PPS 10 KW

POTENTIAL FREE HIGH VOLTAGE POWER SUPPLY UNIT

NEW

AIO

DIO

CLD

EOA

ARC

- **Potential free high voltage outputs**
- **Two high voltage outputs (positive and negative)**
- **10 kW power with 1-10 kW constant power mode**
- **Up to 5.5 kV, 6 A, Extended operation area (EOA) up to 10 kW**
- **Best control characteristics**
- **Multiple interface options**
- **Capacitor charger option (CLD)**
- **Short circuit proof**
- **ARC management (ultrafast ARCpro optional)**
- **Very low noise, very low EMI**
- **4U/19" rack mountable unit**
- **Forced cooling internal (air inlet front, air outlet rear)**
- **Parallel operation for power increase**

PPS 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. Due to an additional external 24V supply it is possible to maintain communication with the control unit and to continue measuring output current and output voltage, even if the mains voltage is disconnected/ switched off. Digitally controlled output parameters, low noise and stored energy, more than 93% efficiency and almost loss free switching of semiconductors makes PPS devices the most advanced AC/DC HV power supply for industrial and research applications.

Operation modes	
CV Constant Voltage	Regulation of the output voltage to the set value
CC Constant Current	Regulation of the output current to the set value
CP Constant Power	Voltage and current regulation are active, limit of the output power to the set value

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SPECIFICATIONS

	PPS 10 kW
Output power P_{nom}	10 kW
Output voltage V_{nom}	up to 5,5 kV
Output current I_{nom}	up to 6 A
Polarity	positive between HVOUT+ and HVOUT- Both outputs potential-free up to V_{nom}
Efficiency	> 93% (V_{in} = 400 V, P_{nom})
Ripple and noise	$\Delta V < 5\ \% \cdot V_{nom}$ @ P_{nom} (voltage control)
Stability	$\Delta V < 0.05\ \% \cdot V_{nom}$
Voltage regulation [ΔV_{out} / ΔV_{in}]	$\Delta V < 0.1\ \% \cdot V_{nom}$ (ΔU_{in}, $0 \le I_{out} \le I_{nom}$)
Voltage accuracy	< 1 % · V_{nom} for one year
	< 10 V @ 50 V for one year
Current accuracy	< 5 % · I_{nom} for one year
Temperatur coefficient	$< 2 \bullet 10^{-4}$ / K *
Supply voltage	V_{in} = 3 x 400 - 480 V_{AC}
Set / monitor voltage	0 - 5 V | opt. 0 - 10 V
Protection	overload, ARC and short circuit, INTERLOCK, INHIBIT, overvoltage/overtemp
ARC Management	ARC | optional: ARCpro
Filament supply	optional
Interfaces	USB, AIO isolated
	optional: IEEE 488.2, Ethernet, RS232, CAN, SPS (0-10V), EtherCAT
Safety standard	EN 61010-1 (VDE 0411)
Operating conditions	Temperature -25 °C – 50 °C
Storage conditions	Temperature -25 °C – 80 °C
	Humidity 20 % – 90 %, condensing
Case	19" rack mountable
Dimensions (L/W/H)	500 mm / 19"/ 4U
High voltage output connector	LEMO L11

*) for 8h, after 0.5h warmup

CONFIGURATIONS

MODEL	V_{nom}	I_{nom}	L/W/H	HV CONNECTOR
PPS 10kW				
PP 10 109p	1 kV	10 A	500mm / 19" / 4U	L11
PP 20 508p	2 kV	5 A	500mm / 19" / 4U	L11
PP 30 348p	3 kV	3.4 A	500mm / 19" / 4U	L11
PP 40 258p	4 kV	2.5 A	500mm / 19" / 4U	L11
PP 50 208p	5 kV	2 A	500mm / 19" / 4U	L11
PP 55 188p	5.5 KV	1.8 A	500mm / 19" / 4U	L11
PP 55 608p	5.5 KV	6 A	500mm / 19" / 4U	L11

OPTIONS & ORDER INFO

OPTION	ORDER INFO	EXAMPLE
Polarity	positive	PP 55 608**p**
Capacitor charger	**CLD**	
Front panel operation with LCD	**FP**	
Interface options	controller area network: **CAN** | industry analog I/O: **SPS** | EtherCAT: **ETC** | Ethernet: **ETH** | IEEE 488: **IEE** | RS232: **RS2**	
ARC management pro (ultrafast)	**ARCpro**	
Extended operating area	**EOA**	

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