



1250W AUTO-TRANSFORM RECTIFIER UNIT (ATRU)

Ultra-light Weight Solutions

TT Electronics' 1250W ATRU is an AC/DC converter designed for applications where clean, reliable power is a must. Weighing in at less than 4 lbs, the space-saving design is ideal for airborne applications which do not require output isolation. The standard model converts 115/200 Vac, 3-Phase 400 Hz to unregulated 270 Vdc output.

Key Features:

- High efficiency and power density
- Wild frequency operation
- Patented 30-pulse rectification scheme
- Designed to DO-160 requirements
- High reliability (>100,000 hours MTBF)
- Custom designs available

Applications:

- Commercial aircraft
- Military aircraft



The ATRU is ideal for commercial and military airborne applications.

Electrical Specifications

Input	
Voltage	115/200 Vac, 3-phase
Frequency	360 to 800 Hz (wild)
Current Harmonics	per DO-160, § 16 to the 28th harmonic; nominal input and full, resistive load*
Transients	per DO-160, § 16
Power Factor	>0.99
Output	
Voltage	270 Vdc, unregulated
Current	4.6A
Ripple	5% Vp-p max
Efficiency	> 96%

* Extended current harmonic compliance available with custom filter design

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Mechanical Specifications

Dimensions (HxWxD)	3.8" x 4.4" x 2.5"
Weight	3.6 lbs. (1.6 kg)
Mounting	Two surfaces, per figures
Electrical Connections	Terminal blocks with safety covers, metric M3 screws, chassis connection
Baseplate Cooling	80°C Maximum at Full Load

Environmental Specifications

Ambient Temperature	-40°C to +70°C (operation), -55°C to +85°C (Storage)
Altitude	15,000 ft (4,600 m) (D0-160, §4, A1)
Shock	6g, 11 ms (D0-160, §7, Cat B)
Vibration	6.4 grms random, tri-axial
MTBF	> 100,000 hours at 25°C ambient

Figure 1. Side Mounting Surface

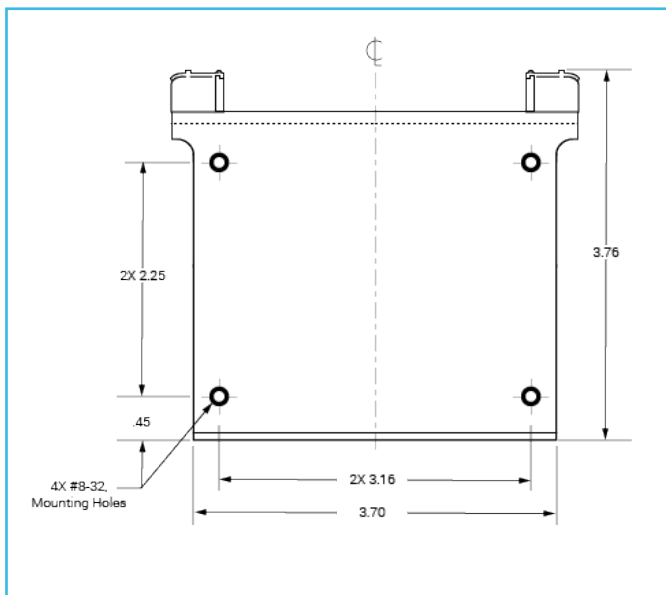
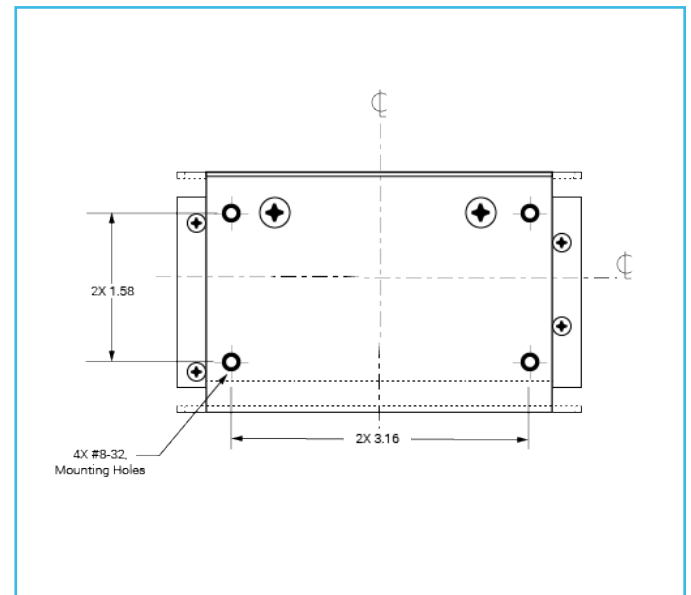


