HARTMANN ELECTRONIC
A Phoenix Mecano Company

VPX 3U DC VITA62 Power Supply 715W

Hartmann Electronic VPX power supplies are commercial off-the-shelf (COTS), conduction cooled single stage converters according to the ANSI/VITA 62.0 specification. They can be used to power a VPX chassis and will fit into the standard envelope defined by VITA 48.0 specifications.

VPX 3U DC VITA62 Power Supply 715W

Using state of the art switching power technology a wide input range voltage range as well as high overall efficiency is achieved. The 715W Power Supply part number D575.00701 offers highest output power on all 6 DC output channels which makes it a perfect power supply for test and development applications.
The VPX power supply mechanical dimensions are 3U x 4HP (0.80” slot). It is outfitted with connectors, keying and alignment mechanism as per VITA 62.

Main Features

- Compliant to VITA 62 baseline specification
- Up to 715 W continuous power,
- 3U size, 0.8" pitch
- 6 (5 independent) output voltages VS1 (12V), VS2 (3.3V), VS3 (5V), Vaux1(+12V), Vaux2(-12V), Vaux3 (3.3V)
- up to 88% peak efficiency
- 28V DC input voltage (20V ... 35V)

Power Supply Features

- Compliant to VITA 62 baseline specification (mechanical specification, connector and keying, power rails)
- Up to 715 W maximum / 600W continuous power
- Parallel mode with Hartmann Electronic Power-Backplanes possible
- Up to 88% peak efficiency
- 6 (5 independent) output voltages
- 28V DC input voltage (19V ... 35V)
- Voltage sense controlled, Over Voltage, Over Current, Over Temperature protection
- Ruggedized to MIL-STD-810
- Operating Temperature -40°C to 85°C
- Dimensions: 100.0 mm x 170.0 mm x 20.3 mm (3.9” x 6.69” x 0.8”)
- Weight: 0.6kg (1.23 lbs)

HARTMANN ELECTRONIC
A Phoenix Mecano Company

Item	Description
D575.00701	715W VPX VITA62 power supply

VPX 3U DC VITA62 Power Supply 715W

High density, conduction cooled power supply according to VITA62 base specification.

Power supply	Input	VS1 [+12V]	VS2 [+3.3V]	VS3 [+5V]	Vaux1 [+12V]	Vaux2 [-12V]	Vaux3 [+3.3V]
D575.00701	28 V DC	21 A	50 A*	40 A	4.2 A	4.2 A	7 A**

* -> may be limited by connector or power backplane rating

** -> depending on temperature, estimated 5A at 85C, 3.3V aux is taken from VS2 and protected with fuse, 3.3Vaux is not a seperate power circuit

Technical Details

Form Factor	3U VPX
Pitch	4HP / 0.8"
Weight	0.6 kg / 1.23 Lbs / 21.2 oz.
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 105°C
Input to Output Insulation	1500V
Input to Output Isolation with Case	550V
Input to Case Ground Isolation	500V
Output to Case Ground Isolation	50V
Case Ground to Safety Ground Resistance	< 10 mOhms
Maximum Output Power	715W
Maximum Input Power	~760W
Maximum Dissipated Power @ max. Power	~45W
Minimum Turn ON Voltage	>20V
Minimum Turn OFF Voltage	19V
Maximum Continuous Input Voltage	35V
Maximum Short Time Input Voltage	(15s) 36 V

Maximum Currents 12V / 3V3 / 5V	21 A / 50 A / 40 A
Fixed Switching Frequencies 12V / 3V3 / 5V	120 kHz / 125 kHz / 130 kHz
Peak Efficiencies 12V / 3V3 / 5V converters	94% / 92% / 92%
Max. Output Ripple and Noise: 12V / 3V3 / 5V	15 mVrms / 4 mVrms / 4 mVrms
(0-20 MHz Bandwidth)	65 mVpp / 27 mVrms / 27 mVpp
Line Regulation: 12V / 3V3 / 5V	40 mV / 2 mV / 4 mV
Vin=Vin,min to Vin,max, Io and Tc fixed	0.1%
Load Regulation: 12V / 3V3 / 5V	70 mV / 2 mV / 4 mV
	Vin=Vin,nom, Io=Io,min to Io,max, Tc fixed < 0.1%
Over voltage Protection:	14.4 V / 4.1 V / 6.1 V (hardware)
Temperature Protection Sensing Point (identical to case)	85°C (Latching)
Maximum Internal Working Temperatures	125°C

Protection / Control Logic / Timing

Protection	OVC, OVT, OFLW
Control Logic	only ENABLE/INHIBIT, FAIL, no other utility or power supply specific signals
Minimum input voltage start up rise time	> 50 V/s

MIL Standard Compliance	as per VITA 62 specification
MIL-STD-461F (EMI) Compliance	Compliance has to be achieved with external filter
MIL-STD-704F Compliance	Compliance has to be achieved with external filter. External hold-up circuit optional.
MIL-STD-1275D Compliance	Compliance has to be achieved with external filter.

HARTMANN ELECTRONIC
A Phoenix Mecano Company

Compatibility / Environmental

Compatibility	VDE 0805, IEC 950
Tested and passed	- Altitude: MIL-STD-810F, Methode 500.4, Procedure II - Vibration: MIL-STD-810G, Methode 514.6 D-1, Category 12 - Shock: MIL-STD 810G, 40g, 11ms semisinusoidal