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SECO ELECTRONICS INC.

1201 S. CLOVER DR.  
MINNEAPOLIS 20, MINN.  
PHONE 866-3477

THANK YOU FOR YOUR INTEREST.....

.....and request for information on Seco Electronic Instruments.

The enclosed literature illustrates the many types of instruments manufactured by Seco and which have been enthusiastically accepted throughout the country by servicemen, industrial firms, military installations, railroads, electronic maintenance shops, and hobbyists.

Through its research and marketing facilities Seco has become a leader in the radio and TV Tester field for manufacturing high quality, time-saving instruments, and is continually developing new service aids.

Seco products are available through your nearest electronic parts supplier, or if you prefer, you may order directly from the factory using the enclosed order form.

We would appreciate the opportunity to serve you.

Yours very truly,

Wm. M. McRostie,  
Vice President and  
General Manager

WMM/rsb  
Enclosure

SEE YOUR NEAREST ELECTRONIC DISTRIBUTOR OR  
IF HE CANNOT SUPPLY YOU, FILL OUT THE  
CONVENIENT FORM BELOW AND MAIL TO:

SECO ELECTRONICS, INC.  
CUSTOMER SERVICE DEPARTMENT  
1201 SOUTH CLOVER DRIVE  
MINNEAPOLIS 20, Minnesota

ALL UNITS GUARANTEED OR MONEY BACK IN 10 DAYS.

Quantities	Model Number	Description	Price

Send to \_\_\_\_\_  
(Please Print Clearly)

Address \_\_\_\_\_

\_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Name of Distributor \_\_\_\_\_

Check or Money Order Enclosed

Send C.O.D.   
(Includes Postage)

Please note: We do not prepay overseas orders or ship overseas on a C.O.D. basis. Please forward remittance including shipping charges with your order.

.....  
NOTICE  
.....

SAVE! No need to guess about postage. Pay by check. Make your check payable to SECO ELECTRONICS, INC. We will ship all merchandise prepaid within continental limits of U. S. A. except Hawaii and Alaska when orders are paid in advance.

TESTS ALL SILICON CONTROLLED RECTIFIERS NOW ON THE MARKET

*Use for - -*

- Incoming Inspection
- Quick Operation Test
- Comparison of Firing Requirements
- Comparison of SCR Voltage Drop
- Gate Open Test
- Gate Shorted Test
- Anode - Cathode Shorts
- Anode - Cathode Open



*Seco Model 600*

## SCR ANALYZER

**\$46<sup>95</sup>**  
NET

Complete with Handy Clip Leads  
and 6' line cord  
105-130 Volt AC 6 Watts  
Factory calibrated - hand wired

The Model 600 Seco silicon controlled rectifier Analyzer provides a comprehensive and rapid SCR analysis for incoming stock inspection, engineering and lab work, trouble shooting, preventive maintenance, comparison of SCR's of different types and manufacture.

This new Seco Instrument tests SCR performances and characteristics without a scope and accommodates SCR's from 1/2 to 225 amps and 25 to 600 volts.

Simple to operate, the Model 600 requires no complex charts for set-up data. Meter reads anode current and phase angle, and holding current can be read directly. Versatile — the conduction angle can be varied from 0 degrees to 160 degrees. Gate pulse amplitude is sufficient to drive all SCR's and yet not damage those requiring small gate current. Cathode current at varying rates of gate pulse are shown.

Protective circuitry prevents damage in the Model 600 from shorted SCR's as well as prevents SCR damage should an overload of gate current occur. Tip jacks are provided so the Model 600 can also be used with a scope to see the gate pulse and phase angle across a load.

**SECO ELECTRONICS INC.**

Division of Di-Acro Corporation

1201 South Clover Drive Minneapolis 20, Minn



### FEATURES

- Gate Pulse Sufficient to Fire Most SCR's
- Phase Angle Continuously Variable from 0 to 160 Degrees
- Load Current to 400 ma
- Maximum PIV 17 Volts
- Scope Output for Viewing Load Wave Form and Gate Pulse
- Shorted SCR Reads Zero on Meter
- Open SCR Reads Zero on Meter
- Easy Turn Phase Angle Control
- Unique Firing Circuit Gives Maximum Phase Angle Control
- Meter Accuracy 2 Per Cent Full Scale
- Rugged Molded Plastic Case



Cover is removable  
to operate thermometer  
separately

**\$274<sup>95</sup>**  
NET

Complete with Test Probe  
105-130V 50-60 cycle

**MODEL 210 ZENER and DIODE ANALYZER**  
Same as 210T except without  
Electronic Thermometer

**\$199.50** NET

A Versatile Broad Coverage Instrument with  
Electronic Thermometer for Completely Test-  
ing Zener Diodes, SCR's, Power Diodes (sili-  
con and germanium) Signal Diodes and  
Selenium Rectifiers

*Seco Model 210t*

**ELECTRONIC THERMOMETER**

**ZENER AND DIODE ANALYZER**



*Seco Model*

**ELECTRONIC  
THERMOMETER**

The Seco Model 210T is the most complete Zener and Diode Analyzer on the market. It provides comprehensive tests including temperature on almost every type of diode known — range extends from micro miniature diodes to 30 amp. power types.

