

Laser Synchronization Modules

POCKELS CELLS

DRIVERS FOR POCKELS CELLS

HV POWER SUPPLIES FOR PC DRIVERS

LASER DIODE DRIVERS

SYNCHRONIZATION MODULES FOR LASERS

PULSE PICKING SYSTEMS

OVS FOR NONLINEAR CRYSTALS

SY4000

SYNCHRONIZATION MODULE AND PULSE DELAY GENERATOR

FEATURES

- > Compact design
- > OEM (single board) and encased options
- > 8 independent output channels
- > Ultra-stable internal clock 0.2 ppm (optional)
- > Precise delay control in range 2 ns to 150 ms
- > 25 ps timing resolution
- > Hi-accuracy synchronization to external pulse train
- > DAC output
- > Both 50 Ω and differential outputs present
- > Measurement of
 - Optical clock frequency
 - Triggering frequency
 - Delay
- > Frequency divider
- > Frequency divider for photodetectors



SY4000 Synchronization module and pulse delay generator encased

Pulse synchronization module with delay generator is designed to create up to 8 delayed output pulse sequences precisely synchronized to internal or external clock. Photo detector or electrical signal can be used as input source to be synchronized with. Generator gives possibility to create different sequences like delayed triggering, or any delayed precisely timed series. Particularly, EKSMA Optics recommends using SY4000 to create sets of pulses to control DPD/DPS series Pockels cell drivers with one, two or 4 triggering inputs.

ENCASED VERSION

Preserves all specifications as SY4000 and additionally communication ports RS232, USB, LAN, WLAN are added. Powering from mains 90 ... 264 V, 50 – 60 Hz or 12 V DC. Power consumption less than 15 W. Ideal solution for your lab and/or evaluation before switching to OEM version.



SPECIFICATIONS

MODEL	SY4000
PULSE GENERATION	
Channel modes	Single shot, burst, normal, duty cycle, frequency divider
Delay range	0 to 150 ms
Negative delay	-150 ms
Pulsewidth	2 ns to 150 ms
Resolution	25 ps
Accuracy	25 ps + 0.000001 × delay
Time base	100 MHz, 0.2 ppm
Jitter	< 30 ps
Burst mode	1 to 65535
EXTERNAL TRIGGER	
Rate	DC to 20 MHz
Thershold	1.3 V
Input level	LVTTTL, TTL
Slope	rising
Jitter	< 100 ps RMS
Delay	< 13 ns; < 70 ns
INTERNAL GENERATOR	
Mode	Duty cycle
Rate	50 ns to 100 sec
Resolution	10 ns; 300 ps
Accuracy	5 ns + 0.000001 × period
Jitter	100 ps RMS
Burst	0 ... 65535
OUTPUTS	
Output level	2.5 V, 4 V
Impedance	50 Ω
Slew rate	1.5 V/ns
COMMUNICATIONS	
Communications	CAN
OPERATING REQUIREMENTS	
Power requirements	12 V DC, 500 mA
DIMENSIONS (not including connectors)	
OEM board (W × D × H)	100 × 77 × 20 mm
Encased version (W × D × H)	105 × 86 × 85 mm



OEM version of SY4000 Synchronization module and pulse delay generator

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