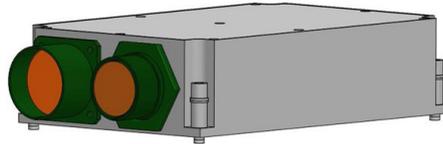


# PS SERIES PSVHP400-X

## VPX DC/DC HOLD-UP POWER SUPPLY



**Standard Models List** (for other voltages – consult factory)

Part Number	Input	Output
PSVHP400-1	18 to 50 VDC	30A

- Additional standard configurations available. **Contact factory for more details.**
- All of our products can be configured to comply with EU REACH regulations. **Contact factory for more details.**

### THE MAIN FEATURES OF THE PSVHP400 SERIES ARE:

- Miniature size
- High efficiency
- Wide input range
- Fixed switching frequency
- External Synchronization ( $250 \pm 10$  kHz)
- EMI filters included
- Indication for Input failure and Hold-Up activation
- Optional to add external capacitors for more hold up.
- Operates together with MPS standard modules. Please consult factory for specific applications.
- More than 990 W/msec per 1 mF capacitance
- Input Reverse Polarity - Protection for unlimited time
- PROVIDES 50 MSEC OF OUTPUT POWER FOR MPS WIDE INPUT RANGE POWER SUPPLIES  
(UP TO 400W INPUT POWER)

## Markets & Applications



Military, Ruggedized



Telecom, Industrial Hold-up module

## APPLICATIONS

Military, Ruggedized, Telecom, Industrial

## SPECIAL FEATURES

- Provides 50 mSec of output power for MPS wide input range converters (up to 400W Input Power)
- Miniature size
- High efficiency
- Wide input range
- Fixed switching frequency

## ELECTRICAL SPECIFICATIONS

### DC INPUT

DC Input range: 18 to 50 VDC

Input transient protection:

All models meet or exceed (no damage) MIL-STD-1275A (100V for 50 mSec) and MIL-STD-704A, MIL-STD-704F (80V for 0.1 Sec)

EMC:

Designed to meet\* MIL-STD-461F:

CE101, CE102, CS106, C101, RE102, RS102, RS103

Isolation:

200V between Input and Case 200V between Output and Case

### DC OUTPUT

Same as input voltage (-1V max) at max current:

Max current:  $I_{max} = 30A$

**Consult factory if higher current required.**

## Environmental Conditions

Meets or exceeds MIL-STD-810F Temperature:

Operating:  $-55^{\circ}C$  to  $+85^{\circ}C$  (baseplate) Storage  $-55^{\circ}C$  to  $+125^{\circ}C$

Vibration level:

Up to 9 grms.

**For higher vibration levels - please consult factory.**

## RELIABILITY

150,000 hours, calculated per MIL-STD-217F at  $+85^{\circ}C$  baseplate, ground fixed.

## Description of Operation

The holdup unit is meant to be installed in front of a power supply, and not a standalone. It is used for input voltage holding when a power failure occurs, such that if the input power returns to nominal limits in a defined period of time, the load can't tell that a power failure had happened.

This unit is designed to be used with most of Amphenol's DC/DC converters and DC/AC inverters (consult factory for applicability to specific models).

During normal operation, an internal converter charges the external capacitor to 50 V.

In case a power failure occurs where the input voltage drops below 17-18V, the input is disconnected from the output via a MOSFET switch, and the external cap is connected to the output pins through another MOSFET switch. The external cap is then discharged into the cascaded power supply, dropping towards 17-18V, where the cascaded power supply ceases to operate.

When input power returns (it can happen during cap discharge or after complete loss of power), the MOSFET switches disconnect the output from the external cap, reconnect the input to the output, and the internal converter recharges the external cap back to 48-51V, preparing it for the next power failure.