Designed to serve as a practical test set for laboratories, engineers and basic incoming diode stock inspection, the Model 210T provides the following tests:

- Diode Tests from 20 MA to 30 amps. 0 to 1500 V
- 0 - 30 amp. forward voltage drop test
- 0 - 1500 V reverse current leakage test
- 0 - 300 V Zener saturation knee test
- Zener diode test range is to 300 volts and up to 100 MA
- Selenium Rectifier Range is to 300 volts forward drop
- Instant temperature tests per the Electronic Thermometer specifications shown to the right

**THE SECO PLUS —**

In addition, the Model 210T has been designed to analyze the parameters of silicon controlled rectifiers. Ranges of 1 MA to 100 microamperes at 150 V and 1500 V are available for testing SCR's for forward and reverse leakage. The 210T can also be used to evaluate dynamic characteristics of SCR gate current voltage and forward drop when used with the Seco Model 600 SCR Analyzer.

Seven sources of power are incorporated in the Model 210T circuit. All are controlled by a variable voltage control on the transformer primary.

Three basic scales are provided — Zener Diode scale, Forward Characteristics scale, Reverse scale. Scales are not limited to checking these items only. For example: a high voltage rectifier stack with many cells in series can be checked on one of the Zener scales since this may supply the appropriate voltage. In addition, two temperature scales check heat range in solids, gas and liquids from - 20 deg. C. to 55 deg. C. 40 deg. C to 160 deg. C.

**SPECIFICATIONS**

- 105-130V 50-60 cycle operation
- Meter accuracy 2% at full scale
- 1% precision resistors used
- Special forward drop scale reads effective DC voltage drop
- On-Off switch has overload circuit breaker
- Human factor engineered - requires positive action to supply and hold power
- Fully isolated from power line
- 30 amp. binding posts provided
- Thermometer provides instant temperature check
- Three main power supplies provide seven metered V ranges
  - 0-1.5 V    0-7.5 V    0-15 V    0-30 V
  - 0-150 V    0-300 V    0-1500 V
- Seven current ranges allow grouped functions and ranges
  - 0-100 Mu    0-1 MA    0-10 MA    0-100 MA
  - 0-1 A    0-10 A    0-30 A
- Size: 10 1/4 x 9 x 5"
- Weight: 11 lbs. - Shipping Wgt. 14 lbs.

Checks Temperature of Diodes, Coils, Transf. Liquids, etc. without Heat Sink Loss

- Two Convenient Scales: Minus 20°C to 55°C, 40°C to 160°C
- Calibrated 2 Per Cent

Here's a versatile, accurate electronically controlled thermometer that can be used for countless temperature checking applications. Used with liquids, gas or solids the Model 210T provides accurate temperature check. Circuitry and front panel controls allow for adjustment to assure complete accuracy. The thermometer provides regular or continuous reading. Meter has 3-1/2" movement. Power supply is two 1.5 volt C cells.

Standard equipment includes thermister probe for temperature measurement. Probe, with 3-foot cord, is insulated and can be fastened to component under test or



**TEST PROBES** are available for a wide range of applications including liquid level measurement. For a quotation.

you'd expect to pay much more

for a semi-conductor test set that:

- Requires no setup data
- Includes a "Speed Test Socket"
- Reads BOTH collector-to-base (Icbo) and collector-to-emitter (Iceo) leakage currents
- Cancels Iceo leakage to give a TRUE gain reading
- Tests tunnel diodes
- Also tests zener diodes
- Includes a very complete circuit analyzer
- Includes a special meter protecting diode to safeguard against meter movement damage

MODEL 250A-AC  
POWER SUPPLY

**\$98.50**  
NET

MODEL 250B  
BATTERY POWER SUPPLY

**\$86.50**  
NET

*Seco*

# TRANSISTOR and TUNNEL DIODE ANALYZER



*a Seco plus*

the only tester in the medium priced field designed for use as a TUNNEL and ZENER DIODE analyzer.

