

Unit with replaceable pulse forming modules



Unit with 3 outputs, rate generator and delay module

Applications

General purpose triggering
Rise time testing
TDR pulse source
Trigger delay generator
Laser diode driver and many more

Summary

- >2kV <150ps rise time pulse into 50 Ω
- Optional built in rate generator to 1kHz
- Optional built in delay unit to 100ns
- Universal AC power
- Optional auxillary outputs
- Optional pulse forming
- Optional variable output voltage.

See www.kentech.co.uk

CPS1 pulsers are based upon a 2kV avalanche switch unit. They can be customised to deliver ~ square pulses in the range 200ps to 6ns. Other options available include variable output voltage, built in rate generator with trigger delay facility and output pulse length control by way of replaceable pulse forming modules.

NORMAL SPECIFICATIONS

Output voltage	>2kV, 50 .
Pulse Shape	<150ps rise time 2ns approximately exponential fall
Polarity	Either positive or negative but fixed at build time.
Trigger	Requires 5V into 50 , ~5 ns rise time.
Jitter	<10 ps RMS.
Trigger delay	~20 ns
Output protection	Short circuit, open circuit and arcing loads
Repetition rates	1,000 Hz.
Power supply	100 to 240V AC 50 to 60Hz.
Outputs:	
Pulse output	N or SMA
Inputs:	
Trigger input	BNC 5V, 50
Controls:	
Power	Switches AC power in the pulser.
Indicators:	
Power Triggered	Shows that AC power is applied and the unit is switched on. Illuminates while the unit is being triggered.

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TYPICAL CUSTOM SPECIFICATIONS

Output voltage	>1kV into 50 Ω .
Pulse Width	~2ns FWHM.
Polarity	Negative.
Trigger	Requires 5V into 50 Ω , ~5 ns rise time.
Jitter	<10 ps rms, <20ps peak to peak.
Trigger delay	~20 ns in direct mode.
Post pulse noise	~10% for ~300ps
Repetition rates	1kHz.
Power supply	100 to 240V AC 50 to 60Hz.
Outputs:	
Pulse output	N type
Pretrigger output	BNC 10V into 50 Ω , leads main output by the delay when the delay is active.
Inputs:	
Trigger input	BNC 5V, 50 Ω .
Controls:	
Mode	Sets one of the following modes: Single shot (delay active) 1-10Hz (delay active) 10-100Hz (delay active) External trigger (delay active) "Delay" External trigger (delay inactive) "Direct"
Fine rate	Varies internal rate by a ratio of 10:1.
Delay (and fine delay)	Sets internal delay, up to 100ns pretrigger delay.
Single shot button	Depressing this button cause a single trigger when single shot mode selected.
Power	Switches AC power in the pulser.
Indicators:	
Power	Shows that AC power is applied and the unit is switched on.
Triggered	Illuminates while the unit is being triggered.

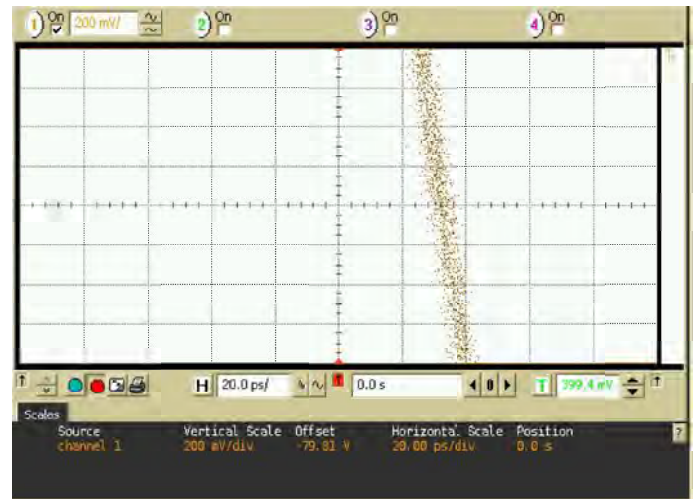
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Pulse shapes - this one is nominally 500ps



Leading edge transition ~ 150ps



Jitter 20ps/div

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