

RO-MIL-2230

40W Triple Output Converter

28V INPUT, 5V 5A & $\pm 12/15V$ 0.6A OUTPUT

Basic Data

Variant	Input	Regulated Outputs
RO-MIL-2230-A	28V	5V 5A, $\pm 15V$ 0.6A
RO-MIL-2230-B	28V	5V 5A, $\pm 12V$ 0.6A
W x D x H:	69.0 x 34.2 x 11.5mm (Flanged)	
	49.5 x 34.2 x 11.5mm (Non-Flanged)	
Weight: 60g max		
Operating Temperature: $-55^{\circ}C$ to $+85^{\circ}C$		



Description

RO-MIL-2230 is a compact, high efficiency, 40W triple output DC-DC converter. Operating from 28V it has a wide input voltage range of 15 to 40V and operates over the full temperature range without derating. The unit is unconditionally stable and does not require any external components for correct operation.

The compact size and high efficiency are achieved by applying innovative packaging techniques.

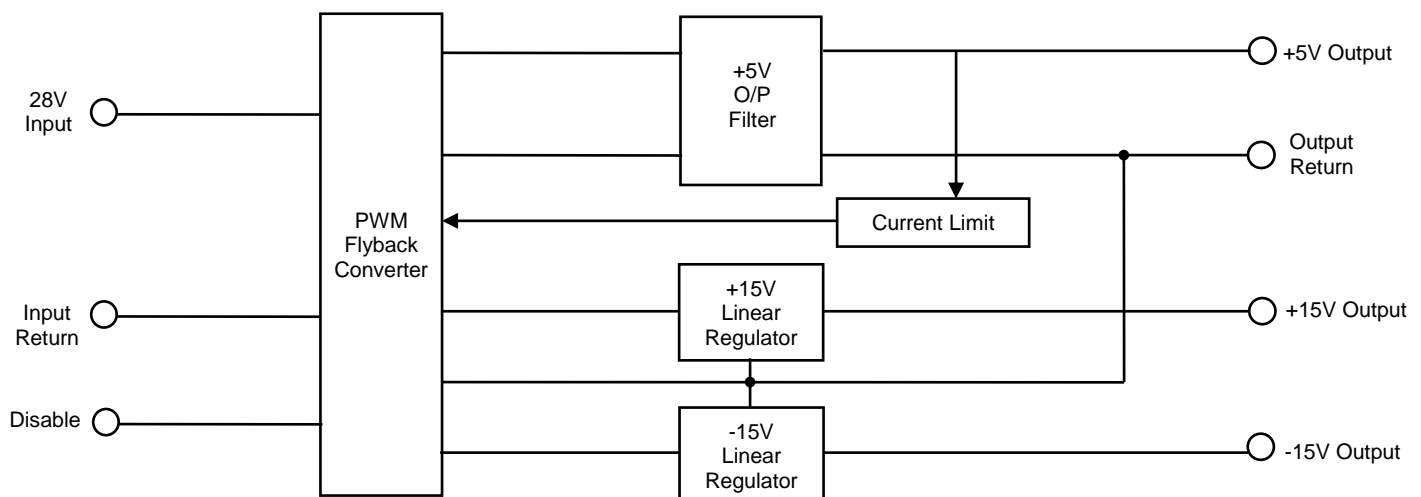
Energy for the 5V output is provided by an isolated high frequency PWM converter.. The two auxiliary outputs share a common return with the 5V rail and are both linear regulated.

Short-circuit, overload and overvoltage protection is included as well as a primary-side remote disable facility. The unit can withstand a 50V input surge for up to 100ms with an optional 80V surge rating available.

The unit is housed in a conversion coated machined box. A non-flanged version is also available, please contact the sales office.

All units are manufactured on site in accordance with Roband's approved Quality Management System.

Block Diagram



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Specification

($T_{case} = 25^{\circ}\text{C}$, $V_{in} = 28V_{dc} \pm 2\%$, Load = 100%, unless otherwise specified)

