

Single-Channel Analyzer Applications Guide

Model	Recommendations
550A	Versatile, economical, general-purpose counting.
551	SCA plus constant-fraction timing.
552	SCA plus constant-fraction timing and pulse-shape analysis.
583B	SCA function in a fast-timing constant-fraction discriminator for signals from a photomultiplier anode.
590A	Cost efficient, includes built-in amplifier.
850	Economical, four SCAs in a single-width module for general-purpose counting.

Single-Channel Analyzer Selection Guide

Model	550A	551	552	590A	850
SCA Output Trigger	LLD reset	Constant fraction (50%)	Selectable constant fractions (2), or zero crossing	Peak detect	LLD reset
Modes	Asymmetric window, symmetric window, normal or integral	Window, normal or integral	Window, normal or integral	Window or integral	Window, normal or integral
Lower-Level Range (V)	0.02–10 (10-turn)	0.05–10 (10-turn)	0.04–10 (10-turn)	0.05–10 (10-turn)	0.02–9.99
Upper-Level Range (V)	0–10 or 0–1 (10-turn)	0–10 or 0–1 (10-turn)	0–10 or 0–1 (10-turn)	0–10 or 0–1 with internal jumper (10-turn)	0.02–9.99
Delay Range	None	0.1–1.1 μ s 1–11 μ s (10-turn)	0.1–1.1 μ s (10-turn)	None	None
Input Coupling	dc	ac or dc	dc	Input directly coupled to amplifier output	dc
External Strobe	No	Yes	Yes	No	No
External Baseline	Yes	Yes	Yes	Yes	Yes
Integral Non-Linearity (%)	$\leq \pm 0.25$	$\leq \pm 0.25$	$\leq \pm 0.25$	$\leq \pm 0.25$	$\leq \pm 0.25$
SCA Output Polarity	Positive	Positive and Negative	Positive and Negative	Positive	Positive

Specifications subject to change
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