

Stanford Research Systems
Lock-in Amplifier Comparison (summary)

SR830 (discontinued)



SR860



Signal Channel

Sensitivity	2nV~1V	1nV~1V
Current input	2fA ~ 1μA	1fA ~ 1μA
Input Noise(typ)	6nV/√Hz at 1kHz	2.5nV/√Hz at 1kHz (10mV input range)
CMRR	100dB to 10kHz(decreasing by 6dB/oct above 10kHz)	90dB to 1kHz(DC couple,input range:10mV~100mV)
Dynamic Reserve	>100dB(without prefilters)	120dB(typ)

Reference Channel

Frequency range	0.001Hz~102.4kHz	0.001Hz~500kHz
Input impedance	1MΩ,25pF	1MΩ or 50Ω
Phase noise (1kHz,100ms,12dB/oct)	internal <0.0001° rms external<0.005° rms	internal <0.0001° rms external<0.001° rms

Demodulator

Time constants	10μs to 30ks	1μs to 30ks
Filter slope	6, 12, 18, 24 dB/oct rolloff	6, 12, 18, 24 dB/oct rolloff

Internal Oscillator

Frequency	1 mHz to 102 kHz.	1 mHz to 500 kHz
Frequency Accuracy	25 ppm + 30 μHz	25 ppm + 30 μHz

Interface

PC interface	GPIB, RS232	GPIB, RS232, USB, Ethernet
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Other

		Touchscreen display HDMI video output USB flash drive(save data,screen-shots) Dual Reference mode ※Recovering double-modulated signal Chop mode(Direct control of SR540 chopper) 10MHz timebase Input/output FFT Display(FFT Analyzer)
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