Input		Environmental	Method	Procedure
Nominal Voltage	28Vdc	To MIL-STD 810G		
Working Range	18 to 40Vdc	Temperature Shock	503.5	(-55 to +85°C)
	50V surge for 100ms (for 80V surge contact sales office)	High Temperature	501.5	(+85°C Operate)
Disable	5V, 5mA source to Pin 7 to disable	Low Temperature	502.5	(-55°C Operate)
		Low Pressure	500.5	(40.000ft Operate)
		Vibration	514.6	(10g, 9 Hours)
		Humidity	507.5	(95% Operate)
Output Voltage		Fungus	508.6	
5V Output	5Vdc ±50mV	Salt Fog	509.5	
±12/±15 Outputs	12/15Vdc ±300mV	Sand and Dust	510.5	
Current Rating		Reliability		
5V Output	5A maximum	To MIL-STD-217F		
±12/±15 Outputs	0.6A maximum	Environment	A.I.F. at 70°C	
Ripple Voltage		MTBF	>90,000 hours	
5V Output	125mV _{p-p} maximum	Enclosure		
±12/±15 Outputs	110mV _{p-p} maximum	Size	69.0x34.2x11.5mm (Flanged)	
Load Regulation			49.5x34.2x11.5mm (Non-Flanged)	
5V Output	20mV, 1 to 5A Load	Weight	45g max	
±12/±15 Outputs	20mV, 0.06 to 0.6A Load	Material	Aluminium Alloy	
Line Regulation (18 to 40V Input)		Finish	SurTec 650	
5V Output	10mV	Clearance Holes	4.1mm Diameter	
±12/±15 Outputs	10mV	Lead Soldering		
Efficiency		Temperature	300°C max for 5 seconds max	
Typical	80%	Caution		
Temperature		Unit must be treated as a static sensitive device.		
Operating, case	-55°C to +85°C	Regulations		
Storage	-65°C to +135°C	RoHS compliant		
Coefficient	200ppm per °C	REACH compliant		
Isolation				
Input to Chassis	>100Mohms at 500V			
Output to Chassis	>100Mohms at 500V			
Input to Output	>100Mohms at 500V			

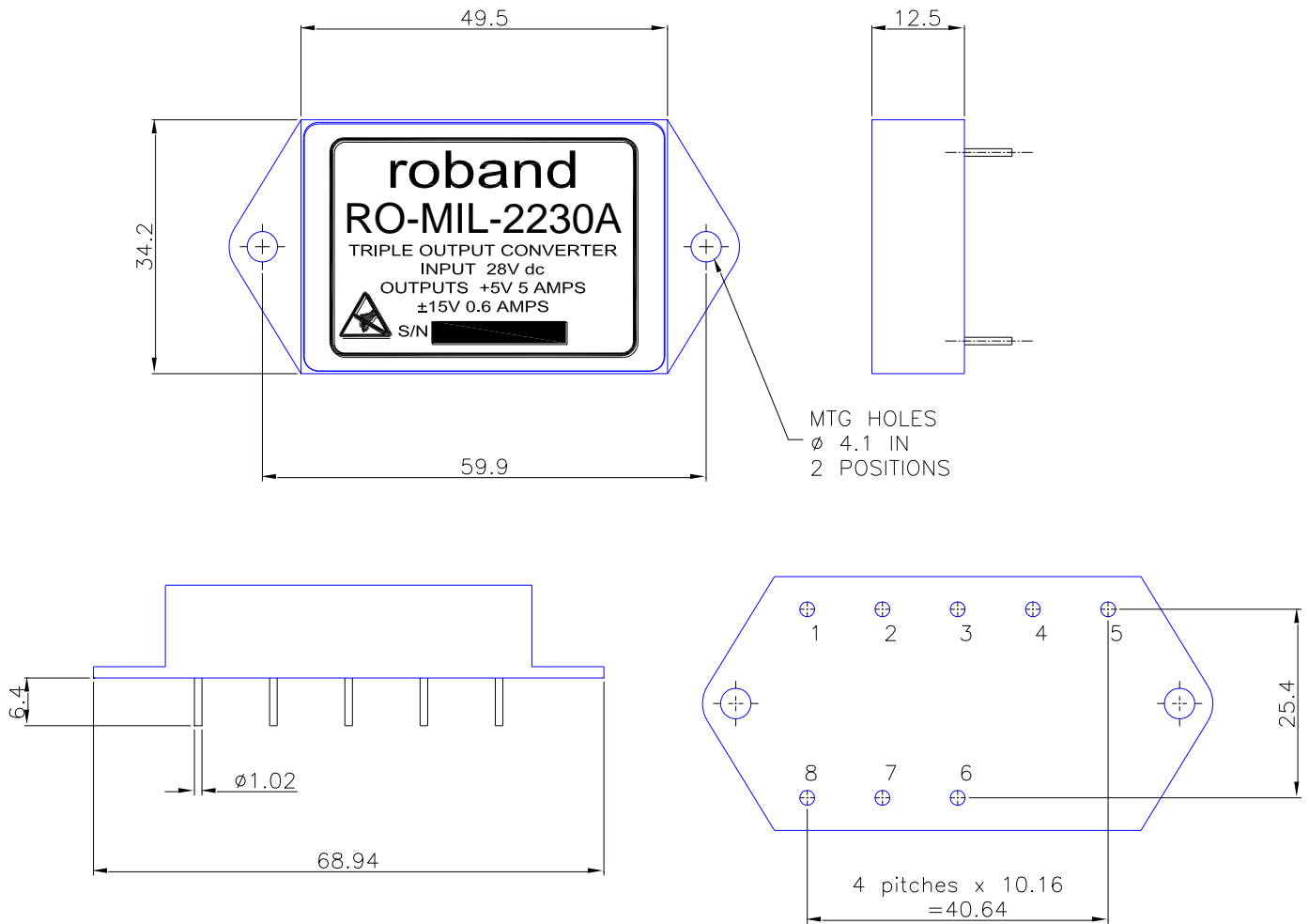
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Outline Drawing

