



# Uninterruptible Power Supply (UPS) Module Model 28VUPS29FSPD

Champion Aerospace Model 28VUPS29FSPD is an uninterruptible power supply with an integrated transient voltage surge suppression (Surge Protection Device (SPD)) circuit specifically designed for airborne applications.

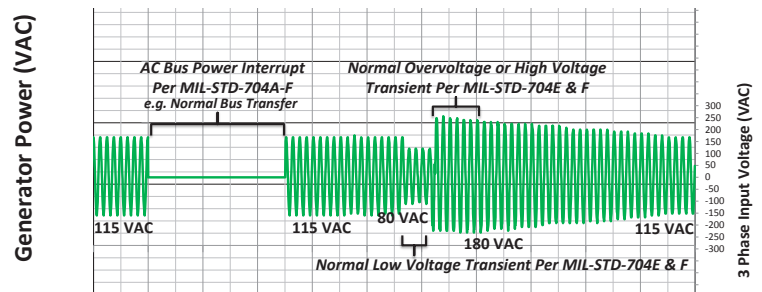
The UPS provides bridge power to mission equipment during AC bus transfers, low voltage sags, and other AC/DC interruptions. This allows utilization equipment to maintain full operational capability and “ride through” these interrupts. The device also provides transient voltage surge suppression during harmful high voltage transients to prevent catastrophic system failures. This UPS device is compatible with all power converters and plays a vital role in preserving the life of utilization equipment.

Designed to meet MIL-STD-704 (A-F) for Aircraft Electrical Power, the 28VUPS29FSPD is the latest development of a complete line of uninterruptible power supplies produced by Champion Aerospace, LLC.

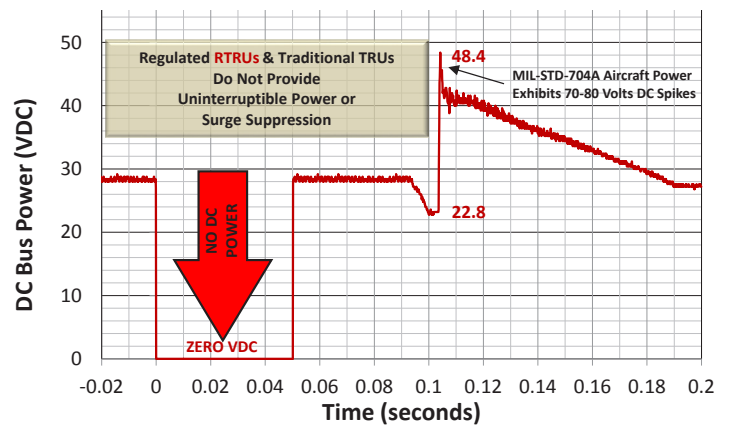
## SPECIFICATIONS

ENCLOSURE	SEALED, 304 STAINLESS STEEL
CIRCUITRY	SOLID STATE
INRUSH CURRENT	30 A (Max), 1 Ω Input Impedance
CHARGE TIME	3 RC (95%) = 90 Seconds
POWER CAPABILITIES	See back page for Curve
ELECTRICAL CONNECTIONS	1/4-28 UNF Positive Stud 3/8-24 UNF Negative Stud
OPERATING TEMP. RANGE	-40° F to 160° F (-40° C to 71° C)
ALTITUDE RATING	50,000 ft (15,240 m) @ -40° F (-40° C) 45,000 ft (13,716 m) @ 93° F (34° C) Mean Sea Level @ 160° F (71° C)
WEIGHT (Max)	7.0 lb. (3.18 kg)
DIMENSIONS (LxWxH) (Max)	13.550 in. x 4.150 in. dia (including mounting brackets) (344.2 mm x 105.41 mm dia)
MOUNTING POSTION	Any
SHORT CIRCUIT FAULT CURRENT	300 A

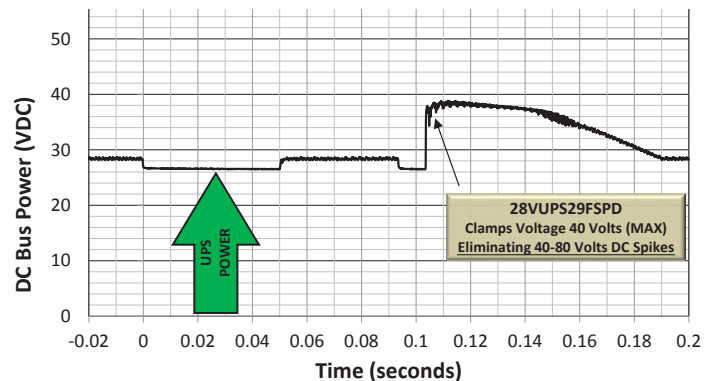
## OUTPUT VOLTAGE COMPARISON



## DC Power System WITHOUT Champion UPS Device



## DC Power System WITH Champion UPS Device



# TECHNICAL NOTES

The 28VUPS29FSPD nominally provides 250 amps of holdup power for 50 milliseconds for a resistive load or 150 amps for 500 milliseconds. See chart below for holdup conditions.

