

STREAK CAMERA SWEEP UNIT

# TSU12-20

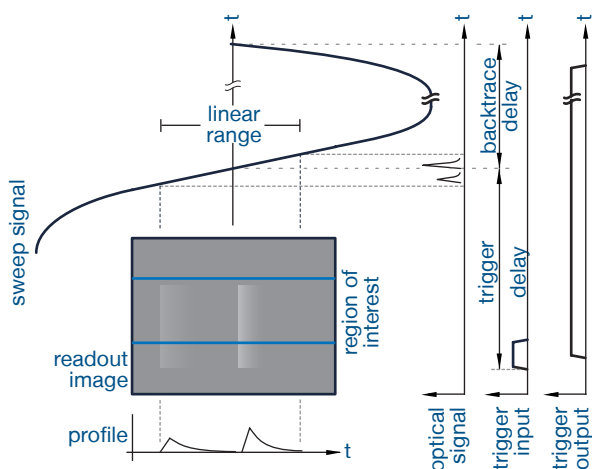
## Triggered Sweep Unit



- To be used with SC-20 main unit
- <math><600\text{ ps}</math> temporal resolution (single-shot)
- 10 ns/mm up to 5  $\mu\text{s/mm}$  sweep speed
- Options for fast and slow sweep speeds
- High sweep speed linearity
- Low jitter

# Sweep Unit TSU12-20

The TSU12-20 sweep unit is used with the OptoScope SC-20 main unit. The rising edge of the trigger signal starts a very linear sweep. The image of the slit is swept over the screen and appears in the middle after the trigger delay time. In single-shot mode each sweep can be captured individually by the readout system.



## SPECIFICATIONS

Temporal resolution (single-shot)	<600 ps (FWHM @ 4 ns/mm)
Temporal jitter	<1 % of time base (FWHM)
Sweep frequency	0 to 10 Hz
Sweep speed accuracy	±5 % (mean over 20 mm)
Sweep speed non-linearity	±2.5% typ. / ±5% max. (30 mm)
Operation modes	Sweep / Focus
Trigger signal input	>+3 V (Trise <10ns, Tpw >50ns)
Trigger signal input connection	BNC / 50 Ω
Trigger signal output	+2 V (typ. Tpw =1.5 μs)
Trigger signal output connection	BNC / 50 Ω
Temperature	0 - 35°C (op.) / -5 - +45°C (stor.)
Humidity	20 - 80% rel. non-condensing
Altitude	sea level up to 3000 m
Weight	3.3 kg (typ.)

## TSU12-20

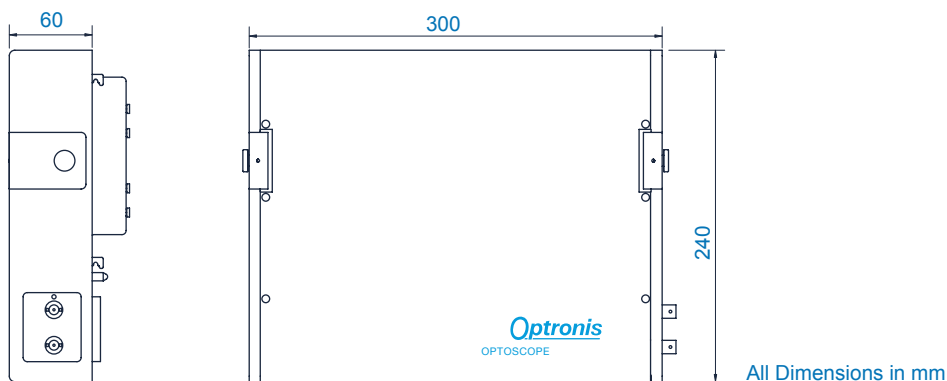
Sweep speed	Time base	Trigger delay (typ.)
10 ns/mm	300 ns	800 ns
25 ns/mm	750 ns	1.2 μs
50 ns/mm	1.5 μs	2.5 μs
100 ns/mm	3 μs	6.5 μs
250 ns/mm	7.5 μs	13 μs
500 ns/mm	15 μs	25 μs
1 μs/mm	30 μs	65 μs
2.5 μs/mm	75 μs	125 μs
5 μs/mm	150 μs	250 μs

## TSU12-20/S1 (SLOW SWEEP OPTION)

Sweep speed	Time base	Trigger delay (typ.)
100 ns/mm	3 μs	5 μs
250 ns/mm	7.5 μs	10 μs
500 ns/mm	15 μs	25 μs
1 μs/mm	30 μs	50 μs
2.5 μs/mm	75 μs	100 μs
5 μs/mm	150 μs	200 μs
10 μs/mm	300 μs	400 μs
25 μs/mm	750 μs	700 μs

## TSU12-20/F2 (FAST SWEEP OPTION)

Sweep speed	Time base	Trigger delay (typ.)
<4 ns/mm	<120 ns	190 ns
5 ns/mm	150 ns	220 ns
10 ns/mm	300 ns	350 ns
25 ns/mm	750 ns	700 ns
50 ns/mm	1.5 μs	1.4 μs
100 ns/mm	3 μs	2.6 μs



All Dimensions in mm

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