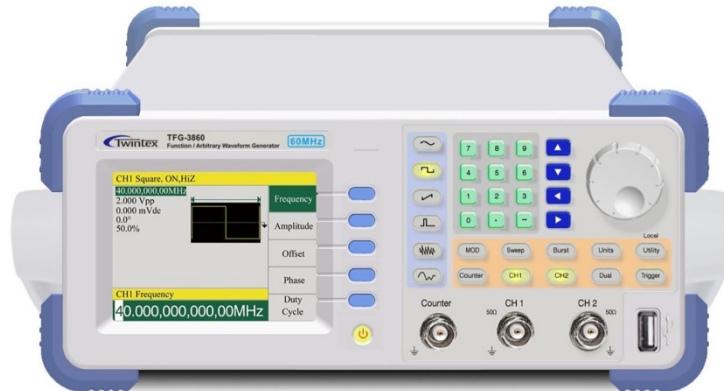


# Function Generator

## DDS Function/Arbitrary Waveform Generator TFG3800 Series



### Features

- Adopt Direct Digital Synthesis (DDS) technology
- 3.5-inch QVGA color LCD display
- Frequency range 1 $\mu$ Hz~30/60/80/120/160MHz
- Vertical resolution 16 bits
- Embedded 400MSa/s arbitrary generator
- Low edge jitter  $\leq$ 50ps 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-3830	TFG-3860	TFG-3880	TFG-38120	TFG-38160	
Sampling rate	400Msa/s					
Output waveforms	Sine, Square, Pulse, Ramp, Noise, DC, Arbitrary					
<b>Frequency</b>						
Range	Sine	1μHz~30MHz	1μHz~60MHz	1μHz~80MHz	1μHz~120MHz	1μHz~160MHz
	Square	1μHz~30MHz	1μHz~60MHz	1μHz~60MHz		
	Pulse	1μHz~30MHz	1μHz~60MHz	1μHz~60MHz		
	Ramp	1μHz~4MHz				
	Noise	400MHz white noise				
	Arbitrary	1μHz~30MHz	1μHz~60MHz	1μHz~60MHz		
Resolution	1μHz					
Accuracy	±5×10 <sup>-6</sup>					
Stability	±1×10 <sup>-6</sup>					
<b>Waveforms</b>						
Sine	Distortion ≤0.2% (1Vpp, DC < f ≤ 20kHz)					
Square/Pulse	Duty cycle 0.1%~99.9%		Resolution 0.1%			
Rise/Fall time	6ns~1μs		Resolution 0.1ns			
Edge jitter	≤100ps rms					
Minimum pulse width	6ns					
Ramp symmetry	0.0%~100.0%		Resolution 0.1ns			
Waveform length	16384 points					
<b>Amplitude</b>						
Range	50Ω	1mVpp~10Vpp f ≤ 40MHz		1mVpp~5Vpp	100MHz < f ≤ 130MHz	
		1mVpp~5Vpp 40MHz < f ≤ 100MHz		1mVpp~3Vpp	130MHz < f ≤ 160MHz	
	High Impedance	1mVpp~20Vpp f ≤ 40MHz		1mVpp~5Vpp	100MHz < f ≤ 130MHz	
		1mVpp~10Vpp 40MHz < f ≤ 100MHz		1mVpp~3Vpp	130MHz < f ≤ 160MHz	
Resolution	16 bits, 4 significant digit					
Accuracy	±1%, ±1mVpp, 1kHz					
Flatness	≤±0.2dB f ≤ 10MHz		≤±0.8dB		60MHz < f ≤ 100MHz	
	≤±0.4dB 10MHz < f ≤ 60MHz		≤±1.0dB		100MHz < f ≤ 160MHz	
Offset	Offset range: ±(10V DC~AC peak) (high impedance) Resolution: 16 bits, 4 significant digit Accuracy: ±1%, offset at ±0.25%, amplitude at ±2mV					
<b>Modulation</b>						
AM	Depth: 0.0%~120.0%		Resolution: 0.1%			
FM	Deviation: Fc/2		Resolution: 1μHz			
PM	Deviation: 0.1°~360.0°		Resolution: 0.1°			
PWM	Deviation: 0.0ns~width-12ns		Resolution: 0.1ns			
FSK/PSK	Hopping rate: 1μHz~1MHz		Resolution: 1μHz			
<b>Sweep</b>						
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					
<b>Burst</b>						
Burst mode	N cycles/gated					
Start phase	0°~360.0°		resolution: 0.1°			
Cycles	1~100000000		resolution: 1			
Period	1μs~1000s		resolution: 1μs			
Trigger source	Internal/External/Single					
<b>Frequency counter</b>						
Range	1Hz~1000MHz					
Resolution	8 digits					
<b>General</b>						
Accessories	BNC-BNC cable x1, Test lead x1, USB cable x1, Software CD x1, Power cord x1, Manual x1					
Power supply	220VAC ±10%, 50Hz/60Hz ±2Hz					
Dimension	260W × 105H × 390D mm					
Weight	2.5kg					