MODEL 3981
PC PLUG–IN CARD LOCK–IN AMPLIFIER

DL Instruments, LLC

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DL Instruments Model 3981 PC Card Lock–In Amplifier is a fully programmable, dual phase, PC–AT, board level instrument with even and odd harmonic rejection. Up to four independent lock–ins in one PC can sample data rapidly and simultaneously with up to 16 bit resolution. The virtual panel User Program provides for excellent performance as a general purpose laboratory instrument. The 3981 is designed to be readily modifiable for custom applications, such as for OEM systems use.

DESCRIPTION

The Main Board, Model 3981B, plugs into any full length, full height, (4.7" x 13.4" form factor) card slot in IBM PC–AT or compatibles. The Remote Signal I/O Module, Model 3981A, connects via a 10 foot cable, Model 3981C, to the rear of the computer. For high level inputs, the 3981B Main Board can function without the Remote I/O Module. All functions are programmed via the host computer. A math co–processor is required.

FEATURES

- *Current and voltage signal inputs*
- *Measures magnitude, phase, ratio and noise*
- *Operable as an automatically phase nulled, single phase lock–in*
- *Driver Software and User Program included, with disk storage of configuration and collected data files*
- *Two dc analog PSD outputs, X = Mcosφ and Y = Msinφ. Also two dc general purpose analog external inputs*
- *Multiple ratio measurements between any two boards or between single boards and external dc inputs. Ideal for dual beam optical system*
- *Self calibrating from an internal signal standard for long term precision without trim adjustments*
- *Remote module for analog input and output connections. Permits placement of front–end signal amplification near detector to minimize problems created by long input cabling*
- *Space savings and portability due to installation within computer expansion slot*
- *Continuously and smoothly tracks variable frequency signals. Unaffected by drifting choppers*
- *Provides averaged signal, standard deviation and error band outputs. Simultaneously produces both coarse, rapidly responding data and fine, slowly responding data with reproducibility figures calculated for both readouts*