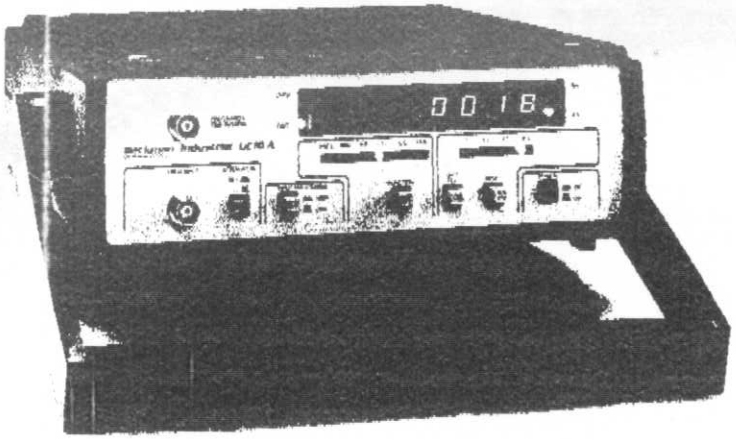

100MHz Universal Counter UC10A

- *5Hz to 100MHz Frequency Range*
- *Two Input Channels*
- *Measures Frequency, Period, Frequency Ratio, Time Interval and Unit Count*
- *20mV Input Sensitivity*
- *4 Selectable Gate Times*
- *14 LED Indicators*
- *8-Digit LED Display*
- *Internal Oscillator Self Check*

FREQUENCY COUNTERS

The UC10A is a feature-packed, highly accurate universal counter that measures frequency, period, frequency ratio of two input signals, time interval between the input signals and unit count (totalize mode). It measures frequency from 5Hz to 100MHz with an input sensitivity of 20mV over the entire range. Four user-selectable gate times allow measurements at four levels of resolution. Push buttons provide easy access to six functional capabilities, four gate time selections, attenuator, input frequency range and reset. Function selections are indicated by a combination of an LED indicator and a distinctive annunciator tone. A large, 8-digit LED display clearly indicates all readings. OVER, GATE, kHz and µsec are separately identified by LEDs. A built-in 10:1 attenuator minimizes false counting by reducing sensitivity and thus noise effects. To verify internal time base generator and counter accuracy, the UC10A has complete self-check capability.

The UC10A is housed in a stylish case, featuring a cushion grip carrying handle/tilt stand, rear cord wrap and recessed areas in the top cover for easy stacking of multiple units.

Specifications (at 23°C ± 5°C, ≤70% R.H.)

Frequency Input

Low Range	5Hz to 10MHz
High Range	50Hz to 100MHz

Frequency Measurement

Range	5Hz to 100MHz
Gate Time	Selectable 0.01s, 0.1s, 1.0s, 10s
Resolution	
5Hz to 10MHz	100Hz, 10Hz, 1Hz, 0.1Hz
50Hz to 100MHz	1000Hz, 100Hz, 10Hz, 1Hz
Accuracy	± (time base stability ± 1 count)

Period Measurement

Range	0.04µs to 0.2s
Gate Time	Selectable 0.01s, 0.1s, 1.0s, 10s
Resolution	
5Hz to 2.5MHz	01ns, 1.0ns, 10ns, 100ns
2.5MHz to 25MHz	0.01ns, 0.1ns, 1.0ns, 10ns
Accuracy	± 1 count ± time base stability ± trigger error of signal

Frequency Ratio

Low Range	Freq. Input: 5Hz to 10MHz Ratio Input: 5Hz to 2.5MHz
High Range	Freq. Input: 50Hz to 100MHz Ratio Input: 50Hz to 25MHz

Time Interval

Input Frequency	5Hz to 2.5MHz (low range only)
Range	0.4µs to 0.2s
Resolution	100ns, 10ns, 1.0ns, 0.1ns
Accuracy	± 1 count ± trigger error

Unit Count (Totalize)

Input Frequency	5Hz to 10MHz (low range only)
Count Capacity	99,999,999

Self-Check

Checks and displays the internal time base oscillator frequency

Input Sensitivity

Frequency Input Attenuator	X1.0: 20mV RMS X10: 200mV RMS
Ratio Input	20mV RMS

Input Impedance

Constant 1MΩ ±50kΩ shunted by less than 30pF over frequency range and attenuator position.

Max. Input Peak Voltage (DC+AC peak)

5Hz to 1kHz	212V
At 100MHz	7V

GENERAL SPECIFICATIONS

Functions:	Frequency, Period, Frequency Ratio, Time Interval, Unit Count, Self-Check
Display:	8-digit, 0.3 in. high LED display
Power:	117VAC or 234VAC, 50 or 60 Hz, ≤ 15VA
Indicators:	kHz, µS, OVER, GATE, 6 functions, 4 gate times
Time Base Temperature Stability:	±5ppm (25°C ±5°C)
Initial Time Base Calibration:	±5ppm max. at 23°C
Aging Rate:	1ppm per month max.
Operating Temperature:	0°C to +50°C, 80% R.H.
Storage Temperature:	-40°C to +70°C
Dimensions:	3.1 x 9.0 x 13.0 in. (HxWxD) (Exclusive of handle)
Weight:	4.4 lb.
Accessories:	AC power cord; two coaxial test cables; two spare fuses; operator's manual
Warranty:	One year