

### 2.5 GHz Universal Frequency Counter

The FC 2500 is a microprocessor controlled portable universal frequency in a compact low cost instrument. The design incorporates an LED back light 16x2 LCD giving clear easily read characters. The frequency range is 5 Hz to 2.5 GHz and measurement functions include frequency, period, ratio, pulse width and count. The instrument uses a reciprocal counting technique to provide high resolutions, normally 7 significant digits of answer are produced per second of measurement time. A temperature controlled crystal oven provides high measurement accuracy and stability.



### MAIN FEATURES

- ◆ *Simple operation*
- ◆ *RS232 interface as standard*
- ◆ *Temperature controlled crystal oven for high accuracy and stability*

### FEATURES

- ◆ 5Hz to 2.5GHz in two overlapping ranges
- ◆ Trigger control for high mark space pulse measurement
- ◆ High sensitivity across the frequency ranges
- ◆ Frequency, period, ratio, pulse width and pulse count
- ◆ Reciprocal counting for high resolution at low frequencies
- ◆ Microprocessor controlled
- ◆ Optional PC software for additional features
- ◆ Low cost providing the optimum performance
- ◆ Backlit LCD display provides concise readout

# SPECIFICATION

## Measurement – Range A

Measurement range	
Frequency	5Hz to 25MHz (coupling: AC)
Period	5Hz to 25MHz (coupling: AC)
Gate Times	0.1S 1S 10S
Sensitivity	Max 15mV rms 10Hz to 25MHz
(sine wave)	Pulse 50mV 0Hz to 25MHz
Impedance	1M Ohm // 25pF
Maximum input voltage	50V rms 5Hz to 50Hz
	1V rms 50Hz to 25MHz
Accuracy	+/- 1 count +/-1 timebase accuracy
Low pass filter	100kHz , -3dB

## Measurement – Range B

Measurement range	
Frequency	20MHz to 2500MHz (coupling: AC)
Period	20MHz to 2500MHz (coupling: AC)
Gate Times	0.1S 1S 10S
Sensitivity	Max 50mV rms 10Hz to 2500MHz
Impedance	50 Ohm nominal
Maximum input voltage	1V rms 50Hz to 25MHz
Accuracy	+/- 1 count +/-1 timebase accuracy

## Frequency– Range A

Measurement range	5Hz to 25MHz (coupling: AC)
Displayed Resolution	5.000000Hz to 25.000000MHz At least 7 digits displayed per second of measurement time.

## Frequency– Range B

Measurement range	5Hz to 25MHz (coupling: AC)
Displayed Resolution	5.000000Hz to 25.000000MHz At least 7 digits displayed per second of measurement time.

Gate Time	Resolution	Readout	Units
0.1S	1KHz	____.001	MHz
1S	100Hz	____.0001	MHz
10S	10Hz	____.00001	MHz

## Period– Range A

Measurement range	5Hz to 25MHz (coupling: AC)
Displayed Resolution	200.00000mS to 99.999999nS Depending of frequency and gate time At least 7 digits are displayed per second of measurement time.

## Period– Range B

Measurement range	20Mz to 2500MHz
Displayed Resolution	5.000000Hz to 25.000000MHz At least 7 digits displayed per second of measurement time.

## Ratio A/B

Measurement range	A: 5Hz to 25MHz B: 20MHz to 2500MHz
Displayed Resolution	The answer is displayed with 7 significant digits irrespective of frequency and measurement time.

## Pulse Range A

Mode:	Pul-Lo: Falling to Rising edge. Pul-Hi: Rising to Falling edge.
Measurement range:	200nS to 1Sec
Resolution:	100nS
Measurement Time:	The selected gate time determines the inter-measurement time.

## Count Range A

Measurement range	5Hz to 2MHz
Displayed Resolution	0 to 99999999 pulses above 8 digits is OVERFLOW is indicated
Minimum Pulse Width	25nS

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