	DATA SHEET	NL4306
	REVISION	A
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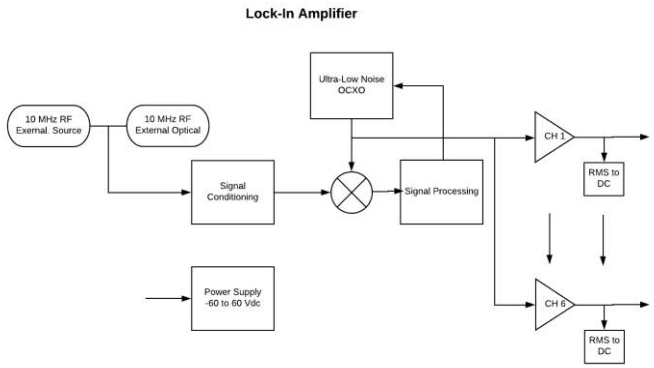
NL4306

Six-Channel 10 MHz Lock-In Amplifier

Ultra-Low Noise

KEY FEATURES



A high-performance Lock-in or Clean-up amplifier that accepts a 10 MHz reference and locks-it to an ultra- low noise OCXO. The unit can include a GNSS locked reference or an external 10 MHz reference (RF or Optical). Six transient and fault protected outputs. Vibration isolated OCXO to minimize fan and other vibration induced noise. Operates from – 60 to +60 Vdc. RS232 port provides unit status.

Product Highlights

Six Channels

Six transient and fault protected channels.

Multi-Sourced

External Reference, RF or 1300 nm Optical port or PPS

Low Phase Noise

Phase Noise dBc/Hz	
Offset Hz	Phase noise
1	-85
10	-140
100	-150
1000	-160
10K	-160

Technical Specifications

10MHz sine	4 ±0.5 dBm ,50 Ohm - BNC
Harmonics	Less than -30 dBc
First year frequency stability	±50 ppb (long-term unlocked)
Temp stability	±10 ppb (long-term unlocked)
Yearly aging	±50ppb (long-term unlocked)
Phase noise	-85 @1 Hz
	-140@10 Hz
	-150 @100 Hz
	-160 @ 1000 Hz
Power requirements	Standard configuration is 12Vdc (9 to 15Vdc) Options- ±24Vdc (20 to 30Vdc), ±48Vdc (40 to 60Vdc) AC adapter available 100 to 240Vac, 50/60Hz
Connectors	SMA 10 MHz output
	SMA 10 MHz input
	Fiber Optic option- ST 1300nm single of Multi-mode

Environmental and Mechanical

Operating temperature	0 to 50°C non-condensing (extended temperature range available)
Storage temperature	-40 to 70°C
Width	3.5 inches
Depth	7.5 inches
Height	~1.5 inches
Weight	~0.5 lbs