### TESTING RANGES

Dynamic Gain .....	Relative
Leakage .....	0-200 Icbo
	0-1 ma Iceo
	0-100 ma Icbo
True DC Beta Gain .....	0-200
Reverse conductance of	
signal and power diodes ...	0-200 microamps
Forward conductance of	
signal and power diodes ...	0-20 ma
Milliamperes .....	0-.2, 0-10 and 0-100
Volts .....	0-1, 0-10 and 0-100
Sensitivity .....	5,000 ohms/volt
Ohms, center scale reading ...	150
Accuracy .....	2%, full scale

### TESTS CONDUCTED

Dynamic GO-NO-GO check in or out of circuit  
 Identifies NPN and PNP transistors  
 Tests both Signal and Power transistors  
 Icbo and Iceo leakage test  
 True DC Beta gain test  
 Tests Tunnel Diode "peak" and "valley" currents  
 Tests Zener Diode "cut-in" point

### CONTROLS AND JACKS

Leakage-cancelling control knob and push button  
 True DC Beta Gain "cut-in" button  
 Transistor test function selector  
 "Feedback" control knob  
 Transistor type selector  
 Ohms "zero index" knob  
 Diode input and ohms jacks

### POWER SUPPLY

Model 250A ..... 105-125 V AC  
 Model 250B ..... 3 standard "C" cells

### CASE, SIZE AND WEIGHT

Injection molded bakelite bottom 8¼x7¼x3 in.  
 Pressed 14 ga. anodized aluminum cover  
 Total dimensions, cover closed .. 9¾x7½x4¼ in.  
 Net weight, 3 lbs., 12 oz.  
 Shipping weight, 4 lbs., 6 oz.  
 Also available in standard  
 wood carrying case ..... 8½x7½x3¾ in.  
 Net weight, 3 lbs., 6 oz.  
 Shipping weight, 4 lbs.

# Selector Guide

# Seco POWER SUPPLIES

**FULLY  
TRANSISTORIZED**

**LOW VOLTAGE  
LOW CURRENT**

**TIGHT  
REGULATION**

RPS-5



RPS-4



RPS-2

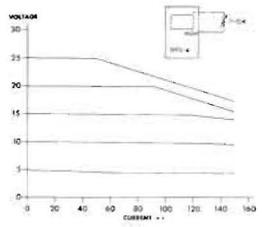


PS-2



## SECO ELECTRONICS, INC.

Division of Di-Acro Corporation  
1201 South Clover Drive • Minneapolis, Minnesota



Regulation Characteristics RPS-2, RPS-4

## MODEL RPS-4

### Transistorized Constant Voltage Power Supply

Completely Wired and Tested  
105 - 130 Volt AC, 60 Cycle  
Includes 24" Set Test Leads

**\$36<sup>95</sup>**  
NET

# Seco Constant Voltage Regulated POWER SUPPLIES

LAB INDUSTRIAL AND GENERAL SERVICE UNITS OFFER

- 4 voltage ranges instead of one or two
- 5 meter ranges instead of two or three
- tight voltage regulation, low output impedance

AND

**THE SECO PLUS** — 0-7.5V variable bias is obtained simultaneously with the 0-15V and 0-1.5V.

#### POWER SUPPLY COMPARISON CHART

Characteristic	Model A	Model B	SECO RPS-1	SECO RPS-4	SECO RPS-11
Voltage Output	0-15V 0-30V	0-30V	0-15V 0-12.5V 0-30V	0-15V 0-1.5V 0-30V 0-30V	0-15V 0-1.5V 0-15V 0-30V
Current Output	0-300MA 0-1000MA	0-1000MA 0-25V 0-3000MA 0-24V	0-1000MA MAX	0-1000MA MAX	0-1000MA MAX FULLY REGULATED SER. CIRCUIT
Regulation Voltage Drop	1V	Not Reg.	30MV 300A Cvt. Reg.	35MV 300A Cvt. Reg.	40MV PER 200MA
Max Ripple	100V	100V	.001%	.001%	.001%
Meter Ranges	0-20V 0-100MA 0-300MA	0-5V 0-50V	NO METER	0-15V 0-1V 0-30V 0-300A 0-1000A	0-15V 0-1V 0-30V 0-300A 0-1000A
Output Impedance	3 OHMS	UNKNOWN	1.8 OHMS	1.8 OHMS	1 OHMS
Bias Tap	NONE	NONE	0-15V	VARIABLE 0-7.5V	0-7.5V
Metering Accuracy	UNKNOWN	UNKNOWN	NO METER	3% Full Scale	2% Full Scale
Overload Protection	NONE	NONE	NONE	NONE	YES
Cost	\$75.00	\$77.00	\$28.75	\$38.50	\$69.00

## MODEL RPS

Zener and Transistor  
Voltage Regulated  
DC Power Supply

Completely Wired and Tested  
105 - 130 Volt AC, 60 Cycle  
Includes 24" Set Test Leads

Here's the first transistorized continuously variable and voltage regulated Power Supply in the low current range . . . just set the dial for the voltage you need — result, a clean filtered DC output. The Seco RPS-4 provides a metered DC supply for transistorized equipment, tunnel diode circuits, experiments, relays and similar electrical equipment. It can also be used for charging nickel cadmium and other rechargeable batteries and for biasing tube equipment. The RPS-4 is designed for use as a substitute for the multitude of battery applications within its specifications.

