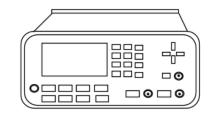
### 400MHz Universal Frequency Counter





## BNC model 1105





Real-Time DSP, Easy LAN Control With Comprehensive GUI

- Up to 6GHz, Standard
- Frequency: 1MHz 400MHz
- Time Interval Resolution: 40pS
- IEEE488.2 and USBTMC Compliance

BNC model 1105

A new counter, Model 1105, from Berkeley Nucleonics compares favorably to existing counters. The 1105 has 12 digits of frequency resolution and 40 ps of time interval resolution. The real-time DSP front-end facilitates faster measurement throughput.

We have made the front panel controls more user-friendly. The SCPI software commands are compatible with the most commonly-used counters so you do not have to rewrite your software. Our LAN control feature lets you control one or several 1105's from your computer with displays of the control or measurement function you want.

#### Impressive 12 Digits Resolution & 6 GHz Frequency Measurements

The Model 1105 includes a RF Channel 3 with a range from 375 MHz to 6GHz and standard Channels 1 & 2 from 1 mHz to 400 MHz. Up to 20 frequently-used setups may be stored in memory. Our design features full front-end isolation.



#### Packed with Many New Features

The BNC Model 1105, ISO 9001 compliant, gives users of existing counters all the measurement capability they are used to, with a few exciting new features. Features include Frequency & Ratio (11 digits/sec.), Time interval, Period (2.5 ns to 1000s), Duty Cycle, Pulse Width, Rise/Fall Time, Peak Volts (100 Hz~300 MHz), Phase, Totalize, with a time base temperature stability of < 1 PPM and aging rate of < 2 PPM per year. We can also measure the peak voltage of incoming waveforms as well.

The BNC Model 1105 offers built-in statistics and math functions. Users can measure and display mean, min/max, delta & standard deviation. These apply to period, frequency, time interval, risetime and peak voltage measurements. Scale & offset can be easily used in compensating for systematic occurrences.

All functions are controlled by either the front panel or via remote control. USB control is standard; GPIB is optional. Data logging to a spreadsheet is easily accomplished with included software (PC Compatible). Of interest is the Ethernet connectivity via your LAN, using your IP address. You can control and display the parameters of several 1105's from your local computer.

#### **Fast Measurement & Special Applications**

In addition to the real-time DSP (digital signal processing) technology, which increases the measurement speeds, a Limit Mode allows users to set margins according to their specific measurements. Go-NoGo commands can be issued via the USB You may control what happens when a limit is exceeded eg. store current data, stop measuring and generate an output signal to trigger an external device.



#### Handy Software & Familiar SCPI Commands

Users can obtain data logs in Excel via USB or via an optional GPIB interface. Our web-support mode allows the 1105 to be connected to your office LAN. Users simply call up an Ethernet address (Default: 192.168.0.247) on a local web browser to access and control the Model 1105. We also provide SCPI commands that are compatible with other manufacturers (Agilent 53132A, etc)

# BNC model 1105

Circul Tree	. Deserve								
Signal Inp	ut Range	LVTTL and TTL compatible Timing Restrictions							
Pulse V	Nidth			Timing Restrictio					
		> 50 ns < 250 ns							
Transition Time									
Start-to-Stop Time		> 50 ns							
Damage	eLevel	0.015			12 Vrms				
		E	External	Arm Input Cha					
Impedance		1 kΩ							
Input Capacitance		17 pF							
Start Slope		Positive or Negative							
Stop Slope		Positive or Negative							
Note	es	<ol> <li>External Arm is available for all measurements except Peak Volts.</li> <li>External Arm is referred to as External Gate for some measurements.</li> </ol>							
		2. Extern		releffed to as Exter	har Gate for some measurements.				
			Inter	nal Time Base S	Stability				
	5			Standard					
				(0° to 50°C)	High Stability Oven (1105-opt01)				
Temper	ature Stabi			(0-10-50-0)	(1105-0001)				
	nced to 25°			± 1 x 10E-6	± 5 x 10E-9				
	Per Da				± 8 x 10E-10				
Aging Rate	Per Mo								
	Per Ye	ar		± 2 x 10E-6	± 8 x 10E-8				
Turn-on stat	bility vs. tin	ne (30			± 2.0 x 10E-8				
min.)					(referenced to 24 hours)				
Ca	libration	8 A.		Electronic	Electronic				
		200							
		Ext	ernal Ti	me Base Input	Specifications				
Voltage	Range	200 mVrms to 10 Vrms							
Damage Level		12 Vrms							
		Exte	ernal Tir	me Base Input C	Characteristics				
Thres	hold			01-64	0 V				
Imped	Impedance		1 kΩ						
Input Capacitance			25 pF						
Input Frequency		10 MHz							
Internal vs. External Time		Manual Select Internal or External							
Base Se	Auton	Automatic Internal used when External not present (default)							
			Time B	ase Output Spec	cifications				
Output Fre	equency				10 MHz				
Volta		570 mVpp (0 dBm), typical							
Imped	ance	50 Ω (typical), AC coupled							
			Meas	urement Specifi	ications				
Frequency				1 mHz to 400 l	MHz (2.5 ps to 1000 s)				
Channel	1 and 2	1 mHz to 400 MHz (2.5 ns to 1000 s)							
Trigg		Default setting is Auto Trigger at 50 %							
"Auto" Ga		0.1 sec							
STD C	CH 3			375 MHz to 6 G	Hz (0.166 ns to 2.6 ns)				

Berkeley Nucleonics Corporation, 2955 Kerner Blvd., San Rafael CA 94901 U.S.A Phone: 800.234.7858 Fax: 415.453.9956 E-mail: info@berkeleynucleonics.com

## BNC model 1105



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Web-support mode allows the 1105 to be connected to your office LAN. Model 1105-HF option, which expands Ch.3 measuring range to 250MHz-20.0GHz