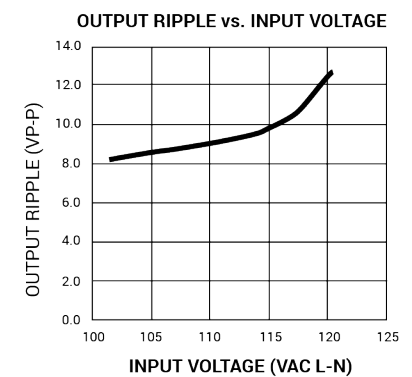
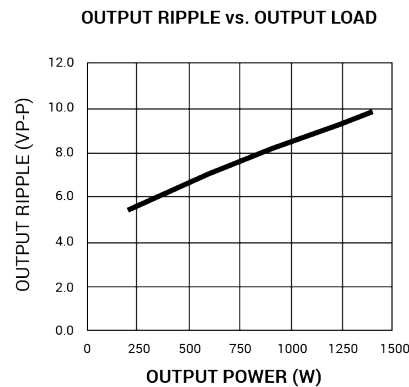
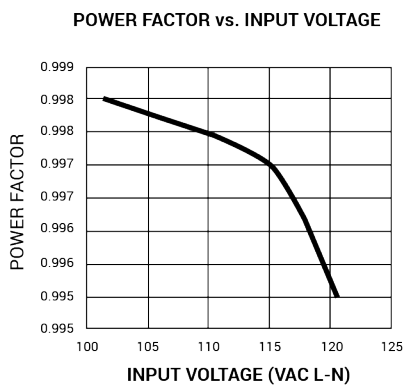
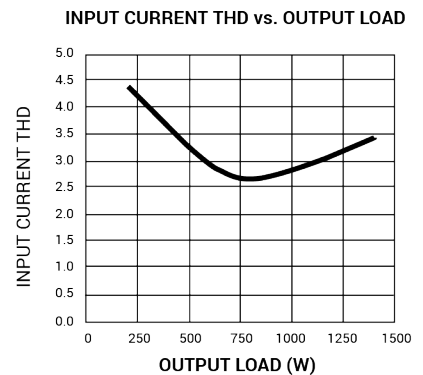
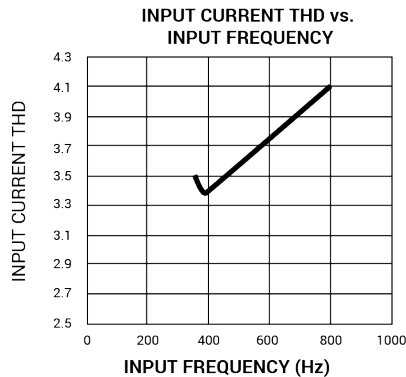
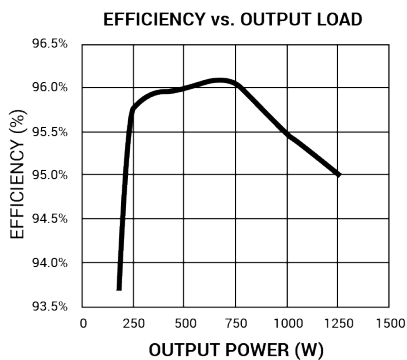
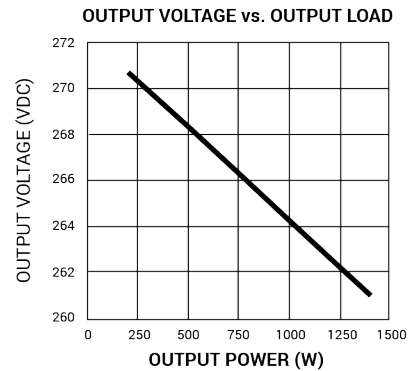
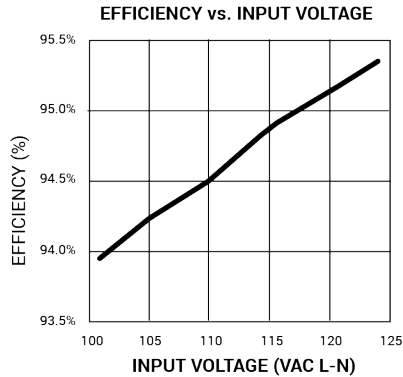
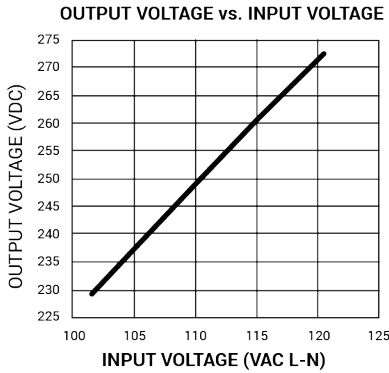
Figure 2. Bottom Mounting Surface



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Figure 3. Typical Operating Characteristics

(115 VAC L-N, 400 Hz Input at Full Load unless otherwise noted)



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