

Frequency Counter

Protek 9100/U2000A



Protek 9100



Protek U2000A

■ Features

- Frequency, Period, Totalize Measurements
- Low Pass Filter
- 2 Channel Inputs (100MHz, 1GHz)
- 8 Digits LED Display
- 3 Steps Gate Time Control
- 1/20 Input Attenuator

■ Features

- Frequency, Period, Totalize, Ratio Measurements
- Low Pass Filter
- Variable Trigger Level
- 8 Digits LED Display
- 4 Steps Gate Time Control
- 1/10 Input Attenuator
- Self Test
- 3 Channel Inputs (CH A, CH B, CH C)

■ Specifications

MODEL	9100	U2000A
Frequency Range		
Channel A	10Hz ~ 10MHz : 10MHz Range 10MHz ~ 100MHz : 100MHz Range	0.1Hz ~ 10MHz : Low Mode 10MHz ~ 100MHz : High Mode
Channel B	100MHz ~ 1GHz	10MHz ~ 2GHz
Sensitivity		
Channel A	25mVrms (10Hz ~ 8MHz) : 10MHz Range 50mVrms (8MHz ~ 10MHz) : 10MHz Range 25mVrms (10MHz ~ 80MHz) : 100MHz Range 50mVrms (80MHz ~ 100MHz) : 100MHz Range	25mVrms (0.1Hz ~ 100MHz)
Channel C (CH B at 9100)	20mVrms	25mVrms (20MHz ~ 1.6GHz) / 50mVrms (10MHz ~ 2.0GHz)
Input Characteristic		
Impedance	1M Ω 35pF (CH A), 50 Ω (CH B)	1M Ω 30pF (CH A, B), 50 Ω (CH C)
Max. Input Voltage	250V (DC + AC rms, CH A), 3Vrms (CH B)	250V (DC + AC rms, CH A), 3Vrms (CH C)
Resolution	1Hz / 10Hz / 100Hz : 10MHz 10Hz / 100Hz / 1KHz : 100MHz 100Hz / 1KHz / 10KHz : CH B	0.1Hz / 1Hz / 10Hz / 100Hz : Low Mode 1Hz / 10Hz / 100Hz / 1KHz : High Mode 10Hz / 100Hz / 1KHz / 10KHz : CH C
Time Base		
Reference Oscillator	10MHz, 3.90625MHz (CH B)	10MHz, 3.90625MHz (CH B, C)
Short Term Stability	$\pm 3 \times 10^{-9}$ (1s Average)	$\pm 3 \times 10^{-7}$ / Month
Long Term Stability	$\pm 2 \times 10^{-5}$ / Month	
Temperature	$\pm 1 \times 10^{-5}$ (0°C ~ 40°C)	$\pm 5 \times 10^{-6}$ (0°C ~ 40°C)
Gate Time	0.01 / 0.1 / 1s (CH A) 0.027 / 0.27 / 2.7s (CH B)	0.01 / 0.1 / 1 / 10s (CH A) 0.0256 / 0.256 / 2.56 / 25.6s (CH C)
Ratio A/B		
Range		10 ~ 100MHz (CH A), 0.1Hz ~ 10MHz (CH C)
Multiplier		1 / 10 / 10 / 1000 (4 Mode)
Period	10Hz ~ 2.5MHz, 10^{-7} / 10^{-8} / 10^{-9} s	5Hz ~ 2MHz, 0.01 / 0.1 / 1 / 10s
Time Interval (T1 A → B)		5Hz ~ 2MHz, 1 / 10 / 100 / 1000 (4 Mode)
Totalize (CH A)	10Hz ~ 10MHz, ± 1 Count of Input	DC ~ 10MHz
General		
Power Requirement	AC 100 / 120 / 220 / 230V AC $\pm 10\%$, 50Hz / 60Hz	100 / 120 / 220 / 230V AC $\pm 10\%$, 50 / 60Hz
Dimension & Weight	205 (W) x 267 (D) x 76 (H) mm / Approx. 2.4Kg	253 (W) x 280 (D) x 95 (H) mm / Approx. 2.4Kg