9510+ Series

Digital Delay Pulse Generators

Our 9500+ series of pulse generators provides a cost-effective yet highly flexible and functional approach for your synchronization and timing needs.

Key Features

- 1 ns Timing Resolution
- < 400 ps Channel to Channel Jitter
- Benchtop Design
- Easy Programming Interface
- 2, 4 or 8 Independent Channel Outputs
- Free LabVIEW Driver
- USB, RS232, GPIB Standard
- Ethernet Available
- Full Customer Support
- 2 Year Warranty

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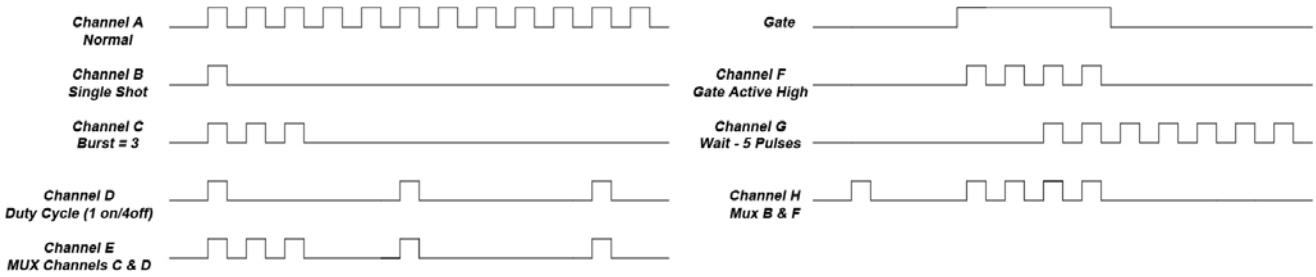
9510+ Series
Pulse Generator

The Model 9500 Plus Series Digital Delay-Pulse Generator with 2, 4 or 8 independent outputs is designed to provide cutting edge, yet cost-effective solutions to generate and synchronize multiple pulses for a variety of applications. The delay and pulse width for each channel are independent and digitally controlled which makes the instrument ideal for situations that require synchronizing a number of different events. Flexible operating modes allow complete control of pulse outputs, including continuous, duty cycle, burst and single shot with external trigger/gate. More advanced features such as multiplexing allows the timing of all or several channels to be combined for complex pulse patterns. For automated test equipment, complete control of the instrument is provided through the standard RS232, USB and GPIB interface. Ethernet is optional and LabVIEW® drivers are available.

Digital Delay Output Modes



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SPECIFICATIONS 9510+ Series

MODELS

9512+ 2 independent channel outputs	Standard Communications: USB, RS232 & GPIB
9514+ 4 independent channel outputs	Configurations: 12 Memory Slots
9518+ 8 independent channel outputs	

PULSE GENERATION

channel modes	single shot, burst, normal, duty cycle.
multiplexer	combine any channel
delay	0 to 1000 s
negative delay	0 to -1000 s
pulsewidth	10 ns to 1000 s
resolution	1 ns
accuracy	1.5 ns + 0.0001 setpoint
time base	50 MHz, 25 PPM crystal oscillator
RMS jitter	< 400 ps channel to channel
burst mode	1 to 1,000,000

EXTERNAL TRIGGER/GATE

rate	DC to 5 MHz
threshold	200 mV to 15 V
input range	0 - 30 V
trigger slope	rising or falling edge
RMS jitter	< 5 ns
insertion delay	< 180 ns

INTERNAL RATE GENERATOR

system modes	single shot, burst, continuous, duty cycle
rate (T0 period)	200 ns to 5000 sec. (0.0002 Hz to 5 MHz)
resolution	10 ns
accuracy	1.5 ns + 0.0001 x period
RMS jitter	< 250 ps channel to channel
burst mode	1 to 1,000,000 pulses

OUTPUTS

outputs	TTL/CMOS, adjustable 2 - 20 V
impedance	50 Ohms
slew rate	> 0.5 V/ns
overshoot	< 100 mV + 10% of pulse amplitude
amplitude (adjustable mode)	1 - 10 V into 50 Ohm load 2 - 20 V into high impedance load
rise time	3 ns typ TTL 15 ns typ @ 20 V (high imp) adj. 25 ns typ @ 10 V (50 ohm) adj. (10% - 90%)

GENERAL

dimensions	10.5" x 8.25" x 5.5"
weight	8 lbs.
power	20 W, 100 - 240 VAC, 50/60 Hz <1 A

OPTIONS

E - Ethernet Computer Interface (Replaces the USB)
T - Extended time base (10 MHz PLL / 20 MHz PRF)
X - Separate gate and trigger inputs
SRM- 19" Rack Mount (single) or DRM- 19" Rack Mount (double)

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