

Specifications in brief: AFG

Frequency

Sine, triangle, square	10 mHz to 20 MHz (symm. 50%) 2 Hz to 2 MHz (symm. 5 to 95%) 666 μ Hz to 500 kHz
Trapeze	666 μ Hz to 1 MHz
Pulse/sin ² pulse	2 Hz to 2 MHz
Ramp	3.5 digits
Resolution	

Signal output

Output voltage (AC)	can be set independently of DC offset
Range	0 to 10 V pp into 50 Ω
DC offset voltage	can be set independently of AC
Range	+5 to -5 V into 50 Ω

SYNC output

TTL, 50 Ω , symmetry and frequency same as signal output

Waveforms

Standard functions	sine, triangle, square, trapeze, pulse
Derived functions	ramp, sin ² pulse by symmetry setting
Symmetry setting	for sine, triangle, square
Range	5 to 95% (of cycle)

Operating modes

CONT	(sine, triangle, square)
BURST	
1/2-CYCLE BURST	
GATE	
SWEEP	
Modes	periodic, single-shot, externally triggered, manually triggered sweeps
Functions	lin/log, ramp up/down, triangle, trapeze

Trigger input/output

Modes	internal, external
Internal	TTL/HCMOS, 1 k Ω
External	Z _{out} = 1 k Ω , DC to 20 MHz

Modulation

Modes	AM, FM, VCO external, PM internal/external, FSK internal/external
Carrier frequency	10 mHz to 20 MHz

General data

Remote control	IEC 625-1/IEEE 488
Power supply	100/120/220/240 V \pm 10%, 47 to 63 Hz, 65 VA

Specifications in brief: AFGU

Data differing from that of Function Generator AFG

Frequency

Sine, triangle, square, pulse	1 μ Hz to 20 MHz
Ramp, trapeze	1 μ Hz to 2 MHz
Signal sync output:	
Square (TTL/HCMOS)	1 μ Hz to 20 MHz
with option AFGU-B1	1 μ Hz to 50 MHz
Frequency resolution	6-digit, min. 1 μ Hz (continuous) 3.5-digit, min. 1 μ Hz (burst, gate)
Frequency error in synthesizer mode	setting error + error of reference
Setting error (2 kHz to 20 MHz)	$\pm 6 \times 10^{-7}$

Signal output

Output impedance	50 Ω / <5 Ω selectable (f = 10 kHz)
Output voltage (AC)	
Range (V pp), EMF	0 to 30 V (I _{max} = 200 mA) 0 to 15 V (into 50 Ω with Z _s = 50 Ω)
DC offset voltage (Z _s = 50 Ω)	
Range	V _{offset} \leq 10 V - 0.5 V pp

Waveforms

same as AFG, plus arbitrary waveforms

Operating modes

F/N and FxN	same as AFG, plus:
DIGITAL SWEEP	

Optional 50 MHz TTL/CMOS Output AFGU-B1

Frequency range	1 μ Hz to 50 MHz
Output signal	TTL, HCMOS into 50 Ω

General data

Power supply	100/120/220/240 V \pm 10%, 47 to 63 Hz, 120 VA
Dimensions (W x H x D)	435 mm x 147 mm x 350 mm
Weight for fully equipped unit	10.5 kg (AFG), 14 kg (AFGU)

Ordering information

Function Generator	AFG	0377.2100.02
	AFGU	0377.5000.02

Extras

Optional 50 MHz Frequency Extension,		
TTL/CMOS Output for AFGU	AFGU-B1	0351.8018.02
Service Kit	AZ-1	0377.4810.02
Arbitrary Waveform Designer		
(application software for AFGU)	AWD-K1	1026.4500.03