

HS Series hand held digital oscilloscopes

digimess® concept

CE



The **digimess®** HS20 and HS60 are general purpose 20MHz 100MS/s and 60MHz 250MS/s, 2 channel, colour digital storage oscilloscopes. These hand held units feature a back lit 3.8 inch colour LCD display with 320 x 240 resolution and 4096 colours. The specification includes separate isolated inputs for the oscilloscope and built in 4000 count multimeter. Up to 4 waveforms can be stored and a USB interface is fitted as standard. The oscilloscope is supplied with a lockable aluminium storage case, rechargeable battery, mains adapter/charger, two X1/X10 probes, USB lead, PC software, 20A current shunt, capacitance adapter, multimeter probes and operating manual.

Specification

OSCILLOSCOPE			
DISPLAY		Trigger level range	± 6 divs from screen centre
Screen	3.8 inch Colour LCD back lit	Trigger level accuracy	± 0.3 divs for rise/fall ≥ 20ns
Resolution	320 x 240, 4096 colours	Trigger displacement	655 divs pre-trig, 4 divs post-trig
Type	Dots or vectors	Trigger sensitivity video/typical mode	2 divs of pk-pk value
Persistence	Off, 1s, 2s, 5s, infinite	Video triggering	PAL, NTSC, SECAM for any field or line
Waveform interpolation	Sin (x)/x	X/Y MODE	
Format	YT and XY	X axis Y axis	CH1/CH2
Zoom window	Full size between 2 cursors	MEASUREMENT	
INPUT		Cursor	Voltage diff (ΔV), time dif (ΔT)
Coupling	DC, AC	Auto	Pk-pk value, average value, rms value, frequency and period
Impedance	1MΩ ± 2%, 20pF ± 3pF	WAVEFORM MATHS	
Max input voltage	400V (peak) CAT II	Function	CH1-CH2, CH2-CH1, CH1+CH2, CH1xCH2, CH1/CH2
Channel delay time (typical)	150ps	MULTIMETER	
Probe attenuation coefficient	X1, X10, X100, X1000	No of counts	4000
DATA ACQUISITION		Impedance	10MΩ
Max real time samp rate / ch	HS20 100MS/s, HS60 250MS/s	Diode test	0 to 1.5V
Max equiv sample rate / ch	HS20 12.8GS/s, HS60 32GS/s	Continuity test	< 30Ω
Sampling modes	Sample, Pk Detection, Average	DC voltage { max i/p	400.0mV, 4.000V, 40.00V
Average	4, 16, 64, 128	1000V dc/ac pk-pk }	400.0V, ± 1% ± 1dig
HORIZONTAL		AC voltage { max i/p 750V ac rms }	4.000V, 40.00V, 400.0V ±1% ± 3dig
Sampling range	10S/s to maximum	DC current	40.00mA ±1% ±1dig, 400.0mA ±1.5% ±1dig, 20A resolution
Record length	6k points per channel	AC current	40.00mA ±1.5% ±1dig, 400.0mA ±2% ± 1dig, 20A resolution
Time base range	5ns/div - 5s/div, 1-2-5 steps	Resistance	10mA ±5% ±3dig
Sample rate /delay time accy	± 100ppm for any time interval	Capacitance	400.0Ω ±1% ±3dig, 4.000K, 40.00K, 400.0K, 4.000M ±1% ±1dig, 40.00M ±1.5% ±3dig
Time interval	≥ 1ms	GENERAL	
(T) measurement accuracy full bandwidth	Single: ± (1 sample time int + 100ppm x reading + 0.6ns) >average 16 : ± (1 samp int + 100ppm x reading + 0.4ns)	Power supply (adapter)	100-240Vac rms 50/60Hz
VERTICAL		Battery (rechargeable)	7.4V 3500mAh lithium
A/D converter	8 bit resolution, 2 channel	Power consumption	< 6W
Sensitivity	5mV/div - 5V/div	Working temp & rel hum	5 - 40°C, 20% - 80%
Analogue bandwidth	HS20 20MHz, HS60 60MHz	Weight & dims (W x H x D)	645g, 115 x 180 x 40mm
Single bandwidth	Full bandwidth	ORDER INFORMATION	
Low frequency response	≥ 5Hz AC coupling -3dB	HUC76-00 HS20	20MHz colour oscilloscope
Rise time	HS20 ≤ 17.5ns, HS60 ≤ 5.83ns	HUC76-10 HS60	60MHz colour oscilloscope
DC gain accuracy	± 5%		
DC accuracy average mode	± 5% reading + 0.05 divs after averaging more than 16 times		
TRIGGER			
Trigger source	CH1, CH2		
Trigger mode	Auto, Norm, Single, Edge, TV		
Trigger coupling	AC, DC, HF Rej, LF Rej		
Trigger sensitivity (Edge)	DC, CH1 & CH2: 1div (dc to b/w)		