

**DANBRIDGE  
DENMARK**

research  
production  
education

## REGULATED POWER SUPPLY TYPE SF51B

0 - 50 V, 0 - 1 AMP.  
FULLY TRANSISTORISED  
SCR PREREGULATION  
ADJUSTABLE CURRENT LIMITING  
EXCELLENT STABILITY AND REGULATION  
LOW RIPPLE AND NOISE



This power supply is fully transistorised and employs a controlled rectifier circuit for pre-regulation, thus reducing the power consumption and limiting the dissipation in the main regulating system.

All semiconductors are silicon types and are conservatively rated to ensure reliable operation even at maximum continuous load and high ambient temperatures.

Output voltages up to 50 volt at 1 ampere may be obtained, which is adequate for most laboratory use, and an adjustable current limiting circuit is a very useful feature for most work.

Output voltages and currents are metered by a multi-range instrument, and an overload indication is provided.

All semiconductors and small components are mounted on a single printed circuit board and are easily accessible for service.

### SPECIFICATION

#### OUTPUT VOLTAGE RANGE

0-50 V continuously adjustable with coarse and fine regulation.

#### OUTPUT CURRENT RANGE

0-1 A.

#### METER RANGES

10 V - 50 V - 0.1 A - 1 A full scale.  
Accuracy 2% of full scale reading.

#### OVERLOAD PROTECTION

A front panel control sets output current limits continuously between 5 mA and 1 A.  
The limiting circuit is fully electronic and self-resetting.

#### OVERLOAD INDICATION

Meter indication and warning lamp.

#### REGULATION

Less than 10 mV change in output voltage for a change in output current from zero to full load.

#### STABILITY

Less than 0.05% change in output voltage for  $\pm 10\%$  change of supply voltage.

the blue line instruments.....

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**OUTPUT IMPEDANCE**

0.01  $\Omega$  at 1 kHz, 0.05  $\Omega$  at 100 kHz.

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**TEMPERATURE COEFFICIENT**

About 0.02% per degree centigrade.

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**RIPPLE AND NOISE**

Less than 0.1 mV RMS. Normally 0.6 mV p-p.

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**A-C SUPPLY REQUIREMENTS**

100-130 V and 200-260 V/50-60 Hz.  
Power consumption max. 80 W.

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**SEMICONDUCTOR COMPLEMENT**

1-TIP14, 2-2N697, 1-2N2904, 3-2N3707, 3-2N3705,  
7-2N3702, 1-MCR2305 (SCR), 1-TIS43, 3-1N4003,  
5-1N4148, 3-BZY88.

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**DIMENSIONS**

220 mm high, 150 mm wide, 230 mm deep.  
(8.5×6×9 inch).

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**WEIGHT**

5.2 kilos (11½ lb.).

**WE RESERVE THE RIGHT TO DEVIATE FROM THIS SPECIFICATION**

**A/S DANBRIDGE**

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