### SPECIFICATIONS

- Transistorized circuit maintains constant voltage over a wide load - variation within 3%. Up to 15 Volts and 150 MA and up to 25 Volts and 50MA (See Chart)
- Five output and meter ranges: top meter scale, 0-1.5V, 0-15V and 0-150MA; bottom meter scale, 0-30V and 0-30MA
- Special bias tap for simultaneous 0-7.5V and 0-1.5V output
- Maximum ripple .001% at full load
- Output impedance - 1.8 ohms resistive. No motor boating
- Overload protection permits feeding into short circuit without damage
- Bakelite case - 4½" x 5½" x 7¾"
- Weight - 2 lbs.

### SPECIFICATIONS

- Maximum ripple 10MV RMS
- Regulation Load + — .5%, Line 5%
- Output impedance 1 ohm
- Continuously variable output control 0-28V
- Short circuit protection
- Overload indicator
- No overshoot
- Response time 2 Micro seconds
- Meter accuracy 2% full scale
- Two variable bias voltages available at separate jacks
- Bakelite case - 3¼" x 5½" x 7½"
- Weight - 3 lbs.

Designed to ind continuously variable voltage up to 28 vol transistorized circuit overshoot over a wide at full rated output

An exclusive fea ing circuit. This circ where any small add ble. All current me transistor Icbo requ quality power transi

In addition, the for short periods wi are protected by a d an overload indicato and shines bright in fuse in case of a com

# MODEL RPS-2

## CONSTANT VOLTAGE POWER SUPPLY

- Transistorized Circuit Maintains Constant Voltage over a Wide Load - Variation Within 3% similar to RPS-4 MA Jack.
- Special Bias Tap for Simultaneous 0-7.5V and 0-15V output — MAX VOLTAGE at Tap is 12.5 V.
- Maximum Ripple .001% at Full Load.

The Seco Model RPS-2 is a constant voltage variable Power Supply similar in operation to the Model RPS-4. Basic difference between the two models is that the RPS-2 does not have a meter. To operate just set dial for the voltage you need — result, a clean filtered DC output. Dial, accurately calibrated 0-25V, will supply up to 100MA average with no hum or motor boating. It provides a DC supply for transistorized equipment, experiments, relays, etc. and can also be used for charging nickel cadmium and other rechargeable batteries and for biasing tube equipment. Jacks are provided should operator want to read circuit current. As metering is done ahead of transistor output no resistance is added in the output circuit when meter is used. Case, 4½"x5½"x7¾". 1½ lbs.



**\$26<sup>95</sup>**  
NET

See page 2  
for Regulation  
Characteristics

Completely Wired and Tested  
105 - 130 Volt AC, 60 Cycle  
Includes 24" Set Test Leads



Completely Wired and Tested  
105 - 130 Volt AC, 60 Cycle  
Includes 40" Set Test Leads and Insulated Clips

**\$13<sup>95</sup>**  
NET

# MODEL PS-2

## BATTERY ELIMINATOR FOR TRANSISTOR EQUIPMENT

- Quickly Pays for Itself
- Cannot Be Damaged by Short Circuit
- Essential for Servicing Transistor Equipment

This Battery Eliminator takes the place of an entire battery. It supplies good clean DC and can be used in place of the battery that normally operates transistorized equipment. Unit cannot be damaged by short circuit. The 1000 MFD filter provides good DC in many low current applications where current demand is reasonably instant.

Voltage may be varied from 0 to 15 Volts which permits the checking of sensitivity and operation under a wide range of conditions. The PS-2 makes transistorized equipment servicing easy and fast — quickly pays for itself. It is a low cost FIRST instrument for service shops — ideal for hobbyists.

### SPECIFICATIONS

- For transistors, radios, amplifiers and other equipment
- Uses line bypass to eliminate hum modulation
- Internal imp. less than 2 ohms
- No motor boating
- Voltage scale calib. at 15MA
- Maximum output 100MA
- Plug in jacks for external volt meter
- Output is isolated from power line by transformer
- Dimensions 4½"x5"x1½"
- Weight 1½ lbs.