

HIGH VOLTAGE DEVICES

AC/DC

HPS

DIGITALLY CONTROLLABLE AC/DC HIGH VOLTAGE POWER SUPPLIES

- ▶ 300 W / 800 W / 1kV - 30 kV versions
- ▶ 19" rack mountable
- ▶ Best control characteristics
- ▶ Multiple interface options
- ▶ Capacitor charger option (CLD)
- ▶ ARC management
- ▶ Very low ripple and noise, very low EMI
- ▶ Parallel operation for power increase



- AIO
- DIO
- CLD
- CUSTOM

HPS devices are digitally controlled AC driven high voltage power supplies with high power density at best output characteristics. The processor controlled supplies can flexibly be adapted to any kind of application by configuring many options. PWM controlled output parameters,

small ripple and noise and stored energy, up to 85% efficiency and almost loss free switching of semiconductors makes HPS devices the most advanced AC/DC HV power supply for industrial and research applications.

SPECIFICATIONS	HPS 300 W	HPS 800 W
Power	300 W	800 W
Polarity	factory fixed, positive or negative	factory fixed, positive or negative
Efficiency	up to 80%	up to 85%
Ripple and noise [f >10 Hz]	$< 1 \cdot 10^{-4} \cdot V_{nom}$ [$V_{nom} \leq 8$ kV] $< 5 \cdot 10^{-4} \cdot V_{nom}$ [$V_{nom} > 8$ kV]	$< 1 \cdot 10^{-4} \cdot V_{nom}$ [$V_{nom} \leq 8$ kV] $< 5 \cdot 10^{-4} \cdot V_{nom}$ [$V_{nom} > 8$ kV]
Stability	0.02 % V_{nom}^*	0.02 % V_{nom}^*
Voltage regulation [$\Delta V_{out} / \Delta V_{in}$]	0.01 % [$V_{out} \geq 5$ V]	0.01 % [$V_{out} \geq 5$ V]
Temperatur coefficient	< 200 ppm / K	< 200 ppm / K
Supply voltage	85 - 264 VAC with PFC	85 - 264 VAC with PFC
Switching frequency	30 - 70 kHz	30 - 70 kHz
Set / monitor voltage	optional 0 - 5 V	optional 0 - 5 V
Protection	overload, ARC and short circuit, INTERLOCK, INHIBIT, overvoltage/overtemp	overload, ARC and short circuit, INTERLOCK, INHIBIT, overvoltage/overtemp
ARC management	ARC	ARC
Filament supply	not available	not available
Interfaces	USB, CAN, IEEE488.2 ** Ethernet **, RS232 **, AIO isolated **	USB, CAN, IEEE488.2 ** Ethernet **, RS232 **, AIO isolated **
Case	19" rack mountable	19" rack mountable
Dimensions (L/W/H)	410 mm / 19" / 1U	410 mm / 19" / 1U

^{*)} for 8h, after 0.5h warmup ^{**) optional}

CONFIGURATIONS	MODEL	V _{nom}	I _{nom}	HV CONNECTOR
HPS 19" - 300 W				
HPx 10 307	1 kV	300 mA	SHV	
HPx 20 157	2 kV	150 mA	SHV	
HPx 30 107	3 kV	100 mA	SHV	
HPx 40 756	4 kV	75 mA	SHV	
HPx 60 506	6 kV	50 mA	SHV	
HPx 80 356	8 kV	35 mA	SHV	
HPx 120 256	12 kV	25 mA	L16 G21	
HPx 150 206	15 kV	20 mA	L16 G21	
HPx 200 156	20 kV	15 mA	L30 G21	
HPx 300 106	30 kV	10 mA	L30	
HPS 19" - 800 W				
HPx 10 807	1 kV	800 mA	SHV	
HPx 20 407	2 kV	400 mA	SHV	
HPx 30 257	3 kV	250 mA	SHV	
HPx 40 207	4 kV	200 mA	SHV	
HPx 60 137	6 kV	130 mA	SHV	
HPx 80 107	8 kV	100 mA	SHV	
HPx 120 656	12 kV	65 mA	L16 G21	
HPx 150 506	15 kV	50 mA	L16 G21	

OPTIONS & ORDER INFO			
OPTION	ORDER INFO	EXAMPLE	OPTION
Polarity	positive: x = p , negative: x = n	HPp 10 307	AIO isolated
Capacitor charger	CLD		Rear HV connector (SHV only) HVR
Interface options	Ethernet: ETH IEEE 488: IEE RS232: RS2		Note: other product configurations and customizing on request