

- 0.1Hz to 2GHz Frequency Range
- Measures Frequency, Period, Time interval, Ratio and Totalize
- 0.5 PPM temperature stability
- Channel A and Channel B have variable trigger level controls
- Large, bright 8 digit LED frequency display along with function and gate time indicators
- Self check
- Low pass filters and X10 attenuators
- All functions selected via tactile switches

**B2000**

## SPECIFICATIONS

### Frequency Measurement

#### Channel A Input

##### Ranges:

Low Range: 0.1Hz to 10MHz

High Range: 10MHz to 100MHz

Best Resolution:

Low range: 0.1Hz

High range: 10Hz

Gate Time: 0.01s to 10s in 4 decade switch settings

Accuracy:  $\pm 1$  count  $\pm$  (timebase error) X frequency

#### Channel C Input

Range: 90MHz to 2GHz

Best Resolution: 10Hz

Gate Times: 0.0256s, 0.256s, 2.56s, 25.6s switch selectable

Accuracy:  $\pm 1$  count  $\pm$  (timebase error) X frequency

### Period Measurement

#### Channel A Input

Ranges: 100ms to 500ns

Gate Time: 0.01s to 10s in 4 switch selectable settings

Best Resolution: 100ps

Accuracy:  $\pm 1$  count  $\pm$  timebase error;  $\pm$  Trigger error

Minimum Pulse Width: 250ns

### Totalize Measurement

#### Channel A Input

Frequency Range: DC to 10MHz

Count Capacity: 0 to 99,999,999

Resolution:  $\pm 1$  input count

### Time Interval

#### CH A & CH B Inputs

Range: 200ms to 500ns

Accuracy:  $\pm 1$  count  $\pm$  timebase error  $\pm$  CH A Trigger error

Best Resolution: 100ns

Minimum Pulse Width: 250ns

### Ratio A/B

#### CH A & CH B Inputs

Range:

CH A: 10MHz to 100MHz

CH B: 0.1MHz to 10MHz

### Input Characteristics

#### Channel A Input

Sensitivity: 25mV RMS 0.1Hz to 100MHz

Attenuation: X1 or X10

Input Impedance:  $1M\Omega + 35pF$

Coupling: DC & AC

Lowpass Filter (-3dB): 10Hz to 100kHz @ X1

Max. Voltage: 250V DC or AC RMS

Trigger Level: From -350mV DC to +350mV DC

#### Channel B Input

Sensitivity: 25mV RMS 0.1Hz to 100 MHz

Attenuation: 0dB or 20dB

Input Impedance:  $1M\Omega + 35pF$

Coupling: AC & DC

Lowpass Filter (-3dB): 10Hz to 100kHz

Max. Voltage: 250V DC or AC RMS

Trigger Level: From -350mV DC to +350mV DC

### Channel C Input

Sensitivity: 50mV RMS, 90MHz to 2GHz

Max. Input Voltage: 3V RMS

Input Impedance: 50 $\Omega$

Coupling: AC

### Timebase

Frequency: 10MHz & 3.90625MHz

(Temperature controlled Oven)

Stability: Long Term:  $\pm 3 \times 10^{-7}$  per month

Temperature:  $\pm 5 \times 10^{-7}$ , 0 to 30°C

Warm Up Time: 20 minutes (25°C)

### 10MHz Oscillator Output

Output Voltage: 1V P-P (open circuit)

Output Impedance: 50 $\Omega$

### General Specifications

Display: 8 Digit LED (14mm)

Power Requirements: AC line voltage 100/120/220,

240V  $\pm 10\%$

Power Consumption: 15V A, 50/60Hz

Operating Temperature: 0 to 40°C

Size: 3.4" H x 10.4" W x 9.0" D

Weight: 5 lbs.

Supplied Accessories: Manual, Line cord, BNC cable