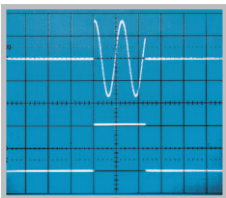


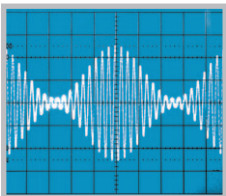
12.5 MHz Arbitrary Function Generator HM8150



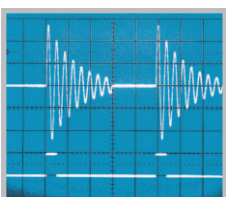
Gated sine wave,
Gated mode



Amplitude-modulated
sine wave



Triggered arbitrary signal



Frequency range 10 mHz to 12.5 MHz

Output voltage 20 V_{pp} (open circuit)

Rise and fall time < 10 ns

Pulse width adjustment

Arbitrary waveform generator 40 MSa/s

Burst, gating, external triggering, sweep

RS-232 interface, optional: USB, IEEE-488



12.5 MHz Arbitrary Function Generator HM8150

Valid at 23 °C after a 30 minute warm-up period

Frequency

Range:	10 mHz to 12.5 MHz
Resolution:	5 digit, max. 10 mHz
Accuracy:	± (1 digit + 5 mHz)
Temperature coefficient:	0.5 ppm/°C
Aging:	2 ppm/year

Waveforms

Sine wave

Frequency range:	10 mHz to 12.5 MHz
Amplitude:	0 - 20 V _{pp} (open circuit)
Distortion:	< 0.2 %

Square wave

Frequency range:	10 mHz to 12.5 MHz
Amplitude:	0 - 20 V _{pp} (open circuit)
Rise / fall time:	< 10 ns
Overshoot:	< 5% (U _{out} ≤ 200 mV)
Symmetry:	50 % ± (5% + 10 ns)

Pulse

Frequency range:	10 mHz to 5 MHz
Amplitude:	0...+10 V or 0...-10 V
Rise / fall time:	< 10 ns
Pulse width:	100 ns to 80 s
Duty cycle:	max. 90 %

Sawtooth

Frequency range:	10 mHz to 10 kHz
Amplitude:	0 - 20 V _{pp} (open circuit)
Linearity:	better than 1 %

Triangle

Frequency range:	10 mHz to 100 kHz
Amplitude:	0 - 20 V _{pp} (open circuit)
Linearity:	better than 1 %

Arbitrary generator

Frequency range:	10 mHz to 100 kHz
Amplitude:	max. 20 V _{pp} (open circuit)
Output rate:	40 MSa/s
Resolution:	X: 1024 (10 bit) Y: 1024 (10 bit)

Inputs

Gate/Trigger:	BNC connector
Impedance:	5 kΩ 100 pF
Max. input voltage:	± 30 V
AM-IN:	BNC connector
Impedance:	10 kΩ
Max. input voltage:	± 30 V

Outputs

Signal output:	BNC connector, short circuit proof, ext. voltage up to ± 15 V		
Impedance:	50 Ω		
Output voltage:	Range 1:	2.1 - 20 V _{pp} (open circuit)	
	Range 2:	0.21 - 2.0 V _{pp} (open circuit)	
	Range 3:	20 - 200 mV _{pp} (open circuit)	
Resolution:	Range 1:	100 mV	
	Range 2:	10 mV	
	Range 3:	1 mV	
Setting accuracy (1 kHz):	Range 1:	± 2 %	
	Range 2:	± 3 %	
	Range 3:	± 4 %	
	3 % additional for pulse and square wave		
Frequency response:	< 100 kHz:	± 0.2 dB	
	0.1 - 12.5 MHz:	± 0.5 dB	
	2 - 10 MHz:	+ 0.5 dB / - 3 dB	
Offset error:	Range 3:	± 50 mV	
Display:	2½ digits (LCD)		

DC offset

Output voltage:	Range 1:	-7.5...+7.5 V (open circuit)
	Range 2:	-0.75...+0.75 V (open circuit)
	Range 3:	-75...+75 mV (open circuit)

Trigger output BNC connector

Sawtooth:	0 to 5 V (sweep out)
Level:	5 V / TTL
Output impedance:	1 kΩ

Sweep (internal)

Setting of start and stop frequency

Internal sweep:	all waveforms
Sweep time:	linear, 20 ms to 100 s continuous or triggered (ext. signal, interface)

Amplitude Modulation:

Modulation via external signal

Modulations depth:	0 to 100 %
Bandwidth:	DC - 20 kHz (-3 dB)

Gate (asynchronous)

Modulation on/off via external TTL signal

Delay time:	< 150 ns
Input signal:	TTL

Trigger Function (synchronous)

Burst mode via ext. trigger input or interface

Frequency range:	< 500 kHz
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Miscellaneous

Interface:	RS-232 (standard), IEEE-488 (optional) or USB (optional)
Display:	16 characters, LCD with backlight
Memory:	for the last device settings and for 1 arbitrary signal
Safety Class:	Safety Class I (EN61010-1)
Power supply:	115/230 V ± 10 %; 50/60 Hz
Power consumption:	approx. 20 Watt
Operating temperature:	+10 °C to +40 °C
Max. rel. humidity:	10 % to 90 % (without condensation)
Dimensions (W x H x D):	285 x 75 x 365 mm
Weight:	approx. 5 kg

Accessories supplied: Operator's Manual and power cable

Optional accessories:

HZ33/HZ34 Test Cable 50 Ω (BNC-BNC)
HZ24 Attenuators 50 Ω 3/6/10 and 20 dB
HZ42 19" Rackmount kit 2RU
HZ20 Adapter plug
HO870 USB Interface
HO880 IEEE-488 interface

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