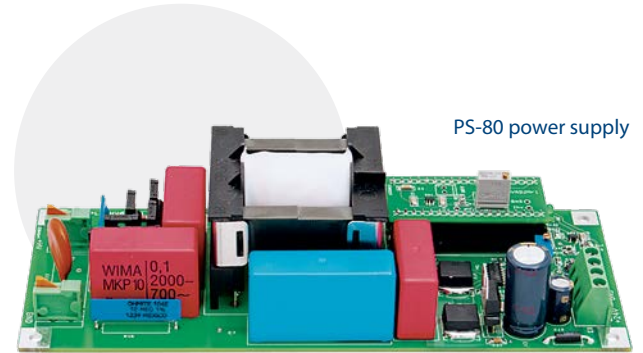


HV Power Supplies



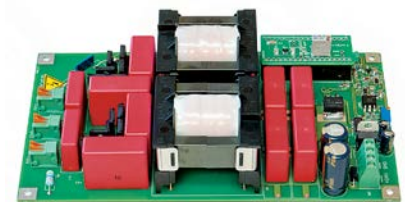
PS-80 power supply

OEM TYPE HIGH VOLTAGE POWER SUPPLY – PS

PS series Power supplies are designed for powering Pockels cell drivers with required power and voltage. Due to its performance and reliable design, PS is good choice for OEM customers. It features high stability low ripple output together with convenient voltage

control by internal trimmer or CAN computer interface.

Power supplies PS-120 and PS2-60 are equipped with overheat protection and LED indicator that stops operation and lights if ambient temperature exceeds 55 °C.



PS-120, PS2-60 power supply

Specifications

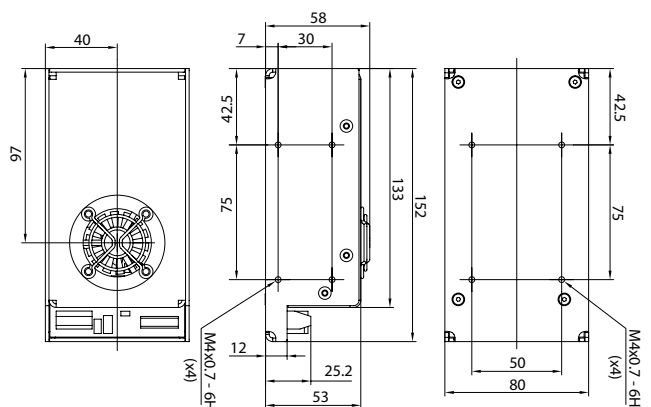
MODEL	PS-5	PS-40	PS-80	PS-120	PS2-60	PS-170	PS-2x85
Maximal high voltage output options ¹⁾	1.8 kV	1.3 kV	1.8 kV	1.8 kV	±1.4 kV	1.8 kV	±1.5 kV
	2.8 kV	1.8 kV	2.6 kV	2.6 kV	±2.0 kV	2.6 kV	±1.8 kV
	4.0 kV	2.5 kV	3.1 kV	3.1 kV	±2.6 kV	3.6 kV	
	4.4 kV	3.6 kV	3.6 kV	3.6 kV	±3.6 kV		
	5.0 kV	4.0 kV	4.0 kV				
Maximal output power at maximal output voltage ²⁾	5 W	40 W	80 W	120 W	2 × 60 W	170 W	2 × 85 W
Voltage control limits	$U_{max} - 1 \text{ kV}$ to U_{max} (internal trimmer); 40% U_{max} to U_{max} (CAN)					40% U_{max} to U_{max}	
Output voltage control options ³⁾	CAN interface ⁴⁾ , internal trimmer potentiometer						
External powering	24 V DC, <15 W	24 V DC, <50 W	24 V DC, <90 W	24 V DC, <150 W	24 V DC, <150 W	24 V DC, <200 W	
Dimensions (L × W × H)	135 × 70 × 30 mm	160 × 70 × 40 mm	175 × 70 × 45 mm	175 × 110 × 45 mm		152 × 80 × 58 mm	
Mounting holes Ø3.4 mm location	125 × 35 mm	150 × 60 mm	165 × 60 mm	165 × 100 mm		-	

¹⁾ Matching to Pockels cell driver voltage requirement is necessary by ordering.
²⁾ Maximal power is proportionally lower by tuning to lower HV output.
³⁾ Needs to be indicated by ordering.
⁴⁾ Requires USB-CAN converter for computer control that is sold separately. Voltage control limits from 40% U_{max} to U_{max} .

Output ripple is 0.5% typically at maximal power for all models of HV power supplies. External filter can be used to reduce that value if certain application requires smoother output. All Pockels cell drivers have integrated ripple filter and usually do not require additional one. Contact us for suggestions if your specific application needs lower ripple voltage.



PS-170, PS2-85 HV power supply



Outline drawing of PS-170, PS2-85 HV power supply

LABORATORY TYPE HIGH VOLTAGE POWER SUPPLY – HVS100

Laboratory type HVS100 series high voltage power supply is especially designed for powering of drivers of Pockels cells. However, it can be used as general purpose high voltage power supply for other electronic devices and different applications in the laboratory. HVS100 features two voltage output channels – adjustable high voltage output channel and 24 V DC output channel.

