

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 / ± 20 ppm for $F > 10$ kHz, ± 30 ppm for $F < 10$ kHz | |
| Amplitude | 1mV to 20.0Vpp with open circuit in 3 automatic ranges – 3-digit Vpp or Vrms display | |
| Flatness | ± 1 dB up to 20MHz (specs. for level from 0.1Vpp to 20Vpp) | |
| Voc Offset | ± 10 Vdc with open circuit – accuracy $\pm 5\%$ ± 5 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 < 15kHz, amplitude ± 10 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 < 15kHz | |
| Internal FM | Modulation by a sine signal with a frequency of 1kHz | |
| External FM | Modulation by a signal with a frequency < 15kHz | |
| FUNCTIONS | | |
| Shift K | FSK (Internal/External) = switching between F start & F stop PSK (Internal/External) = phase switching $\pm 180^\circ$ | |
| Burst | Internal | 1 to 65,535 impulsions pulse train period from 10ms to 100s |
| | External | 1 to 65,535 impulsions – Synch/Period by a TTL signal with a frequency < 200 kHz (VCG IN input) |
| Gate | Validation of the AC component of "Line Out" by a TTL signal with a frequency < 2MHz (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 ± 20 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)