



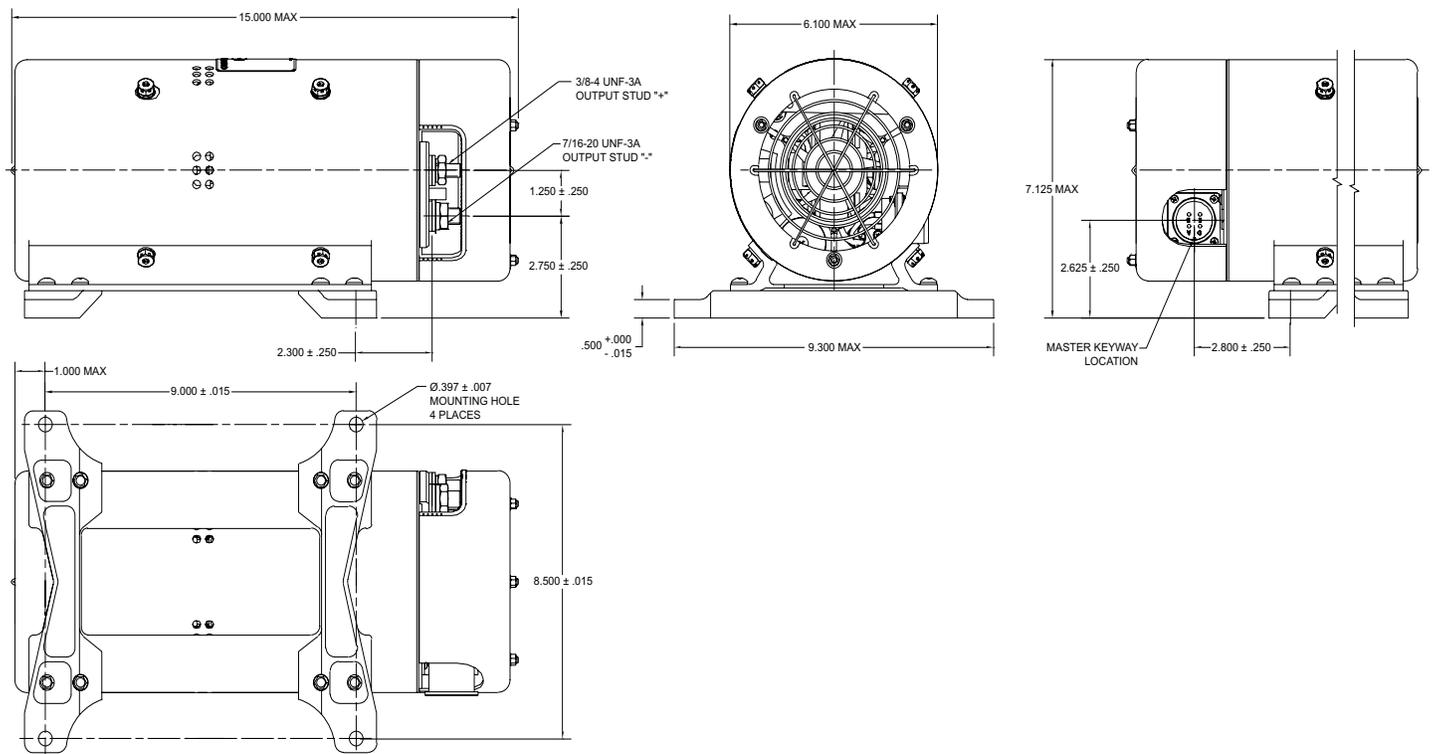
# 300 AMP PASSIVELY CONTROLLED TRANSFORMER-RECTIFIER MODEL 28VS300Y-35

The Model 28VS300Y-35 Passively Controlled Transformer-Rectifier Unit is a lightweight, highly reliable, static AC to DC converter designed for advanced avionics. The unit operates from a 115 / 200 volt, 400 hertz, 3 phase AC source, and provides 300 amperes of current continuously at a nominal 28 volts DC.

Champion's PCTRU provides higher power quality than a regulated TRU by delivering low ripple voltage, transient voltage surge suppression, high efficiency and the highest reliability without the added failures modes inherent to regulated TRUs. Champion model 28VS300Y-35 clamps high voltage transients to 40 volts max as compared to regulated TRUs and traditional TRUs which can allow high voltage transient up to 70 volts. This higher quality power eliminates faults, increases operational time and performance, reduces operational cost, and increases safety. Champion's PCTRU exceeds power quality requirements of industry standards.

