EPS

VERSATILE BUILT-IN POWER HV MODULE

- **Patented resonance converter technology**
- **High efficiency**
- **Voltage and current control**
- **Low ripple and noise, low EMI**
- **Multiple options (INTERLOCK, ARC, CLD)**
- **Highly customisable, optimised versions on request**

THQ

AIO

ARC

CLD

EPS modules are versatile DC/DC high voltage power supplies with multiple options. The modules are available as compact metal box in 60 W and 150 W version or system capable in 3U Eurocassette-standard in 60 W. EPS modules can be used as standalone DC/DC converters, combined to multichannel AC/DC supply in a THQ series or integrated in a modular MMC system.
The output voltage is controllable via analog interface with either an external potentiometer (internal reference voltage) or an analog control voltage.

To protect the connected load the modules are equipped with INHIBIT and INTERLOCK (optional).
The patented resonance converter technology and metal box shielding guarantee lowest electromagnetic interference. To fit best in different applications EPS modules can be equipped with ARC management or as capacitor charger with very low output voltage overshoot (option CLD).

SPECIFICATIONS

	EPS 60 W	EPS 150 W
Polarity	factory fixed, positive or negative	factory fixed, positive or negative
Ripple and noise [f >10 Hz]	< 10kV: typ. < 5 • 10^{-4} • V_{nom} ≥ 10 kV: typ. < 2 • 10^{-2} • V_{nom}	< 10kV: typ. < 5 • 10^{-4} • V_{nom} ≥ 10 kV: typ. < 2 • 10^{-2} • V_{nom}
Stability [ΔV_{out} / ΔV_{in}]	ΔV_{out} < 0.01% • V_{nom}	ΔV_{out} < 0.01% • V_{nom}
Stability [ΔV_{out} / R_{load}]	ΔV_{out} < 0.02% • V_{nom}	ΔV_{out} < 0.02% • V_{nom}
Temperature coefficient	< 100 ppm / K	< 100 ppm / K
CLD - Repeat accuracy	< 0.01 • V_{out}	< 0.01 • V_{out}
Supply voltage	22.8 - 26.4 V	21 - 29 V
Set / monitor voltage	0 - 5 V | optional: 0 - 10 V	0 - 5 V | optional: 0 - 10 V
Protection	overload and short circuit, INHIBIT, overvoltage/overtemp	overload and short circuit, INHIBIT, overvoltage/overtemp
Remote connector	D-Sub 9	D-Sub 9
Interlock	optional	optional
HV connector	HV-cable	HV-cable
Case	metal box	metal box
Dimensions (L/W/H)	185/108/57 mm	170/188/60 mm

EPS

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ALSO AVAILABLE AS SYSTEM CAPABLE 3U MMC VERSION

MMC

CONFIGURATIONS

EPS 60 W	V_{nom}	I_{nom}	RIPPLE AND NOISE
EPx 05 127 24 5	500 V	120 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 10 606 24 5	1 kV	60 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 15 406 24 5	1.5 kV	40 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 20 306 24 5	2 kV	30 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 30 206 24 5	3 kV	20 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 40 156 24 5	4 kV	15 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 50 126 24 5	5 kV	12 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 60 106 24 5	6 kV	10 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 80 705 24 5	8 kV	7 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$
EPx 100 605 24 5	10 kV	6 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$
EPx 150 405 24 5	15 kV	4 mA	$< 2 \bullet 10^{-2} \bullet V_{nom}$
EPx 200 306 24 5	20 kV	3 mA	$< 2 \bullet 10^{-2} \bullet V_{nom}$
EPx 300 205 24 5	30 kV	2 mA	$< 2 \bullet 10^{-2} \bullet V_{nom}$

EPS 150 W	V_{nom}	I_{nom}	RIPPLE AND NOISE
EPx 10 157 24 5	1 kV	150 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 20 756 24 5	2 kV	75 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 40 406 24 5	4 kV	40 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$ *
EPx 80 206 24 5	8 kV	20 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$
EPx 120 126 24 5	12 kV	12.5 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$
EPx 150 106 24 5	15 kV	10 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$
EPx 200 755 24 5	20 kV	7.5 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$
EPx 300 505 24 5	30 kV	5 mA	$< 5 \bullet 10^{-4} \bullet V_{nom}$

(* optional: $< 1 \bullet 10^{-4} \bullet V_{nom}$

OPTIONS & ORDER INFO

OPTION	ORDER INFO	EXAMPLE
Polarity	positive: **x = p**, negative: **x = n**	EP**p** 05 127 24 5
ARC management	**ARC**	
Capacitor charger	**CLD**	
Set 0 - 10 V	**AO**	