

HTP-EHS-8-F6

STANDARD PRECISION FLOATING GND HV MODULES



POSITIVE PROBLEM SOLVING **+ =**

This range of high voltage modules are available with 4, 8 or 16 output channels. Front panel potentiometers are used to set the maximum voltage limit and current trip point.

The modules are simple to setup. Individual channel limits are programmed via the potential free CAN interface. Software is available that includes flexible group & event handling such as time delayed trip processing. Should a limit be reached then sensitive loads are protected with the controlled 'ramp down' feature .

- + Measurements & Setting Values in Floating Point Single Precision
- + Rackmounting and Desktop Crates with CAN, USB & LAN
- + Channel - GND Potential Difference = 20V (Option /2kV)
- + Low Ripple & Noise ($<10\text{mV}_{\text{p-p}}$ up to 4kV)
- + Very Compact 6U Cassettes

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FURTHER DETAILS

The compact form factor of 6U cassettes offers an excellent cost effective solution for users that require a number of independent HV channels. A variety of crates are available for 4, 6, 8 or 10 cassettes with computer interfaces.

SELECTION TABLE

Part Number	Output Voltage	Output Current	Max Power [Each Channel]	Setting Resolution		Measurement Resolution		Number of Channels
				V_{SET}	I_{SET}	V_{Meas}	I_{Meas}	
HTP-EHS F6-01x-106F	0 - 100V	0 - 10mA	1W	5mV	100nA	1mV	100nA	16 Channels
HTP-EHS 86-05x-156F	0 - 500V	0 - 15mA	7.5W	20mV	600nA	2mV	150nA	8 Channels
HTP-EHS F6-05x-156F	0 - 500V	0 - 15mA	7.5W	20mV	600nA	2mV	150nA	16 Channels
HTP-EHS 86-10x-805F	0 - 1kV	0 - 8mA	8W	40mV	320nA	4mV	80nA	8 Channels
HTP-EHS F6-10x-805F	0 - 1kV	0 - 8mA	8W	40mV	320nA	4mV	80nA	16 Channels
HTP-EHS 86-20x-405F	0 - 2kV	0 - 4mA	8W	80mV	160nA	5mV	40nA	8 Channels
HTP-EHS F6-20x-405F	0 - 2kV	0 - 4mA	8W	80mV	160nA	5mV	40nA	16 Channels
HTP-EHS 86-30x-305F	0 - 3kV	0 - 3mA	9W	120mV	120nA	10mV	30nA	8 Channels
HTP-EHS F6-30x-305F	0 - 3kV	0 - 3mA	9W	120mV	120nA	10mV	30nA	16 Channels
HTP-EHS 86-40x-205F	0 - 4kV	0 - 2mA	8W	160mV	80nA	10mV	20nA	8 Channels
HTP-EHS F6-40x-205F	0 - 4kV	0 - 2mA	8W	160mV	80nA	10mV	20nA	16 Channels
HTP-EHS 86-60x-105F	0 - 6kV	0 - 1mA	6W	240mV	40nA	15mV	10nA	8 Channels
HTP-EHS F6-60x-105F	0 - 6kV	0 - 1mA	6W	240mV	40nA	15mV	10nA	16 Channels
HTP-EHS 46-100x-504F	0 - 10kV	0 - 0.5mA	5W	400mV	20nA	30mV	5nA	4 Channels

Replace 'x' in the part number with P for positive or N for negative output polarity.

TECHNICAL DATA

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Potential difference	20V channel to channel, 20V channel to C-GND (on request this can be increased to 2kV channel to channel and to C-GND)
Ripple & Noise	<5mV _{p-p} (100V models); <10mV _{p-p} (500V to 4kV models); <30mV _{p-p} (6 to 10kV models)
Hardware Limits	Voltage and current potentiometer per module sets limits for all output channels
Software Limits	Voltage, current limit and current trip point adjustable per channel via interface
Interface	CAN interface (potential free)
INHIBIT	TTL Low for entire module (Option : INH for each channel)
V&I Setting Resolution	Voltage: $4 \times 10^{-5} \times V_{NOM}$ Current: $4 \times 10^{-5} \times I_{NOM}$ (in the setting range $1\% \times I_{NOM} < I_{OUT} \leq I_{NOM}$)
V&I Measurement Resolution	2×10^{-5} to $10^{-6} \times V_{NOM}$ resp. I_{NOM} noise free, dependant on integration time
Accuracy of Voltage Measurement	$\pm [0.01\% \times V_{OUT} + 0.02\% \times V_{NOM} + 1 \text{ digit}]$
Accuracy of Current Measurement	$\pm [0.01\% \times I_{OUT} + 0.02\% \times I_{NOM} + 1 \text{ digit}]$
Rate of Voltage Change	Up to $0.2 \times V_{NOM}/s$ (on request up to $0.75 \times V_{NOM}/s$)
Safety Loop [2 Pole Lemo Connector]	$5mA < I_s < 20mA = \text{module ON}$ $I_s < 0.5mA = \text{module OFF}$
Power Requirements	+24V (< 3.5A / 6A) and +5V (<200 / 400mA)
HV Connector Type	REDEL (100V to 4kV models); SHV (6kV models); KINGS (10kV models)
Mechanical Construction	4 or 8 or 16 channels in 6U x 8HP cassette (40.3mm)

OPTIONS

CODE	DESCRIPTION
/P	Positive output polarity (factory fixed)
/N	Negative output polarity (factory fixed)
/SHV	SHV connectors in place of REDEL connector
/INH	Inhibit function per channel
/ECH 224	4 slot desktop mainframe (see below for details)
/ECH 238	8 slot rackmounting mainframe (see below for details)
/ECH 43A	10 slot rackmounting mainframe slave to HTP- ECH 44A (see below for details)
/ECH 44A	10 slot rackmounting mainframe with integrated server (see below for details)
/WIFI	Integrated Wi-Fi access point for wireless remote control (for HTP- ECH 44A only)
/ICS	Intelligent remote control and monitoring software (for HTP- ECH 44A only)
/FAN	Fan tray mounted on HTP-ECH 238 mainframe (adds 1.5U to overall height)
/UPS	Uninterruptible Power Supply (for HTP-ECH 238, HTP- ECH 43A and HTP- ECH 44A)
/MPOD 2H-LX	10 slot mainframe with front panel control and display Ethernet, CAN & USB
/MPODmini	4 slot mainframe with Ethernet, CAN & USB

MAINFRAMES

Part Number	Slots	Power	Fan	Interface	PSU (Integrated AC/DC)	Dimensions (W x H x D)
HTP-ECH 224	4	300W	Yes	CAN & USB	Yes	19" x 7U x 350mm
HTP-ECH 238	8	700W	Option	CAN & USB	Yes	19" x 6U x 450mm
HTP-ECH 43A	10 + 1*	1200W	Yes	CAN	Yes	19" x 8U x 600mm
HTP-ECH 44A	10 + 1*	1200W	Yes	Ethernet & CAN	Yes	19" x 8U x 600mm
HTP-MPOD 2H-LX	10	1200W	Yes	Ethernet, CAN & USB	Yes	19" x 8U x 460mm
HTP-MPODmini	4	600W	Yes	Ethernet, CAN & USB	Yes	19" x 4U x 460mm

*Additional slot for communications card

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.



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