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# EPS

# High Voltage Modules

## Description

The EPS family offer voltages between 500V and 30kVdc supplied at either 60W or 150W. Employing a patented resonance mode principle the 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. The EPS range are built as compact modules as standard. A bare ended HV cable provides the output. If preferred Any EPS power supply can be built into a 3U cassette. 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 THQ range of products.



- Available in 3U cassette or compact box
- Capacitor charger option
- High voltages up to 30kV
- Stable output voltage
- Low ripple & noise
- Low EMI

## Selection Table

Part Number	Maximum Power	Output Voltage	Output Current
EPx 05 127 24 5 EPx 10 606 24 5	60W 60W	0 - 0.5 kV 0 - 1 kV	0 - 120 mA 0 - 60 mA
EPx 15 406 24 5 EPx 20 306 24 5	60W 60W	0 - 1.5 kV 0 - 2 kV	0 - 40 mA 0 - 30 mA
EPx 30 206 24 5 EPx 40 156 24 5	60W 60W	0 - 3 kV 0 - 4 kV	0 - 20 mA 0 - 15 mA
EPx 50 126 24 5 EPx 60 106 24 5	60W 60W	0 - 5 kV 0 - 6 kV	0 - 12 mA 0 - 10 mA
EPx 80 705 24 5 EPx 100 505 24 5	56W 50W	0 - 8 kV 0 - 10 kV	0 - 7 mA 0 - 5 mA
EPx 150 405 24 5* EPx 200 305 24 5* EPx 300 205 24 5*	60W 60W 60W	0 - 15 kV 0 - 20 kV 0 - 30 kV	0 - 4 mA 0 - 3 mA 0 - 2 mA
EPx 10 157 24 5 EPx 20 756 24 5	150W 150W	0 - 1 kV 0 - 2 kV	0 - 150 mA 0 - 75 mA
EPx 40 406 24 5 EPx 80 206 24 5	150W 150W	0 - 4 kV 0 - 8 kV	0 - 40 mA 0 - 20 mA
EPx 120 126 24 5 EPx 200 755 24 5 EPx 300 505 24 5	150W 150W 150W	0 - 12 kV 0 - 20 kV 0 - 30 kV	0 - 12.5 mA 0 - 7.5 mA 0 - 5 mA

Replace x with N for negative or P for positive output polarity

\* Only available as a capacitor charger



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## Technical Data

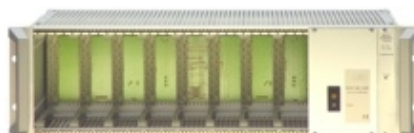
Stability ( $\Delta V_{IN}$ ).....	< $1 \times 10^{-4} * V_{NOM}$
Stability ( $\Delta R_{LOAD}$ ).....	< $2 \times 10^{-4} * V_{NOM}$
Ripple & noise.....	< $5 \times 10^{-4} * V_{NOM}$ (< $1 * 10^{-4} * V_{NOM}$ option to 6kV)
Repetition accuracy.....	< $1\% * V_{NOM}$ (with option CLD)
Temperature coefficient.....	< $1 * 10^{-4} / K$ ( $2 * 10^{-4} / K$ for 150W units)
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, 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 x 12HP (60.96mm) ≤10kV = 3U x 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%
Output connection.....	600mm HV bare ended cable
Polarity.....	Factory fixed (x = p - Positive, x = n - Negative)
INHIBIT.....	TTL Low

## Options Table

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)

## 19" Mainframes

Type	Slots	Power	Dimensions (H x W x D)
ECH 124	4 + 1	120W	½ 19" x 3U x 350mm
ECH 128	8 + 1	300W	19" x 3U x 350mm
ECH 12A	10 + 1	300W	19" x 3U x 350mm



Every effort is made to ensure that the information provided within this technical summary is accurate. However, ET 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. ET 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.