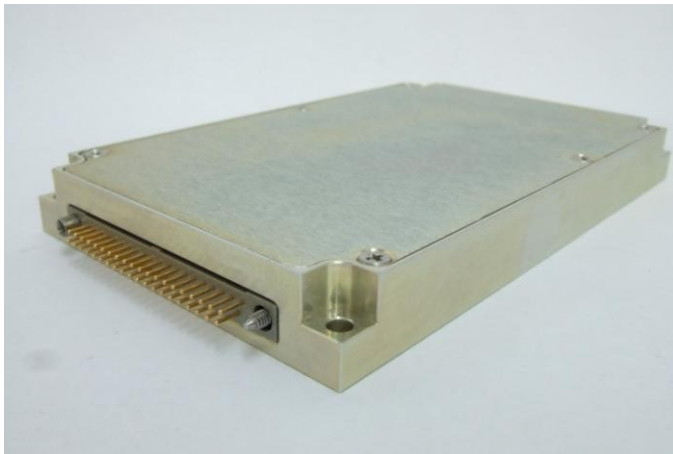


# 70Watt Military Triple Output Isolated DC/DC Converter

## MVM-70-5P5-3K

### Main Features:

- For Airborne Missile & Ground application
- Meets MIL-STD-704A/F and MIL-STD-1275D
- High Efficiency - Typical 86 % (Full Load @ 25 C)
- Fully protected for Over Load /Short , Over-voltage and Over-Temperature
- 3 Isolated outputs
- Base Plate cooling
- No external EMI filter needed



### Typical Applications:

- EW systems
- RWR Receivers
- Missile
- Navigation Systems
- Outdoors Telecom

### Output Specifications:

Output #	Voltage	Current	Power	R&N	Notes
OUT #1	3.3V	3A	69.9W	20mV	Remote Sense
OUT #2	5.5V	10A		20mV	Local Sense
OUT #3	-5.0V	1A		20mV	Local Sense

## Product Specification:

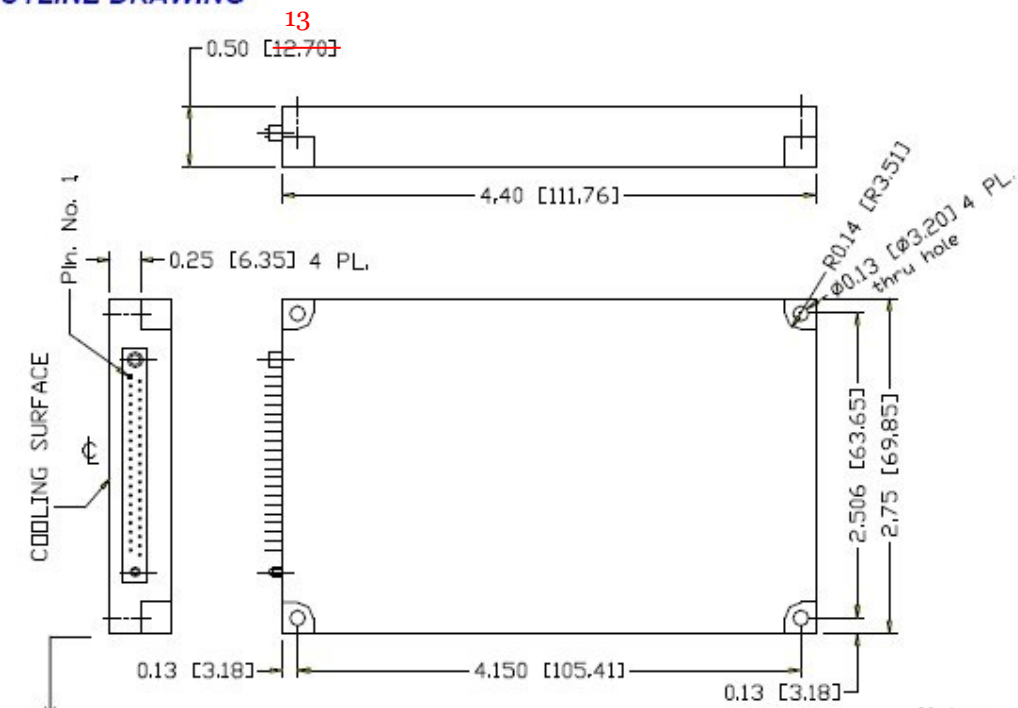
<b>Input</b>	<p>Input voltage range 20-36VDC          Input Per MIL-STD-704A/F (Including 80V for 100MSEC)          Input Per MIL-STD-1275D (Including 100V for 50MSEC)          Reverse Polarity Protection</p>														
<b>Output</b>	<p>Output voltage / Current – See table above          Line Load &amp; Temperature regulation &lt; +/-2%          Current limit on each output – 110-200% of rated current – Hick-Up          Over-Voltage on each output – Non-latch type          Isolation – Input / Output - &gt;100VDC</p>														
<b>Interface</b>	<p><b>Control Signals</b>          TTL level – Low &lt; 0.7V, 5V &gt; High &gt; 2.4V.          Gnd /Open – Gnd &lt; 0.7V, Open &gt; 2V. At Open State no voltage over 12V is allowed on the signal line.  <b>ENABLE - input</b>          An ENABLE line (with internal pull-up), which turns on the P.S.          ENABLE = Open, P.S. is off.          ENABLE = GND (-2V ÷ +2V) P.S. is on.  <b>SIGNAL RTN</b>          Return Line of Input Signals ENABLE and SYNC IN.          Internally connected to return of Input Aux. P.S. – Not Isolated from Input.  <b>Synchronize CLK (Sync. CLK) - input</b>          External clock, synchronize the power supply clock to external clock. Clock frequency: 312.5 KHz.          Duty cycle: 50%  <b>Internal Switching frequency</b>          Internal frequency source: 312.5KHz ± 5%.</p>														
<b>Environmental</b>	<p>Operating Temperature -40°C - +85°C Base plate          Shock &amp; Vibration per MIL-STD-810G</p> <table border="1" data-bbox="327 1265 938 1624"> <tr> <td colspan="2">Taiwan Accreditation Foundation (TAF) Lab MIL-STD-810G Environmental Test Criteria</td> </tr> <tr> <td>Vibration</td> <td>514</td> </tr> <tr> <td>Shock</td> <td>516 I</td> </tr> <tr> <td>Temp Cycling</td> <td>501 II &amp; 502 II</td> </tr> <tr> <td>Low Temp</td> <td>502.5 I&amp;II; 502.7 I&amp;II</td> </tr> <tr> <td>High Temp</td> <td>501.5 I&amp;II; 501.7 I&amp;II</td> </tr> <tr> <td>Humidity</td> <td>507.5 II; 507.6 II</td> </tr> </table> <p>EMI-RFI per MIL-STD-461G          MTBF – 289,347 Hours typical for GM (25°C) Per MIL-HDBK-217F notice-2</p>	Taiwan Accreditation Foundation (TAF) Lab MIL-STD-810G Environmental Test Criteria		Vibration	514	Shock	516 I	Temp Cycling	501 II & 502 II	Low Temp	502.5 I&II; 502.7 I&II	High Temp	501.5 I&II; 501.7 I&II	Humidity	507.5 II; 507.6 II
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<b>Mechanical</b>	<p>Size - 112mm x 70mm x 13mm          Weight – 170 g          Cooling – Base plate          Input / Output connector – 40 PIN Airborne P/N RM272-040-312-2900</p>														

