

POCKET LOCK-IN™

FEATURES

- ❖ Automatically measures signal magnitude
- ❖ Unique *phase-insensitive* design
- ❖ Pick-Our-Pocket Lock-in Option
- ❖ Computer-free operation
- ❖ Small size, low weight
- ❖ Low power
- ❖ Auto vector tracking

APPLICATIONS

- ❖ Chlorophyll fluorescence
- ❖ Spectroscopy
- ❖ Photometry
- ❖ Pulse oximetry
- ❖ Photo-plethysmography

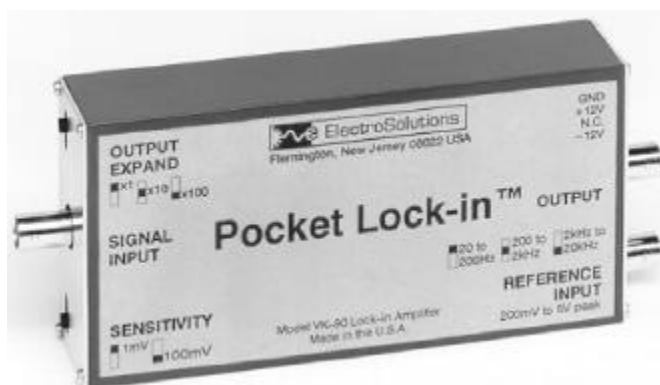
DESCRIPTION

The Model VK-90 Pocket Lock-in™ is the world's smallest commercial vector tracking OEM lock-in amplifier—making it ideal for laboratory, embedded or portable equipment use. This instrument easily measures low-level signals in the presence of high-level background noise or interference!

The Pocket Lock-in™ automatically tracks the phase of the signal so it measures signal magnitude without the need for inconvenient vector switches or complicated magnitude calculations. Its *phase-insensitive* operation is particularly valuable when measuring the magnitude of signals whose phase varies during the measurement period.

For those special applications you may order a customized lock-in by using the Pick-Our-Pocket Lock-in™ Option.

With its versatility, ease of operation and high performance, the Pocket Lock-in™ will find application wherever precision measurements are made.



SPECIFICATIONS

Signal Input:

Configuration: Single-ended, voltage or current input. Internal jumper selected.

Impedance: 1M Ω , voltage
50 Ω , current
Sensitivity: 1mV-100mV
1nA-100nA

Two position switch selected

High Pass Cutoff: 0.1 Hz
Low Pass Cutoff: 100kHz
Input Noise: <20nV/ $\sqrt{\text{Hz}}$

Reference Input:

Input Impedance: 10K Ω
Input Level: 200mVpk-5Vpk

Square or sine wave

Phase Control: Auto vector tracking
Freq. Range: 20Hz—200Hz
200Hz—2kHz
2kHz—20kHz

Three position switch selected

Time Constant:

Standard: 100ms
Slope: 12dB per octave
Accuracy: $\pm 10\%$

Signal Output:

Level: $\pm 1\text{V}$ full scale

Output Expand: x1, x10, x100

Three position switch selected

General:

Power Requirements:

+12V @ 100mA, -12V @ 100mA

Environmental Operating Conditions:

Ambient Temperature Range: 0°C to 40°C

Relative Humidity: 5% to 85%, non-condensing

Size: 2.9" W x 1.3" H x 7.0" D

Weight: 1.0 lb.

ACCESSORIES

Supplied as standard:

- 1) 3' power cable
- 2) Spare power connector

Available at extra cost:

Model PS-1, $\pm 12\text{V}$ wall mount power pack (120VAC, 60Hz)

MODIFICATIONS

To order a customized Pocket Lock-in™ simply fill out the Pick-Our-Pocket Lock-in form on the reverse side and send to us.

Please contact us for your other unique module needs.

Preliminary specifications subject to change without notice.

Copyright © 2000 • ElectroSolutions, Inc

Pick-Our-Pocket Lock-in™ Option

To take advantage of our Pick-Our-Pocket Lock-in™ Option, fill in the Special Performance Features you need for your application. If you are already using a lock-in amplifier, then we suggest transferring the settings from your lock-in onto this form. Then FAX or mail the form to us at the address shown below. What could be easier? We will contact you within a week to discuss and confirm your requirements.

Feature	Choice	Standard Pocket Lock-in™	Special Performance Features
Input Sensitivity	1	1mV / 1nA	
	2	100mV / 100nA	
Frequency Range Or choose three spot frequencies.	1	20Hz-200Hz	
	2	200Hz-2KHz	
	3	2KHz-20KHz	
Output Expand 1V FSD	1	x1	
	2	x10	
	3	x100	
Low Pass Filter 6-12dB	1	100ms time constant	
	2	12dB/oct slope	
Power supply	1	± 12V	

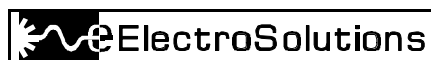
Quantity: _____ By Date: _____

Name: _____

Company: _____

Address: _____

Tel: _____ FAX: _____



ElectroSolutions, Inc. • 160 Voorhees Corner Road • Flemington, NJ 08822
www.electrosolutions-usa.com Tel: 908/788-8445 Fax: 908/788-7521