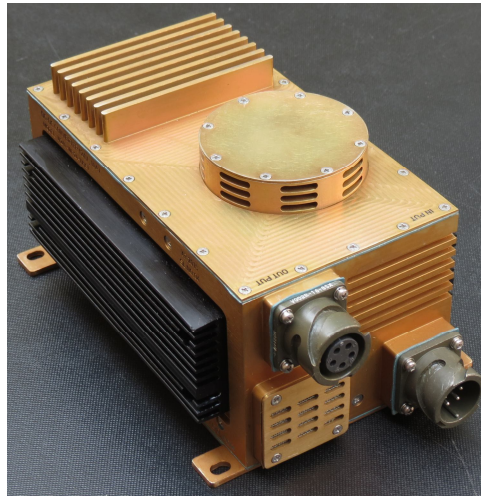


## DC-DC CONVERTER

Rev: 00, Mar 2018, [www.variturndefence.com](http://www.variturndefence.com)

24V, 10A, 240W



Size : 8.66 x 5.35 x 4.25 inches (220 x 136 x 108mm)

### Key Features:

- Wide input range: 100 to 400 VDC.
- Output : 24VDC.
- High Efficiency.
- Very low ripple and noise.
- < 0.6 % of line regulation
- < 0.4 % of load regulation
- < 40mVp-p of ripple.
- < 90mVp-p of noise.
- Approx 60 mSec Holdup time.
- Fixed frequency switching operation.
- Isolated.
- UVLO (Under Voltage Lock Out).
- OVLO (Over Voltage Lock Out).
- Reverse polarity protection.
- Short circuit protection.
- Over Temperature Shutdown.
- -10<sup>o</sup> to +55<sup>o</sup>C operation.
- Compact in size.
- **Meets MIL-STD-461E (EMI/EMC)**
- **Meets JSS 55555 (Environmental)**

### Description:

These series of DC/DC converters are available in Customized package and Model: VI240-WR24-1V1C1 is capable of driving up to 250W. These DC/DC converters can accept an input voltage rail between 100VDC and 400VDC and delivers a constant output voltage.

No external capacitors/ resistors required and it has reliable and robust design with following protection features: Reverse polarity protection, UVLO, OVLO, Output short circuit , Over Temperature Shutdown.

### Applications:

- Industrial power supplies.
- Telecommunication systems.
- Military.
- Navy
- Submarine.
- Ruggedized systems

### VARITURN ELECTRO PRODUCTS (P) LTD.

196, Phase-II, IDA, Charlapally, Hyderabad-500051, Telangana, INDIA.  
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**DC-DC CONVERTER**

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**24V, 10A, 240W**
**Electrical Specifications:**

Sl. No	Parameter	Condition	Values			Units
			Min	Typ	Max	
1	<i>Operating Input Voltage range</i>		100	240	400	VDC
2	<i>Output voltage</i>		+23.95	+24	+24.1	VDC
3	<i>Output current</i>		—	10	11	A
5	<i>Output power</i>		—	240	264	W
6	<i>Line regulation</i>	Vin Min to Vin Max and @ 7A load	—	0.62	0.7	%
7a	<i>Load regulation</i>	10% load to full Load	—	—	0.4	%
7b		No load to full Load	—	—	0.46	%
8	<i>Output ripple</i>	@ Nominal input	—	40	42	mVp-p
9	<i>Noise</i>	@Nominal input, 20 MHz Band width	—	92	98	mVp-p
10	<i>Efficiency</i>	@ Nominal input and @ Full load	90	91	92	%
11a	<i>Isolation</i>	Input to Output	—	>1000	—	VDC
11b		Input to Case	—	>1000	—	VDC
11c		Case to Output	—	>1000	—	VDC
12	<i>Holdup time</i>	@ 7A load	—	53	60	mSec
<b><u>Input protections</u></b>						
13	<i>UVLO (Auto recovery)</i>			YES		
14	<i>OVLO (Auto recovery)</i>			YES		
15	<i>Reverse voltage Protection.</i>			YES		
<b><u>Output protections</u></b>						
16	<i>Short circuit (Auto recovery)</i>	@ Nominal input voltage, Room temp.		YES		
17	<i>Over load/ Over current (Auto recovery)</i>	@ Nominal input voltage, Room temp.		YES		
18	<i>Operating Temperature</i>	—	-10	—	+55	°C
19	<i>Storage Temperature</i>	—	-20	—	+70	°C
20	<i>Input connector</i>	—	5 pin - Circular connector-Pins			
21	<i>Output connector</i>	—	5 pin - Circular connector– Sockets			

**DC-DC CONVERTER**

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**24V, 10A, 240W**
**Qualification test Specifications:**