## SPECIFICATIONS

<b>INPUT-AC</b> Voltage..... 115/200 ..... Volts Current-Full Load ..... 27 ..... Amperes Frequency ..... 380 to 420 ..... Hertz Phase ..... 3 ..... 4 Wire <b>OUTPUT-DC</b> Voltage-Nominal..... 28 ..... Volts Current ..... 300 ..... Amperes Ripple (Half Load) ..... 0.4 (Max) ..... Volts Pk-Pk (Full Load) ..... 0.7 (Max) ..... Volts Pk-Pk Overload ..... 200% ..... One Minute <b>DUTY CYCLE</b> ..... Continuous <b>EFFICIENCY</b> ..... 85 ..... Percent (Min) <b>POWER FACTOR</b> ..... 95 ..... Percent (Min)	<b>TVSS CLAMPING</b> ..... 40 .....(Full Load) Volts (Max) <b>COOLING</b> ..... Fan <b>ALTITUDE</b> ..... 25,000 Ft. <b>ALTITUDE TEMP. RATING</b> ..... Per Curve 2 ..... MS33543 (ASG) <b>SIZE</b> ..... 15.00 L x 9.300 W x 7.125 H Inches <b>WEIGHT</b> ..... 29 .....Pounds <b>MOUNTING POSITION</b> .....Any <b>TRANSFORMER</b> Primary.....Wye Secondary.....Delta-Wye <b>RECTIFIERS</b> ..... Schottky Diodes <b>ELECTRICAL CONNECTIONS</b> Input..... MS3452W-20-4P Receptacle Output..... Terminal Studs
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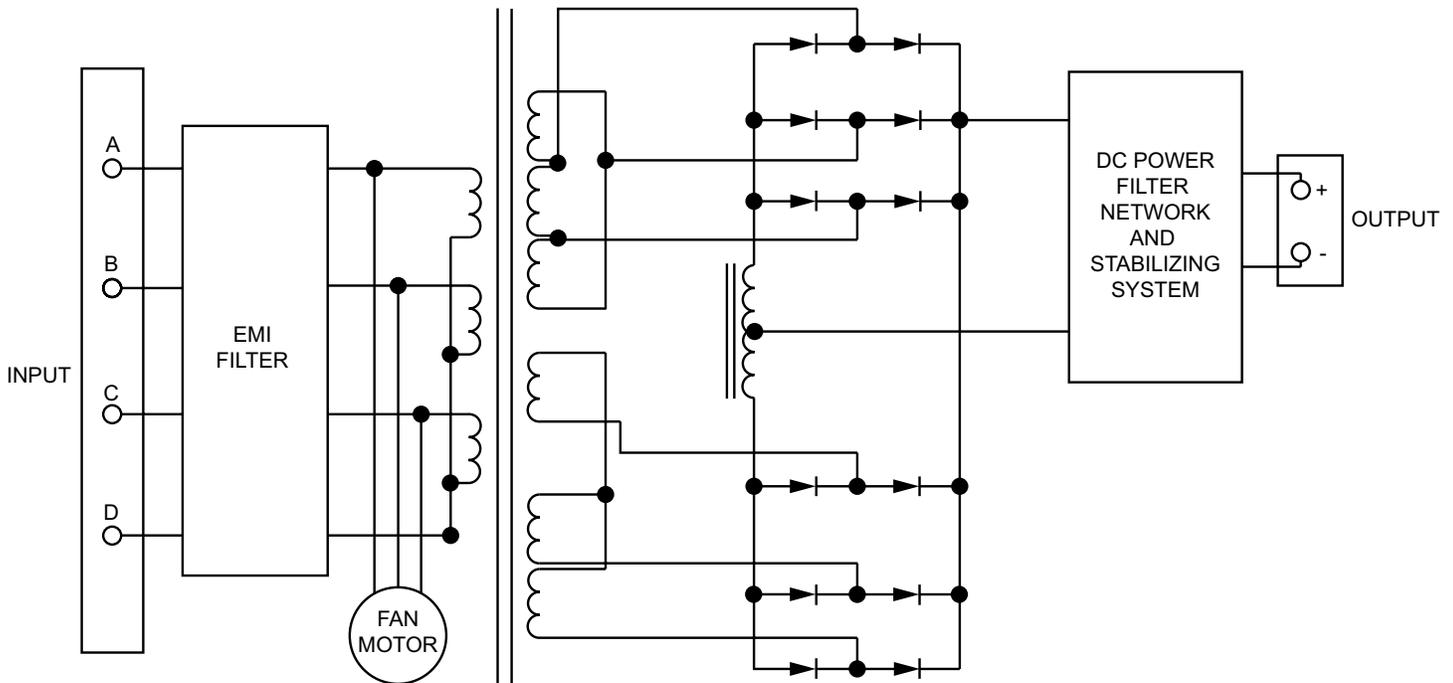
## TECHNICAL NOTES

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The Model 28VS300Y-35 is an exceptionally adaptable unit permitting flexibility in the choice of location of the mounting base in any of four quadrants around its circumference. Fan cooling allows the unit to be mounted in any position; input and output connection locations and mounting provisions may be varied to meet special requirements. This unit can employ an optional built-in-fault detector to indicate thermal overheat.

A unique Class-H delta-wye transformer, which is symmetrical electrically and magnetically, provides for cooler, less noisy operation. The housing and circular heat sinks are constructed of extruded aluminum for exceptional rigidity. This unit is qualified as M7115/4A per MIL-PRF-7115G. Transient Voltage Surge Suppression (TVSS) and a low impedance bypass circuit stabilize the output voltage for advanced electronics and Commercial Off The Shelf (COTS) utilization equipment. A high reliability cooling fan with a pressure cooling system insures uniform heat dissipation. Minimum unit volume and weight have been achieved by employing a rectifier heat sink and transformer of cylindrical configuration.

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