

HTP-VHQ

VME HIGH VOLTAGE PSU



POSITIVE PROBLEM SOLVING **+ =**

The HTP-VHQ are a series of dual channel high voltage power supplies built to operate on the VME (VERSA module eurocassette) bus.

The units are packaged in a standard 6U, 2 slot cassette. Typical applications include medical, nuclear and particle physics along with vacuum technology. The output polarity can be switched and the voltage ramp time adjusted via computer interface after switch on. Mainframes are available which are designed to house & power the high voltage modules when they are built as Eurocassettes. These rack mounting mainframes simplify system integration with their various intergrated interfaces.

- + High Precision & Standard Models Available
- + VME High Voltage Module in 2 Slot Width
- + LCD Display for Voltage & Current
- + SHV Connector on Front Side
- + Full Control via VME Bus
- + Switchable Polarity

STANDARD MODELS

SELECTION TABLE

Part Number	Output Voltage	Output Current	Max Power [Each Channel]	Interface Type	Number of Channels
HTP-VHQ 202M	0 - 2kV	0 - 3mA	6W	VME	Dual
HTP-VHQ 202M-h	0 - 2kV	0 - 6mA	12W	VME	Dual
HTP-VHQ 203M	0 - 3kV	0 - 2mA	6W	VME	Dual
HTP-VHQ 203M-h	0 - 3kV	0 - 4mA	12W	VME	Dual
HTP-VHQ 204L	0 - 4kV	0 - 1mA	4W	VME	Dual
HTP-VHQ 204L-h	0 - 4kV	0 - 3mA	12W	VME	Dual
HTP-VHQ 205L	0 - 5kV	0 - 1mA	5W	VME	Dual
HTP-VHQ 205L-h	0 - 5kV	0 - 2mA	10W	VME	Dual

Different output ranges and application/user specific options are possible. Please contact ETPS Ltd to discuss your requirements.

TECHNICAL DATA

GENERAL	
Ripple & noise [02M, 02M-h, 03M 03M-h, 04L, 04M-h]	2mV _{pp}
Ripple & noise [05L, 05M-h]	5mV _{pp}
Resolution of voltage measurement [Display]	1V
Resolution of voltage measurement [via Interface]	100mV
Resolution of current measurement [Range]	I _{NOM} (option /104 = 100µA)
Resolution of current measurement [Display]	1µA
Resolution of current measurement [via Interface]	1µA
Voltage accuracy (for one year)	± [0.05% V _O + 0.02% V _{NOM} + 1 digit]
Current accuracy (for one year)	± [0.05% I _O + 0.02% of range + 1 digit]
Stability [ΔV _O / ΔV _{IN}] ± μ	< 5 × 10 ⁻⁵ × V _{NOM}
Stability load no load [ΔV _O]	< 5 × 10 ⁻⁵ × V _{NOM}
Temperature coefficient	< 5 × 10 ⁻⁵ /K
LCD display	4 digit for voltage or current
Voltage setting	Manual: 10 turn potentiometer DAC: via VME Interface (selectable)
Ramp speed at HV On/Off	Hardware ramp: 500V/s
Ramp speed at Interface	Software ramp: 2 - 255V/s
Protection	Separate current & voltage limit, INHIBIT, current trip
INHIBIT	Per channel [TTL Low]
Power Requirements V _{IN}	± 12V [< 850mA on one channel]
Power Requirements V _{IN}	+ 5V [< 300mA on one channel]

OPTIONS

CODE	DESCRIPTION
/104	100µA current range with resolution of 10nA via display and 1nA via interface
/2MA	2 current measurement ranges with automatic crossover
/2MM	2 current measurement ranges with manual selection

19" MAINFRAMES

Part Number	Backplane	+5V	+12V	-12V
HTP-Mini-VME 195	VME/VME64	45A	23A	23A
HTP-VME 620	VME/VME64	115A	46A	46A
HTP-VME 621	VME/VME64	230A	46A	46A
HTP-VME 622	VME/VME64	345A	46A	--
at ±24V	Each 0.5A	Each 1A	Each 2A	Each 6A

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ETPS Ltd must reserve the right to make changes to the published specifications without prior notice. Where certain operating parameters are critical for your application we advise that they be confirmed at the time of order. ETPS Ltd specialises in modifying its proven platforms to suit your needs. Please contact our office if your requirement is non-standard. Please note that your actual unit may differ from those shown.

HIGH PRECISION MODELS

SELECTION TABLE

Part Number	Output Voltage	Output Current	Max Power (Each Channel)	Interface Type	Number of Channels
HTP-VHQ 222M	0 - 2kV	0 - 3mA	6W	VME	Dual
HTP-VHQ 222M-h	0 - 2kV	0 - 6mA	12W	VME	Dual
HTP-VHQ 223M	0 - 3kV	0 - 2mA	6W	VME	Dual
HTP-VHQ 223M-h	0 - 3kV	0 - 4mA	12W	VME	Dual
HTP-VHQ 224L	0 - 4kV	0 - 1mA	4W	VME	Dual
HTP-VHQ 224L-h	0 - 4kV	0 - 3mA	12W	VME	Dual
HTP-VHQ 225L	0 - 5kV	0 - 1mA	5W	VME	Dual
HTP-VHQ 225L-h	0 - 5kV	0 - 2mA	10W	VME	Dual

Different output ranges and application/user specific options are possible. Please contact ETPS Ltd to discuss your requirements.

TECHNICAL DATA

GENERAL	
Ripple & noise (02M, 02M-h, 03M 03M-h, 04L, 04M-h)	2mV _{P-P}
Ripple & noise (05L, 05M-h)	5mV _{P-P}
Resolution of voltage measurement (Display)	1V
Resolution of voltage measurement (via Interface)	100mV
Resolution of current measurement (Range)	I _{NOM} (option /104 = 100µA)
Resolution of current measurement (Display)	1µA
Resolution of current measurement (via Interface)	100nA
Voltage accuracy (for one year)	± [0.05% V _O + 0.02% V _{NOM} + 1 digit]
Current accuracy (for one year)	± [0.05% I _O + 0.02% of range + 1 digit]
Stability (ΔV _O / ΔV _{IN}) ± µ	< 3 × 10 ⁻⁵ × V _{NOM}
Stability load no load (ΔV _O)	< 5 × 10 ⁻⁵ × V _{NOM}
Temperature coefficient	< 3 × 10 ⁻⁵ /K
LCD display	4 digit for voltage or current
Voltage setting	Manual: 10 turn potentiometer DAC: via VME Interface (selectable)
Ramp speed at HV On/Off	Hardware ramp: 500V/s
Ramp speed at Interface	Software ramp: 2 - 255V/s
Protection	Separate current & voltage limit, INHIBIT, current trip
INHIBIT	Per channel (TTL Low)
Power Requirements V _{IN}	± 12V (< 850mA) (option /OH = <1.6A)
Power Requirements V _{IN}	+ 5V (< 300mA)

OPTIONS

CODE	DESCRIPTION
/104	100µA current range with resolution of 10nA via display and 1nA via interface
/2MA	2 current measurement ranges with automatic crossover
/2MM	2 current measurement ranges with manual selection
/OH	Output current is doubled

19" MAINFRAMES

Part Number	Backplane	+5V	+12V	-12V
HTP-Mini-VME 195	VME/VME64	45A	23A	23A
HTP-VME 620	VME/VME64	115A	46A	46A
HTP-VME 621	VME/VME64	230A	46A	46A
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at ±24V	Each 0.5A	Each 1A	Each 2A	Each 6A

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