

HTP-EHS-8-F0

COMMON GND HV MODULES



POSITIVE PROBLEM SOLVING **+ =**

This range of high voltage modules provide up to 32 output channels in a compact 6U cassette. Both V and I limits can be set for each individual channel via CAN interface.

For applications that do not require each channel to be floating these common ground units offer a cost affective solution. Software is available that also allows the behaviour of any number of channels to be automatically effected should an event occur. For example a controlled ramp down of all channels can be programmed if the current limit of a single channel is reached.

- + Each Output Channel Individually Controllable via Interface**
- + Hardware Voltage Limit and Current Trip per Module**
- + Flexible Group and Event Handling via Software**
- + Choice of Desktop and Rackmounting Crates**

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FURTHER DETAILS

A variety of crates are available with or without computer interfaces allowing a mix of high voltage cassettes to be installed. For example this low cost module can be operated alongside high precision floating modules from the HTP-EHS-8-F2 series and a bidirectional unit from the HTP-EBS series.

SELECTION TABLE

Part Number	Output Voltage	Output Current	Max Power [Each Channel]	Number of Channels	Output Socket
HTP-EHS F0-01x-106F	0 - 100V	0 - 10mA	1W	16 Channels	REDEL
HTP-EHS 80-05x-156F	0 - 500V	0 - 15mA	7.5W	8 Channels	REDEL
HTP-EHS F0-05x-106F	0 - 500V	0 - 15mA	7.5W	16 Channels	REDEL
HTP-EHS 80-10x-805F	0 - 1kV	0 - 8mA	8W	8 Channels	REDEL
HTP-EHS F1-10x-405F	0 - 1kV	0 - 4mA	4W	16 Channels	REDEL
HTP-EHS F0-10x-805F	0 - 1kV	0 - 8mA	8W	16 Channels	REDEL
HTP-EHS 201-10x-405F	0 - 1kV	0 - 4mA	4W	32 Channels	REDEL
HTP-EHS 80-20x-405F	0 - 2kV	0 - 4mA	8W	8 Channels	REDEL
HTP-EHS F0-20x-405F	0 - 2kV	0 - 4mA	8W	16 Channels	REDEL
HTP-EHS 80-30x-305F	0 - 3kV	0 - 3mA	9W	8 Channels	REDEL
HTP-EHS F1-30x-145F	0 - 3kV	0 - 1.3mA	4W	16 Channels	REDEL
HTP-EHS F0-30x-305F	0 - 3kV	0 - 3mA	9W	16 Channels	REDEL
HTP-EHS 201-30x-145F	0 - 3kV	0 - 1.3mA	4W	32 Channels	REDEL
HTP-EHS 80-40x-205F	0 - 4kV	0 - 2mA	8W	8 Channels	REDEL
HTP-EHS F1-40x-105F	0 - 4kV	0 - 1mA	4W	16 Channels	REDEL
HTP-EHS F0-40x-205F	0 - 4kV	0 - 2mA	8W	16 Channels	REDEL
HTP-EHS 201-40x-205F	0 - 4kV	0 - 1mA	4W	32 Channels	REDEL
HTP-EHS 80-60x-105F	0 - 6kV	0 - 1mA	6W	8 Channels	SHV
HTP-EHS F0-60x-105F	0 - 6kV	0 - 1mA	6W	16 Channels	SHV
HTP-EHS 80-80x-105F	0 - 8kV	0 - 1mA	8W	8 Channels	SHV
HTP-EHS 40-100x-504F	0 - 10kV	0 - 0.5mA	5W	4 Channels	KINGS

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

TECHNICAL DATA

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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 (HTP-EHS 80, F0 & 40 Models)	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 Setting Resolution (HTP-EHS F1 & 201)	Voltage: $5 \times 10^{-5} \times V_{NOM}$ Current: $1 \times 10^{-5} \times I_{NOM}$ (in the setting range $1\% \times I_{NOM} < I_{OUT} \leq I_{NOM}$)
V&I Measurement Resolution (HTP-EHS F0, 80 & 40 models)	2×10^{-5} to $10^{-6} \times V_{NOM}$ resp. I_{NOM} (dependant on integration time)
V&I Measurement Resolution (HTP-EHS F1 & 201 models)	5×10^{-6} to $1 \times 10^{-5} \times V_{NOM}$ resp. I_{NOM} (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	$\pm (0.01\% \times I_{OUT} + 0.02\% \times I_{NOM} + 1 \text{ digit})$ for HTP-EHS F0, 80 & 40 models $\pm (0.02\% \times I_{OUT} + 0.02\% \times I_{NOM} + 1 \text{ digit})$ for HTP-EHS F1 & 201 models
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) for HTP-EHS F0, 80 & 40 models +24V (< 4A/8A) and +5V (<100/200mA) for HTP-EHS F1 & 201 models
HV Connector Type	See selection table
Mechanical Construction	4, 8, 16 or 32 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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