## Outline Drawing:

Connector - "AIRBORN" RM272-040-312-2900

PIN #	FUNCTION	PIN #	FUNCTION	PIN #	FUNCTION	PIN #	FUNCTION
1	ENABLE	11	(+)OUT 2 SENSE	21	SIGNAL RTN	31	(-)VIN 24VDC
2	SYN IN.	12	(+)OUT 3 -5.0V RTN	22	CHASSIS	32	(-)VIN 24VDC
3	(-)OUT 2 SENSE	13	(-)VIN 24VDC	23	(-)OUT 1 +3.3V	33	(-)VIN 24VDC
4	(-)OUT 1 +3.3V	14	(+)VIN 24VDC	24	(-)OUT 1 +3.3V	34	(+)VIN 24VDC
5	(-)OUT 1 +3.3V	15	N.C	25	(-)OUT 1 +3.3V	35	(+)VIN 24VDC
6	(-)OUT 1 SENSE	16	N.C	26	(-)OUT 1 +3.3V	36	(+)VIN 24VDC
7	(+)OUT 1 +3.3V	17	(-)OUT 2 +5V	27	(+)OUT 1 +3.3V	37	(+)OUT 2 +5V
8	(+)OUT 1 +3.3V	18	(-)OUT 2 +5V	28	(+)OUT 1 +3.3V	38	(+)OUT 2 +5V
9	(+)OUT 1 SENSE	19	(-)OUT 2 +5V	29	(+)OUT 1 +3.3V	39	(+)OUT 2 +5V
10	(-)OUT 3 -5.0V	20	(-)OUT 2 +5V	30	(+)OUT 1 +3.3V	40	(+)OUT 2 +5V

## OUTLINE DRAWING



Connector: AIRBORN RM 272-040-312-2900 or equivalent

### Notes

- Dimensions are in Inches [mm]
- Tolerance is:  
XX ±.02 IN  
.XXX ±.01 IN
- Weight: Approx. 13.4 Oz (380 gr)

\* Specifications are subject to change without prior notice by the manufacturer