Required high voltage value can be set and adjusted in the limits from 40% of maximal specified voltage to maximal specified voltage ($40\% U_{max}$ to U_{max}).

HVS100 has 2.4 inch OLED display for high voltage control and current consumption monitoring at the output channel.



Front panel of HVS100 power supply



Rear panel of HVS100 power supply

Specifications

CATALOGUE NUMBER	HVS100-2x60	HVS100-120	HVS100-5	HVS100-40	HVS100-80	HVS100-150
Maximal high voltage output options	± 1.4 kV ± 2.5 kV	1.8 kV 2.6 kV 3.1 kV 3.6 kV	1.8 kV 2.8 kV 4.0 kV 4.4 kV 5.0 kV	1.3 kV 1.8 kV 2.5 kV 3.6 kV 4.0 kV	1.8 kV 2.6 kV 3.1 kV 3.6 kV 4.0 kV	1.8 kV 2.6 kV 3.1 kV 3.6 kV 4.0 kV
HVS100 Maximal output power at maximal output voltage	2x60 W	120 W	5 W	40 W	80 W	150 W
Voltage control limits	40% U_{max} to U_{max}					
Remaining power at the output of 24 V DC for external needs	55 W	55 W	190 W	150 W	100 W	Not available
Mains voltage / DC supply	90 to 264 V AC, 47 – 63 Hz					24 V DC
Dimensions (W x L x H)	230 x 245 x 53.5 mm					
Weight	2.5 kg					

Output ripple is 0.5% typically at maximal power for all models of HV power supplies.

Maximal power is proportionally lower by tuning to lower HV output.

HIGH VOLTAGE POWER SUPPLY – HV

Features

- Up to 400 W and 4 kV at the output
- Single polarity HV and bipolar HV-2x versions
- Computer control through CAN and RS232
- 48 V DC powering
- Auxiliary 24 V DC output for Pockels cell drivers

OEM type HV series power supply modules are designed to be used with high power and high repetition rate Pockels cell drivers that require >120 W power from HV source. To extend the versatility of possible applications we offer both single (positive) polarity and bipolar HV series power supplies.

HV power supplies can also be used as universal HV power supplies for different applications where up to 200 – 400 W high voltage source is required. HV series module provides maximal power (200 W or 400 W) at the indicated maximal rated voltage only.

Therefore, the required rated voltage should be noted when ordering (possible options are listed in the specifications table).

The input of HV series power supply is 48 VDC. 24 VDC auxiliary output is a convenient feature to use the module as a single power source (high plus low voltage) with one of EK SMA Optics Pockels cell drivers. The output voltage can be tuned from zero to maximal value using an internal trimmer potentiometer, CAN or RS232 interfaces. Analog control (0 – 10 V) is possible under request.



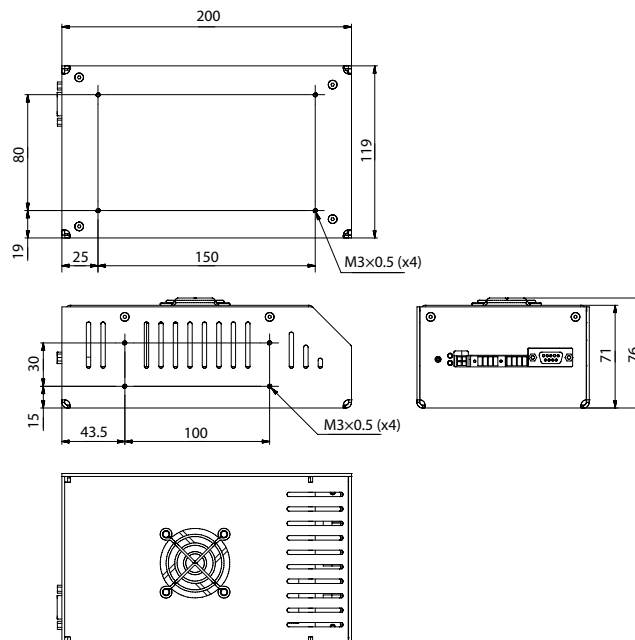
Front and rear view of HV power supply module

Specifications

MODEL	HV-200	HV-400	HV-2x200
Maximal HV options	1.8 kV 2.6 kV 3.6 kV 4.0 kV ^{1) 2)}		± 1.5 kV ± 2.0 kV ± 2.6 kV ± 3.6 kV
Maximal output power	200 W ¹⁾	400 W ²⁾	2 × 200 W
Voltage control range	0 – U _{max}		
Auxiliary output	24 VDC, 1.2 A		
Controls	CAN, RS232, internal trimmer potentiometer		
Powering requirement	48 V, 4.5 A	48 V, 9 A	
Dimensions	200 × 118 × 75 mm		

¹⁾ Maximal output power of 4 kV HV-200 version is limited to 180 W.

²⁾ Maximal output power of 4 kV HV-400 version is limited to 360 W.



Outline drawing of HV power supply module.