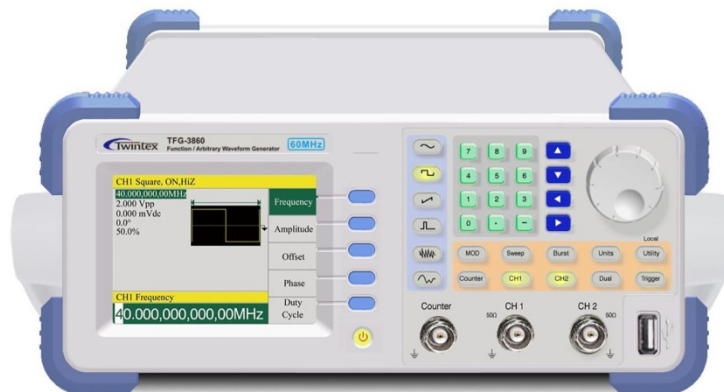


DDS Function/Arbitrary Waveform Generator TFG3800 Series



Features

- Adopt Direct Digital Synthesis (DDS) technology
- 3.5-inch QVGA color LCD display
- Two equivalent output channels
- Frequency range **1 μ Hz~80/120/160MHz**
- Vertical resolution 16 bits
- Embedded 400MSa/s arbitrary generator
- Low edge jitter ≤ 50 ps rms
- Built-in 52 arbitrary waveforms
- Arbitrary waveform length 16384 points
- Sine wave distortion less than 0.2%
- Multiple modulations: AM, DSB-AM, FM, PM, PWM, FSK, PSK, Sweep, Burst
- Built-in 8 digits 1000MHz frequency counter
- USB Host and USB device interfaces, optional LAN and GPIB interface

Function Generator

Specifications

Model		TFG-3880	TFG-38120	TFG-38160
Sampling rate		400Msa/s		
Output waveforms		Sine, Square, Pulse, Ramp, Noise, DC, Arbitrary		
Frequency				
Range	Sine	1 μ Hz~80MHz	1 μ Hz~120MHz	1 μ Hz~160MHz
	Square	1 μ Hz~40MHz		
	Pulse	1 μ Hz~40MHz		
	Ramp	1 μ Hz~4MHz		
	Noise	400MHz white noise		
	Arbitrary	1 μ Hz~40MHz		
Resolution		1 μ Hz		
Accuracy		$\pm 5 \times 10^{-6}$		
Stability		$\pm 1 \times 10^{-6}$		
Waveforms				
Sine		Distortion $\leq 0.2\%$ (1Vpp, DC < f ≤ 20 kHz)		
Square/Pulse		Duty cycle 0.1%~99.9%	Resolution 0.1%	
Rise/Fall time		6ns~1 μ s	Resolution 0.1ns	
Edge jitter		≤ 100 ps rms		
Minimum pulse width		6ns		
Ramp symmetry		0.0%~100.0%	Resolution 0.1ns	
Waveform length		16384 points		
Amplitude				
Range	50 Ω	1mVpp~10Vpp f ≤ 40 MHz 1mVpp~5Vpp 40MHz < f ≤ 100 MHz	1mVpp~5Vpp 1mVpp~3Vpp	100MHz < f ≤ 130 MHz 130MHz < f ≤ 160 MHz
	High Impedance	1mVpp~20Vpp f ≤ 40 MHz 1mVpp~10Vpp 40MHz < f ≤ 100 MHz	1mVpp~5Vpp 1mVpp~3Vpp	100MHz < f ≤ 130 MHz 130MHz < f ≤ 160 MHz
Resolution		16 bits, 4 significant digit		
Accuracy		$\pm 1\%$, ± 1 mVpp, 1kHz		
Flatness		$\leq \pm 0.2$ dB f ≤ 10 MHz $\leq \pm 0.4$ dB 10MHz < f ≤ 60 MHz	$\leq \pm 0.8$ dB $\leq \pm 1.0$ dB	60MHz < f ≤ 100 MHz 100MHz < f ≤ 160 MHz
Offset		Offset range: $\pm(10$ V DC~AC peak) (high impedance) Resolution: 16 bits, 4 significant digit Accuracy: $\pm 1\%$, offset at $\pm 0.25\%$, amplitude at ± 2 mV		
Modulation				
AM		Depth: 0.0%~120.0%	Resolution: 0.1%	
FM		Deviation: Fc/2	Resolution: 1 μ Hz	
PM		Deviation: 0.1 $^\circ$ ~360.0 $^\circ$	Resolution: 0.1 $^\circ$	
PWM		Deviation: 0.0ns~width-12ns	Resolution: 0.1ns	
FSK/PSK		Hopping rate: 1 μ Hz~1MHz	Resolution: 1 μ Hz	
Sweep				
Sweep mode		Lin./Log.		
Sweep time		0.001s~3600s, resolution 1ms		
Hold time		0.001s~3600s, resolution 1ms		
Return time		0.001s~3600s, resolution 1ms		
Trigger source		Internal/External/Single		
Burst				
Burst mode		N cycles/gated		
Start phase		0 $^\circ$ ~360.0 $^\circ$	resolution: 0.1 $^\circ$	
Cycles		1~100000000	resolution: 1	
Period		1 μ s~1000s	resolution: 1 μ s	
Trigger source		Internal/External/Single		
Frequency counter				
Range		1Hz~1000MHz		
Resolution		8 digits		
General				
Accessories		BNC-BNC cable x1, Test lead x1, USB cable x1, Software CD x1, Power cord x1, Manual x1		
Power supply		220VAC $\pm 10\%$, 50Hz/60Hz ± 2 Hz		
Dimension		260W \times 105H \times 390D mm		
Weight		2.5kg		