Specifications

Input Range: 0-100kHz at 50mV-50V p-p; sine wave, square wave or pulse
Input Impedance: >100.kΩ
Overvoltage: 250VAC or VDC
Sensitivity Adjustment: 50mV to 500mV p-p
Output: Max. Frequency: 0.9999 x Input Frequency, square wave
5V TTL @ 15mA; 24V, 30mA unregulated (selectable)
Relay: Maximum 100k operations, use for <3.1Hz
Form "C" contact, 120V, 1 amp non-inductive load
For inductive loads, derate relay contact rating 50%, use RC snubbing networks across contacts to extend contact life. Max operations for inductive loads not specified.

For general specifications, see the Series 8000 manual, which provides general information for the entire series.

Setup Procedure

I. Disassemble the Series 8000 unit as described on page 6 of the main manual.
II. Remove the Frequency Scaler Input and Output Boards.
III. Set up the boards as described below.
IV. Calibrate as described on page 07-2.
V. Reassemble the unit as described in the main manual, pages 4 to 6.

Setup Instructions

Input Board

Select Input Scaling
Determine the scaling you need, as a multiplier between 0.9999 and 0.0001 (i.e. Output Freq = Input Freq x Scale Factor). The four BCD rotary switches (SW1 through SW4) correspond directly to the digits following the decimal place.

Set the value by turning each switch to correspond to your value, for example:
0.5000 (halving your input frequency) requires SW1 to be set at "5" and SW2—SW4 to be set to "0".
0.9999 requires setting each switch to "9".
0.0001 requires SW1—SW3 to be set to "0" and SW4 to "1," giving you an output of one ten-thousandth of the input.

Output Board

Solder jumpers SB13 and SB14 should be closed, and should remain closed.

5V TTL output with an 8-pin base and a 5V or 24V output with an 11-pin base:

SB1	SB2	SB3	SB4	SB5
closed	open	closed	open	closed

24V Output with an 8-pin base, set the solder jumpers as follows:

SB1	SB2	SB3	SB4	SB5	SB12
closed	clsoed	open	open	open	closed

Contact Closure (relay output), set the solder jumpers as follows:

SB1	SB2	SB3	SB4	SB5
open	closed	open	closed	open

Calibration

1. Input your input value (50mV to 50V at 0 to 100kHz)
2. Adjust the sensitivity adjustment potentiometer until you get a stable output. *This should take little or no adjustment for higher amplitude inputs, but may require more adjustment for lower amplitudes.*
3. Verify that the input frequency times the scaling factor selected is the output of the unit.

Frequency Scaler Input and Output Board Part Locations