SPECIFICATIONS

SIGNAL CHANNEL

Voltage Inputs	Single-ended (A) or differential (A-B).
Current Input	10^6 or 10^8 Volts/Amp.
Full Scale Sensitivity	2 nV to 1 V in a 1-2-5-10 sequence (expand off).
Input Impedance	Voltage: 10 MΩ+25 pF, AC or DC coupled. Current: 1 kΩ to virtual ground.
Gain Accuracy	±1% from 20°C to 30°C (notch filters off), ±0.2 % Typical.
Input Noise	6 nV/√Hz at 1 kHz (typical).
Signal Filters	60 (50) Hz and 120(100) Hz notch filters (Q=4).
CMRR	100 dB to10 kHz (DC Coupled), decreasing by 6db/octave above 10 kHz
Dynamic Reserve	Greater than 100 dB (with no signal filters).
Harmonic Distortion	-80 dB.

REFERENCE CHANNEL

Frequency Range	1 mHz to 102 kHz
Reference Input	TTL (rising or falling edge) or Sine. Sine input is1 MΩ, AC coupled (>1 Hz). 400 mV pk-pk minimum signal.
Phase Resolution	0.01°
Absolute Phase Error	<1°
Relative Phase Error	<0.01°
Orthogonality	90° ± 0.001°
Phase Noise	External synthesized reference: 0.005° rms at 1 kHz, 100 ms, 12 dB/oct. Internal reference: crystal synthesized, <0.0001° rms at 1 kHz.
Phase Drift	<0.01°/°C below 10 kHz <0.1°/°C to 100 kHz
Harmonic Detect	Detect at Nxf where N<19999 and Nxf<102 kHz.
Acquisition Time	(2 cycles + 5 ms) or 40 ms, whichever is greater.

DEMODULATOR

Zero Stability	Digital displays have no zero drift on all dynamic reserves. Analog outputs: <5 ppm/°C for all dynamic reserves.
Time Constants	10 µs to 30 s (reference > 200 Hz). 6, 12, 18, 24 dB/oct rolloff. up to 30000 s (reference < 200 Hz). 6, 12, 18, 24 dB/oct rolloff. Synchronous filtering available below 200 Hz.
Harmonic Rejection	-80 dB

INTERNAL OSCILLATOR

Frequency	1 mHz to 102 kHz.
Frequency Accuracy	25 ppm + 30 µHz
Frequency Resolution	4 1/2 digits or 0.1 mHz, whichever is greater.
Distortion	f<10 kHz, below -80 dBc. f>10 kHz, below -70 dBc.1 Vrms amplitude.
Output Impedance	50 Ω
Amplitude	4 mVrms to 5 Vrms (into a high impedance load) with 2 mV resolution. (2 mVrms to 2.5 Vrms into 50Ω load).
Amplitude Accuracy	1%
Amplitude Stability	50 ppm/°C
Outputs	Sine output on front panel. TTL sync output on rear panel. When using an external reference, both outputs are phase locked to the external reference.