

TEST AND MEASUREMENT (LAB) INSTRUMENTS

DDS GENERATOR AND FREQUENCY METER

MODEL GX320

Cascade arrangement for simulating complex signals with 20MHz and integrated external frequency meter

SPECIFICATIONS

MODEL	GX320
INTERFACE	
Display	LCD 4.92 x 1.77" (125 x 45mm) – Adjustable brightness Display of frequency on 5 digits 0.79" (20mm) high
Commands	19 direct-access commands (9 backlit and adjustable) 1 Line Out On/Off key – 1 digital encoder wheel
Adjustment of Signal Parameters	Continuous by the encoder, automatic frequency and level ranges, selection of the increment digit (F,P,N...)
BNC Output Terminals	TTL, Sweep, Clock and Synch outputs
BNC Input Terminals	VCG, Gate, Clock and Synch inputs
CONTINUOUS SIGNAL GENERATION	
Frequency	0.001Hz to 20.000MHz (11 ranges)
Resolution/Accuracy	5-digit display – resolution from 1mHz to 1kHz according to frequency range / $\pm 20\text{ppm}$ for $F > 10\text{kHz}$, $\pm 30\text{ppm}$ for $F < 10\text{kHz}$
Amplitude	1mV to 20.0Vpp with open circuit in 3 automatic ranges – 3-digit Vpp or Vrms display
Flatness	$\pm 1\text{dB}$ up to 20MHz (specs. for level from 0.1Vpp to 20Vpp)
Vdc Offset	$\pm 10\text{Vdc}$ with open circuit – accuracy $\pm 5\%$ $\pm 5\text{mV}$
Waveforms	Sine/Triangle (max frequency 2MHz)/Square & "LOGIC" / TTL output
FREQUENCY	
Modes	LIN (linear) or LOG (logarithmic) "Sawtooth" or "Triangle" mode
"INT" internal sweep	Unlimited excursion between "F Start" & "F Stop" (256 steps) Sweep time adjustable from 10ms to 100s
"EXT" internal sweep	Sweep by signal $< 15\text{kHz}$, amplitude $\pm 10\text{V}$ VCF IN input impedance 10k Ω approx.
MODULATIONS	
Internal AM	Modulation by a sine signal with a frequency of 1kHz Modulation rate 20% or 80%
External AM	Modulation by a signal with a frequency $< 15\text{kHz}$
Internal FM	Modulation by a sine signal with a frequency of 1kHz
External FM	Modulation by a signal with a frequency $< 15\text{kHz}$
FUNCTIONS	
Shift K	FSK (Internal/External) = switching between F start & F stop PSK (Internal/External) = phase switching $\pm 180^\circ$
Burst	Internal
	External
Gate	Validation of the AC component of "Line Out" by a TTL signal with a frequency $< 2\text{MHz}$ (GATE IN input)
Synch	Maximum frequency of signals generated 100kHz Adjustment of phase shift across $\pm 180^\circ$ (resolution 1°)
EXTERNAL FREQUENCY METER	
Measurement Range	5Hz to 100MHz
Accuracy	$\pm 0.05\% + 1$ count
Max Acceptable Voltage	300Vrms
GENERAL	
Configuration Memories	Storage/Recall of 15 complete instrument configurations
Communication Interface	"USB A/B" link for the programmable versions and Ethernet interface
Power Supply	115V $\pm 10\%$ or 230V $\pm 10\%$; 50/60Hz – 20VA max. – Internal selection
Safety/EMC	Safety as per IEC 61010-1 / EMC as per EN 61326-1



FEATURES

- Frequency range from 20MHz
- DDS technology and frequency accuracy of $\pm 20\text{ppm}$
- Frequency adjustment stable to the nearest digit
- "LOGIC signal" function for direct adjustment of high and low levels
- LIN or LOG sweep, triangle or sawtooth, with adjustable duration from 10ms to 100s
- Internal and external AM & FM modulation, GATE, BURST, FSK and PSK functions
- Adjustable phase synchronization of several generators in a cascade arrangement
- 100MHz frequency meter
- Storage of 15 complete instrument configurations
- Versions programmable via USB link and Ethernet with standard SCPI protocol

CATALOG NO. DESCRIPTION

2138.02 Function Generator Model GX320 (DDS, 20MHz, USB)