

HIGH VOLTAGE PCKELS CELL DRIVERS – DPB

Features

- HV pulse amplitude up to 9.8 kV
- HV pulse amplitude doubling layout
- Repetition rate up to 10 kHz
- Easy integration with HV power supply
- Easy mounting on optical breadboard



OEM version of DPB series Pockels cell driver mounted with HV power supply



Encased version of DPB series Pockels cell driver with HV power supply mounted inside

Configuration samples

CATALOGUE NUMBER OF DRIVER	DPB-10-4.2 HVS-D2-10-4.2	DPB-5-5.5 HVS-D2-5-5.5	DPB-3-8.6 HVS-D2-3-8.6	DPB-2.5-9.8 HVS-D2-2.5-9.8
Maximal HV operation voltage	4.2 kV	5.5 kV	8.5 kV	9.8 kV
Output polarity	bipolar			
HV pulse rise time, typical	6 ns	7 ns	10.5 ns	12 ns
HV pulse fall time, typical	6 ns	7 ns	9.5 ns	10.5 ns
HV pulse duration	30...3000 ns		35...2000 ns	
Maximal HV pulse repetition rate	10 kHz	5 kHz	3 kHz	2.5 kHz
HV pulse delay	30 ns			
Requirement for external triggering pulse amplitude	3.5...5 V (50 Ω load)			
Requirement for external triggering pulse rise time	≤ 10 ns		≤ 5 ns	
Requirement for external triggering pulse duration	See Fig. 8 for control by 1 pulse, see Fig. 9 for control by 2 pulses			

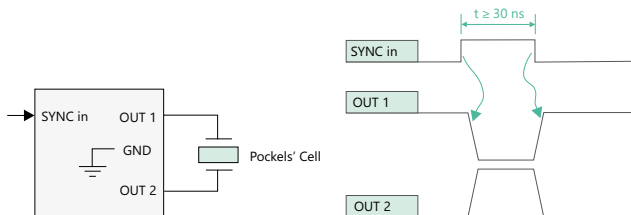


Fig. 8. Diagram of pockels cell connection to driver and timing charts of driver controlled by 1 sync pulse

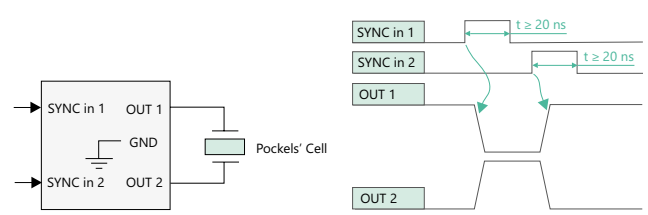


Fig. 9. Diagram of pockels cell connection to driver and timing charts of driver controlled by 2 sync pulses

Specifications of OEM type DPB series Pockels cell driver

CATALOGUE NUMBER OF DRIVER	DPB-10-4.2	DPB-5-5.5	DPB-3-8.6	DPB-2.5-9.8
Control	by 1 or 2 external triggering pulses, switchable			
External powering requirements:				
Low voltage DC supply	15 – 25 V, 150 mA (0.5 A inrush current)		24 – 25 V, 150 mA	
HV power supply (not included, should be purchased separately)	2.1 kV, 5 W	2.8 kV, 5 W	4.4 kV, 5 W	5.0 kV, 5 W
DC Connectors	Molex Micro-Fit 3.0			
Dimensions (L x W x H):				
Driver board	135 × 65 × 30 mm		135 × 75 × 30 mm	
Driver board mounted with PS-5 power supply	See Fig. 10		See Fig. 11	

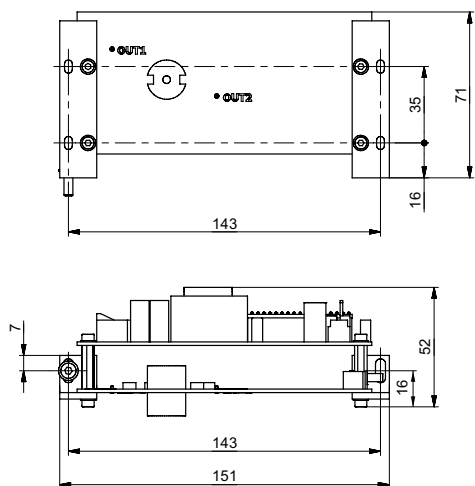


Fig. 10. Outline drawing of OEM version DPB-10 and DPB-5 drivers with PS-5 power supply

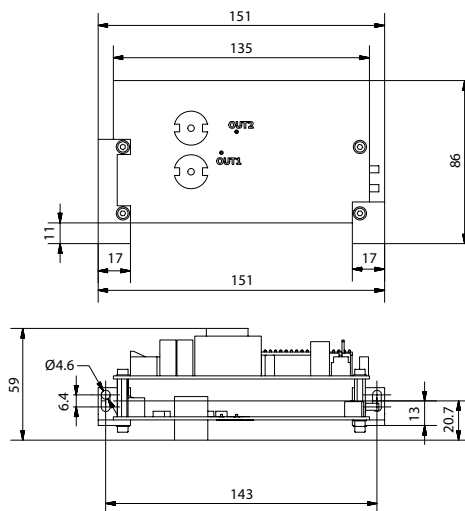


Fig. 11. Outline drawing of OEM version DPB-3 and DPB-2.5 drivers with PS-5 power supply

Specifications of encased type HVS-D2 series Pockels cell driver with HV Power supply

CATALOGUE NUMBER OF DRIVER	HVS-D2-10-4.2	HVS-D2-5-5.5	HVS-D2-3-8.6	HVS-D2-2.5-9.8
Control	by 1 or 2 external triggering pulses, factory preset			
HV Power supply (integrated)	2.1 kV, 5 W	2.8 kV, 5 W	4.4 kV, 5 W	5.0 kV, 5 W
Voltage control limits	$U_{max} - 1 \text{ kV}$ to U_{max} (internal trimmer); 40% U_{max} to U_{max} (CAN)			
Output voltage control options	Internal trimmer potentiometer or CAN interface (requires CAN-USB converter)			
Mains voltage	90 to 264 V AC, 47 – 63 Hz			
Dimensions (W x L x H)	80 × 120 × 225 mm (see Fig. 12)			

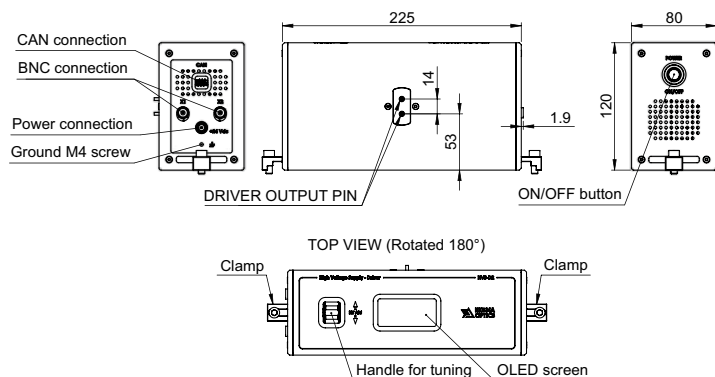


Fig. 12. Outline drawing of encased type HVS-D2 driver with HV power supply