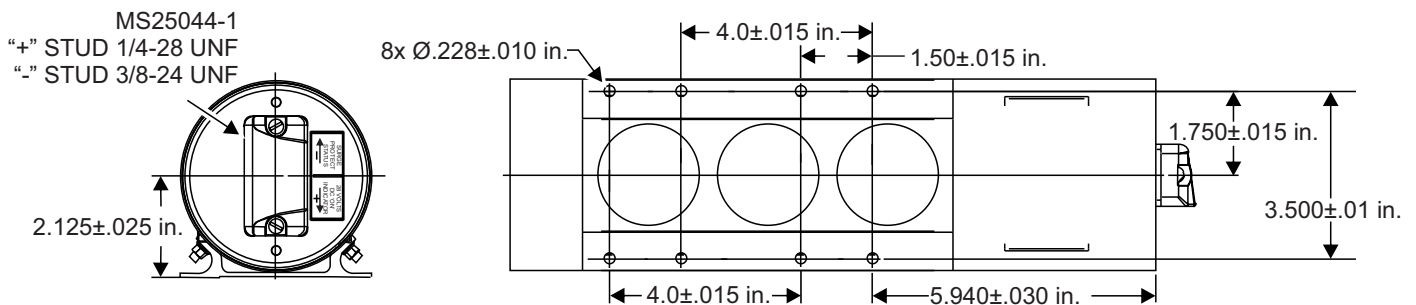
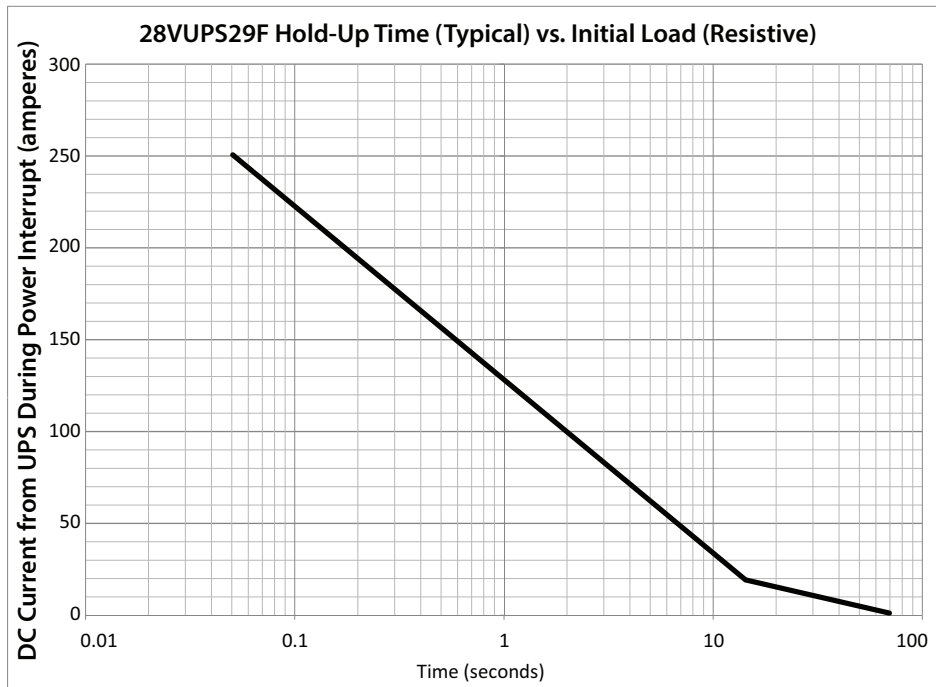
The Surge Protection Device within the UPS clamps high voltage transients to 40 volts maximum.

All circuitry in the 28VUPS29FSPD is based on supercapacitor and solid state technology. The device is installed onto the DC Bus in parallel and connects automatically.

There are two conditions that disconnect holdup power:

1. Low Output Voltage at 18 VDC
2. Timeout at 70 seconds

The low output voltage feature disconnects at 18 VDC to prevent under voltage power to the DC bus. The timeout feature disconnects the output line after a loss of aircraft power is sensed for the purpose of complying with an intentional shutdown. These conditions are customizable upon request.



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