

Lock-In Preamplifier

SR556 — Current preamplifier



- 1 V/nA fixed gain
- 5 fA/ $\sqrt{\text{Hz}}$ input noise
- Bias voltage input
- Powered by SRS lock-in amplifiers

SR556 Specifications

The SR556 is a low-noise, high-bandwidth, fixed-gain current (trans-impedance) amplifier designed to work with SRS lock-in amplifiers. Current amplifiers provide gain close to the experimental detector, allowing the user to minimize input cable length and its corresponding input capacitance. The SR556 minimizes noise and pickup before they permanently degrade the signal-to-noise ratio, reducing measurement time in noise-limited experiments. Power is brought from the lock-in by a 9-pin cable. The SR556 can also be operated independently by applying the appropriate DC power.

Gain	10 ⁹ V/A
Bandwidth	3 kHz (-3 dB)
Input noise (typ.)	5 fA/ $\sqrt{\text{Hz}}$ at 1 kHz
Current input	
Impedance	<50 Ω
Bias current	<3 pA
DC bias input	
Range	± 5 VDC
Settling time	<250 ms
Impedance	1 M Ω
Gain accuracy	1 %
Gain stability	± 50 ppm/ $^{\circ}\text{C}$
Output	20 V _{pp} max. balanced differential 10 mA max., 50 Ω
Power	Supplied by SR510, SR530, SR810, SR830, SR850 or SR124 via control cable
Mechanical	3.0" \times 1.3" \times 5.1" (WHD)
Weight	10 oz.
Warranty	One year parts and labor on defects in materials and workmanship

Ordering Information

SR556 Lock-in preamplifier