<u>Sl. No</u>	<u>Parameter</u>	<u>Condition</u>	<u>Remarks/ Frequency range</u>
<b><u>Environmental As per JSS 55555, 2012 Rev03</u></b>			
1	<b>High Temperature Test</b>	<i>Procedure 6, Test Condition K, Page no.4-73</i>	
2	<b>Low Temperature Test</b>	<i>Procedure 4, Test Condition H, Page no.4-84</i>	
3	<b>Damp Heat Test</b>	<i>Test No:10, Page no.4-48</i>	
4	<b>Mould Growth Test (FUNGUS)</b>	<i>Test No:21, Page no.4-87</i>	
5	<b>Corrosion (Salt) Test</b>	<i>Test No.9, Procedure 1, Page no.4-44</i>	
6	<b>Shock Test</b>		
7	<b>Environmental Stress Screen (ESS)</b>		
<b><u>EMI/EMC As per MIL-STD 461E</u></b>			
1	<b>CE-101</b>	<i>Conducted Emissions , Power Leads</i>	30 Hz – 10 KHz
2	<b>CE-102</b>	<i>Conducted Emissions , Power Leads</i>	10 KHz – 10 MHz
3	<b>CS-101</b>	<i>Conducted Susceptibility , Power Leads</i>	25 Hz – 150 KHz
4	<b>CS-114</b>	<i>Conducted Susceptibility , Bulk Cable Injection</i>	10 KHz – 200 MHz
5	<b>CS-115</b>	<i>Conducted Susceptibility , Ground - Bulk Cable Injection</i>	Impulse Excitation
6	<b>RE-101</b>	<i>Radiated Emissions , Magnetic Field (Cables &amp; equipment)</i>	25 Hz – 100 KHz
7	<b>RE-102</b>	<i>Radiated Emissions , Electric Field</i>	10 KHz – 1 GHz
8	<b>RS-101</b>	<i>Radiated Susceptibility , AC Magnetic Field</i>	25 Hz – 100 KHz
9	<b>RS-103</b>	<i>Radiated Susceptibility , Electric Field</i>	2 MHz – 40 GHz
10	<b>RS-06</b>	<i>Radiated Susceptibility , DC Magnetic Field</i>	1200 A/m

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24V, 10A, 240W

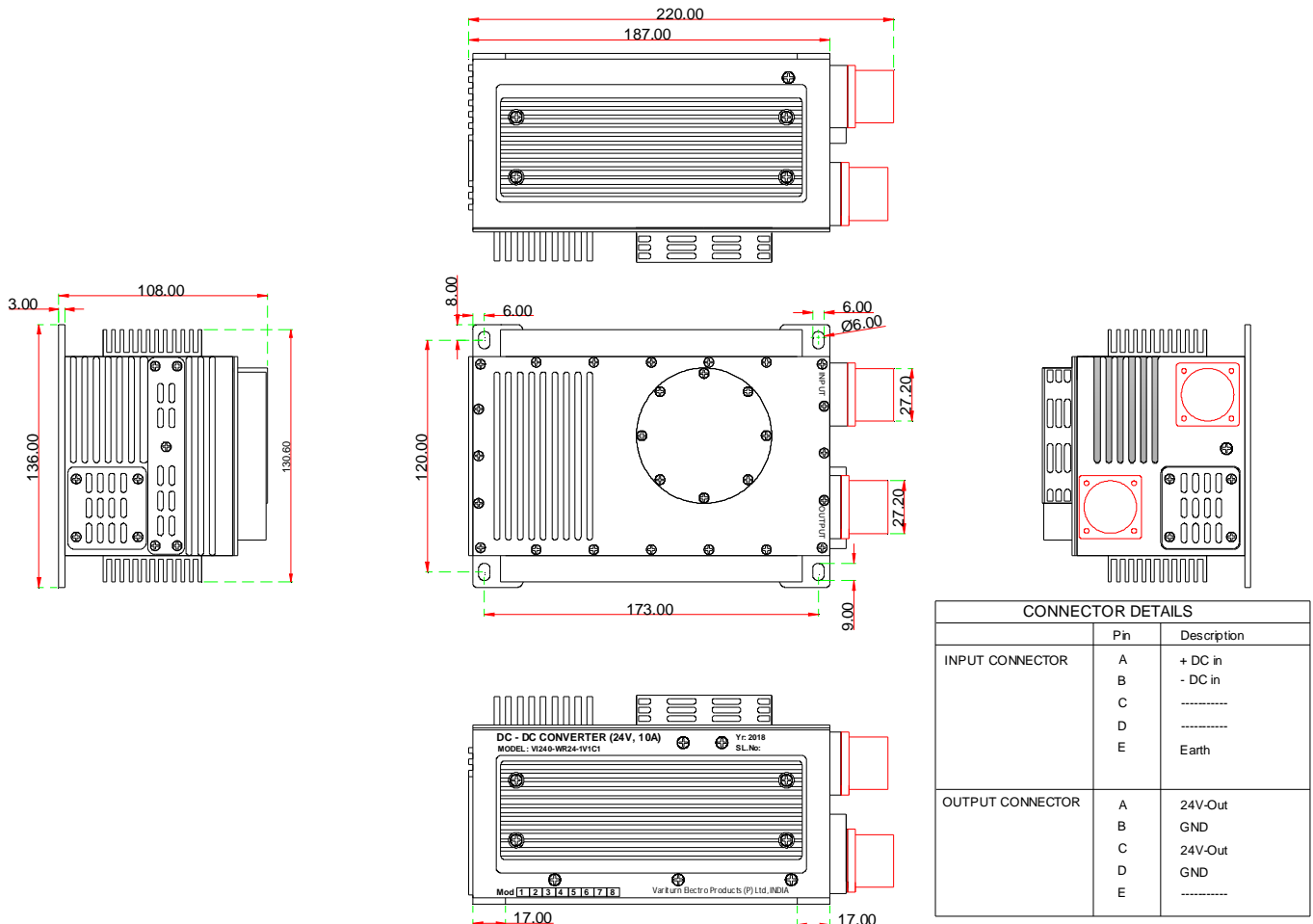
### Absolute Maximum ratings:

Input voltage	100V to 400V
Output power	264 W
Output current	11 A
Storage temperature	-40°C to +150°C

### Mechanical Specifications:

	Length (mm)	Width (mm)	Height (mm)
Overall specifications	220 ±0.5	136 ±0.3	108 ±0.2

### Dimensions:



#### Note:

- All dimensions are in mm, unless otherwise specified.
- Tolerance: ±0.15mm. (Max)
- Not to scale

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