

# HTP-EPS

## HIGH VOLTAGE MODULES



POSITIVE PROBLEM SOLVING **+ =**

The HTP-EPS family offer voltages between 500V and 30kVdc supplied at either 60W or 150W. The range is built as compact modules as standard.

Employing a patented resonance mode principle the HTP-EPS series demonstrates impressive regulation and stability. Modified versions are available specifically for use as a capacitor charger that exhibit high repetition accuracy at high charge frequencies. A bare ended HV cable provides the output. If preferred any 60W HTP-EPS power supply can be built into a 3U cassette.

- + Available in 3U Cassette or Compact Box
- + High Voltages up to 30kV
- + Capacitor Charger Option
- + Stable Output Voltage
- + Low Ripple & Noise
- + Very EMI

# HTP-EPs

## HIGH VOLTAGE MODULES

## FURTHER DETAILS

Each 3U cassette is fitted with an ID chip to allow automatic detection by an MMC interface card.

In cassette form the output is provided by either an SHV or CPE connector depending on the unit's maximum voltage. Control and measurement is achieved with an analogue signal.

The module can also be transferred into a low cost bench unit with front panel and display. For more information, please take a look at our HTP-THQ range of products.

### SELECTION TABLE

Part Number	Maximum Power	Output Voltage Range	Output Current Range
HTP-EPx 05 127 24 5	60W	0 - 0.5kV	0 - 120mA
HTP-EPx 10 606 24 5	60W	0 - 1kV	0 - 60mA
HTP-EPx 15 406 24 5	60W	0 - 1.5kV	0 - 40mA
HTP-EPx 20 306 24 5	60W	0 - 2kV	0 - 30mA
HTP-EPx 30 206 24 5	60W	0 - 3kV	0 - 20mA
HTP-EPx 40 156 24 5	60W	0 - 4kV	0 - 15mA
HTP-EPx 50 126 24 5	60W	0 - 5kV	0 - 12mA
HTP-EPx 60 106 24 5	60W	0 - 6kV	0 - 10mA
HTP-EPx 80 705 24 5	60W	0 - 8kV	0 - 7mA
HTP-EPx 100 605 24 5	60W	0 - 10kV	0 - 6mA
HTP-EPx 150 405 24 5*	60W	0 - 15kV	0 - 4mA
HTP-EPx 200 306 24 5*	60W	0 - 20kV	0 - 3mA
HTP-EPx 300 205 24 5*	60W	0 - 30kV	0 - 2mA
HTP-EPx 10 157 24 5	150W	0 - 1kV	0 - 150mA
HTP-EPx 20 756 24 5	150W	0 - 2kV	0 - 75mA
HTP-EPx 40 406 24 5	150W	0 - 4kV	0 - 40mA
HTP-EPx 80 206 24 5	150W	0 - 8kV	0 - 20mA
HTP-EPx 120 126 24 5	150W	0 - 12kV	0 - 12.5mA
HTP-EPx 150 106 24 5	150W	0 - 15kV	0 - 10mA
HTP-EPx 200 755 24 5	150W	0 - 20kV	0 - 7.5mA
HTP-EPx 300 505 24 5	150W	0 - 30kV	0 - 5mA

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

\* Only available as a capacitor charger

## TECHNICAL DATA

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Stability ( $\Delta V_{IN}$ )	$< 1 \times 10^{-4} \times V_{OMAX}$
Stability ( $\Delta P_{LOAD}$ )	$< 2 \times 10^{-4} \times V_{OMAX}$
Ripple & Noise	$< 5 \times 10^{-4} \times V_{OMAX}$ ( $< 1 \times 10^{-4} \times V_{NOM}$ option to 6kV)
Repetition Accuracy	$< 1\% \times V_{NOM}$ (with option CLD), higher accuracy on request
Temperature Coefficient	$< 1 \times 10^{-4}/K$ ( $2 \times 10^{-4} / K$ for 150W units), higher accuracy on request
Switching Frequency	32kHz to 50kHz (150W units 60kHz to 100kHz) depending on type
Remote Control	0 - 5VDC analogue interface (optionally 0 - 10VDC)
Protection	Overload and short circuit, INHIBIT signal, internal temperature control, current & voltage limit
Case	Metal box (option 3U x 12HP cassette)
Dimensions (60W Units, Metal box)	108 x 185 x 57mm (W x D x H)
Dimensions (60W Units, Cassette)	$> 10kV = 3U \times 12HP$ (60.96mm) $\leq 10kV = 3U \times 16HP$ (81.28mm)
Dimensions (150W Units, Metal box)	190 x 185 x 60mm (W x D x H)
Supply voltage $V_{IN}$	24VDC $\pm 5\%$ (60W models), 21 - 29VDC (150W models)
Output connection	600mm HV bare ended cable
Polarity	Factory fixed (x = p - Positive, x = n - Negative)
INHIBIT	TTL Low

## OPTIONS

CODE	DESCRIPTION
/P	Positive output polarity (factory fixed)
/N	Negative output polarity (factory fixed)
/CLD	Built for capacitor charging (See additional datasheet)
/AI-10	0 - 10 VDC Analogue interface for control and measurement
/3U-SHV	Unit built as 3U x 12HP cassette (SHV connector for up to 6kV)
/3U-CPE	Unit built as 3U x 12HP (CPE for 8 - 10kV and 3U x 16HP for 15kV)
/CIO	CAN interface
/ECH 124	Unit placed in 4 slot mainframe (see below for more information)
/ECH 128	Unit placed in 8 slot mainframe (see below for more information)
/ECH 12A	Unit placed in 10 slot mainframe (see below for more information)
/ARC	Up to 5 arcs per second are controlled

## MAINFRAMES

Part Number	Slots	Power	Interface	Dimensions (W x H x D)
HTP-ECH 124	4 + 1	120W	CAN & USB	½19" x 3U x 350mm
HTP-ECH 128	8 + 1	300W	CAN & USB	19" x 3U x 350mm
HTP-ECH 12A	10 + 1	300W	CAN & USB	19" x 3U x 350mm
Option ETH	Integrated ethernet interface with 32 inputs and 16 outputs			

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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