**Note: all voltage refers to power supply  $V_{in}$ =18-50V**

## PIN ASSIGNMENT

**Connector type:** 28VDC OUT - D38999/24WE06SN or eq.

**Mates with:** D38999/26WE06PN or eq.

**Connector type:** 28VDC IN - D38999/20WG11PN or eq.

**Mates with:** D38999/26WG11SN or eq.

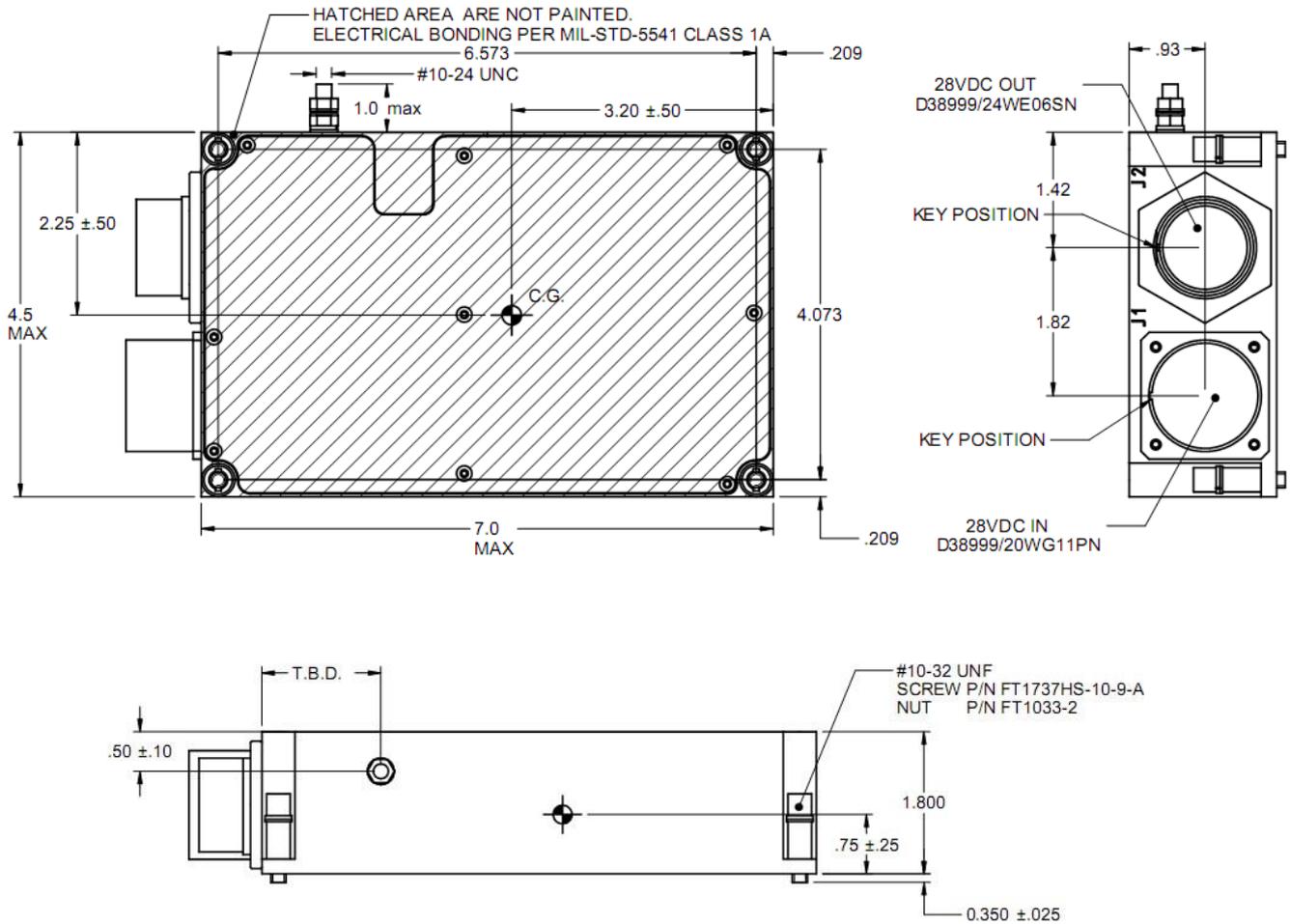
28VDC	IN
A	28VDC
B	28VDC
C	28VDC
D	28VDC
E	N.C.
F	28VDC RTN
G	28VDC RTN
H	28VDC RTN
J	28VDC RTN
K	N.C.
L	N.C.

28VDC	OUT
A	28VDC
B	28VDC
C	28VDC RTN
D	28VDC RTN
E	28VDC
F	28VDC RTN

# VPXHP400-X SERIES

## OUTLINE DRAWING

For detailed dimensions and tolerances see Drawing: PSVHP400



### NOTES:

1. WEIGHT: 1.5 KG MAX.
2. PAINTING:
  - 1) PRIMER : EPOXY POLYIMIDE/STRONTIUM CHROMATE PER MIL-P-23377G TYPE I, CLASS C THICKNESS : 15 - 25 MICRONS.
  - 2) TOP COAT : POLYURETHANE-POLYESTER PER MIL-C-85285B, TYPE I THICKNESS : 40 -50 MICRONS.
  - 3) COLOUR : LIGHT GRAY, PER FED-STD-595B, COLOUR NO. 26622.
3. FILL ENGRAVING WITH BLACK LUSTERLESS EPOXY PAINT COLOUR PER FED-STD 595, COLOUR NO : 37038.

Note: Specifications are subject to change without prior notice by the manufacturer.