Dimensions in mm



Pin Allocation

Pin	Function
1	Input
2	+5V Output
3	Output Common
4	-15V Output
5	+15V Output
6	Chassis Earth
7	Enable
8	Input Common

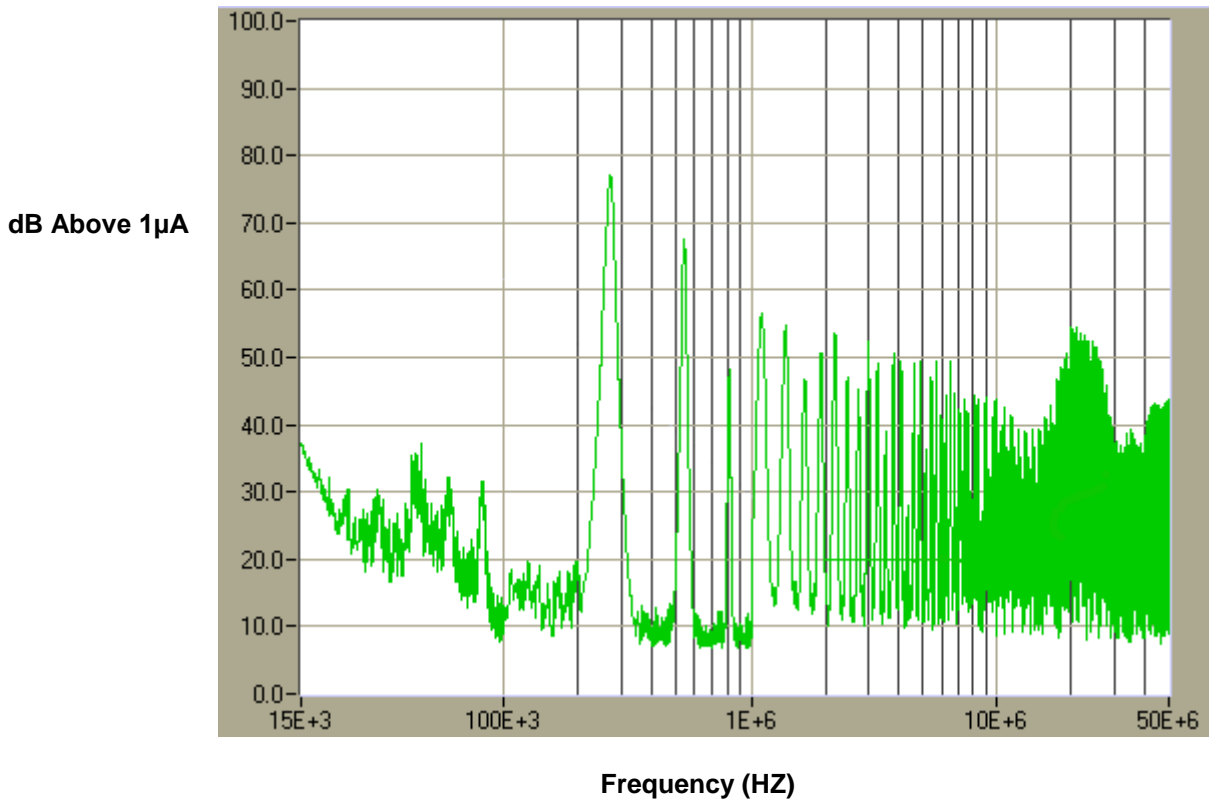
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Input 28V DC 5A, $\pm 15V(\pm 12V)$ 0.6A

Conducted Emissions to MIL-STD-461C CE03

Input Common Mode



Input EMI Noise Generated (dB μ A) vs Frequency (Hz)

The seller reserves the right to amend or alter the specification without notice.
Roband recognizes that different applications may require specific amendments to the unit.
Whenever possible we will accommodate these special requirements seamlessly