

Ultrafast Pulse Picking Systems

Digital synchronization and delay pulse generator pMaster 4.2



DIGITAL SYNCHRONIZATION AND DELAY PULSE GENERATOR – pMaster 4.2

Features

- Synchronization with pulsed lasers emitting laser pulses at up to 100 MHz repetition rate
- Control of ultrafast pulse picking units operating at up to 2 MHz repetition rate
- Single shot, burst or normal operation modes
- 4 output channels for full control of Pockels cells drivers with 100 ps resolution
- Touch screen for setting operation parameters and monitoring of HV current
- Communication via USB port
- Integrated over-temperature protection
- Protection installed in order to prevent damage if control cables are connected incorrectly
- Possibility to use asynchronous gate input signal

pMaster 4.2 is a timing generator with four output channels used for the full control of operation of high voltage Pockels cells drivers which are built-in in UP2 or MP1 pulse

picking units. pMaster 4.2 also has built-in high voltage power supplies for Pockels cells drivers powering.

Specifications of pMaster 4.2 timing generator

MODEL		pMaster 4.2
Control modes		Internal pulse generator, External trigger, External RF source
Internal Pulse generator	Operation modes	Single shot, burst, normal
	Delay range	1.1 nanoseconds to 140 milliseconds
	Resolution	100 ps
	Accuracy	25 ps + 0.000001 × delay
	Time base	100 MHz, 0.2 ppm
	RMS jitter	< 100 ps
	Channel to channel jitter	< 30 ps
External synchronization	Synchronization source	External trigger, SYNC IN input
	Rate	1 Hz to 20 MHz
	Min pulse width	10 ns
	Threshold	1.3 V
	Input level	LVTTL, tolerates 5 V
	Impedance	0.2 mA pulldown
External RF source, CLK IN input	Rate	10 MHz to 100 MHz
	Min pulse width	300 ps
	Input level	0.5 V to 3.3 V
	Impedance	50 Ω
Outputs	Output level	4.5 V
	Output impedance	50 Ω
Communication, powering and physical specifications	Communication	USB
	Power	230 V AC 50 Hz or 110 V AC 60 Hz
	Dimensions	482 × 387 × 88 mm

Ordering information

Digital synchronization and delay pulse generator pMaster 4.2 should be matched with pulse picker MP1 or UP2. Please contact our sales engineers for a complete solution tailored to your application.