



TENMA®

72-8725 Technical Specification (4 Channels) :

Sample Range		
Sample Method	Real Time	Equivalent
Sample Rate	2GS/s	50GS/s
Average	All the channel achieve to sample rate at N times , N times can select on 2、 4、 8、 16、 32、 64、 128 and 256	

Input	
Input Coupling	DC, AC or Grounding (AC、 DC、 GND)
Input Impedance	1MΩ±2% , and 16±3pF
Probe attenuates coefficient setting	1×,10×,100×,1000×
Maximum input voltage	400V (DC + AC peak、 1MΩ input impedance)
Channel time delay(typical)	150ps

Horizontal

Interpolation	$\sin(x)/x$
Records length	1024k
Storage Depth	24k(Max)
Equivalent Storage Depth(double time base)	60M pts
Scan range (s/div)	1ns/div ~ 50s/div (300MHz) 2ns/div ~ 50s/div (200MHz、 150 MHz) 5ns/div ~ 50s/div (100MHz) Press 1-2-5 enter
Sampling range and delay timing accuracy	$\pm 50\text{ppm}$ (Any one $\geq 1\text{ ms}$ time interval)
Time interval(ΔT) Accuracy(Full bandwidth)	Single time: $\pm(1\text{ sampling time interval}+50\text{ppm}\times\text{ Reading}+0.6\text{ns})$ >16 mean value: $\pm(1\text{ sampling time interval}+100\text{ppm}\times\text{ Reading}+0.4\text{ns})$

Vertical				
Model Number				72-8725
A/D Converter (A/D)	8 bits resolution			
Deflection factory (V/div)	2mV/div ~ 5V/div (at the input BNC)			
Position Range	$\pm 5\text{div}$			

Analyse Bandwidth				100MHz
Single bandwidth				100MHz
Selectable bandwidth limit(typical)	20MHz			
Low frequency response (AC coupling , -3dB)	≤10Hz(at BNC above)			
Rising time				≤3.5ns
DC gain accuracy	At 2mV/div ±4% (sampling or mean value sampling method); Vertical accuracy is 5mV/div ~ 5V/div: ±3%(sampling or mean value sampling method)			
DC measurement accuracy (mean value sampling method)	Vertical position is zero, also $N \geq 16$: $\pm (5\% \times \text{reading} + 0.1\text{mV})$, select 2mV/div; $\pm (3\% \times \text{Reading} + 1\text{mV})$ and select 5mV/div ~ 5V/div. Vertical position is not zero, then $N \geq 16$: $\pm [3\% \times (\text{Reading} + \text{Vertical position reading}) + (1\% \times \text{vertical position reading})] + 0.2\text{div}$ Setting from 5mV/div to 200mV/div add 2mV; Setting >200mV/div to 5V/div and add 50mV.			
Voltage difference (ΔV) accuracy (mean value sampling method)	Under the same setting and environment , the obtained ≥ 16 waveforms after getting mean value, the voltage difference (ΔV): $\pm (3\% \times \text{Reading} + 0.05\text{div})$			

Trigger		
Trigger Sensitivity	≤1div	
Trigger level range	Internal	Display center±8div
	EXT	800mV
	EXT/5	4.0V
Trigger electric level accuracy (typical) accuracy is applicable to rising and falling ≥20ns signal	Internal	±(0.3div×V/div)(within display center±4div range)
	EXT	±(6% setting value + 40mV)
	EXT/5	±(6% setting value + 200mV)
Pre-Trigger capability	Normal mode/ Scan mode、pre-trigger/delayed by time trigger; Pre-trigger depth is adjustable	
Release Range	96.0000ns ~ 1.5s	
Set electric level to 50%(typical)	Input frequency signal ≥50Hz	
Edge Triggering		
Edge Type	Rising、Falling、Rising and Falling	
Glitch Trigger		
Trigger Mode	(Higher、Lower or equal) forward pulse , (higher、lower、equal) backward pulse	
Pulse Range	20ns-10s	
Video Triggering		

Trigger sensitivity (video trigger, typical)	Internal	2div
	EXT	400mV
	EXT/5	2V
Signal mode	Support NTSC and PAL ,line range 1-525(NTSC) and 1-625 (PAL)	

Triggering Frequency		
Reading	6 digits	
Determination		
Accuracy	±51ppm	
Frequency Range	AC coupling , from 10Hz to full	
Trigger type	Edge / Pulse	
Measurement		
Cursors	Manual mode	Cursor voltage difference (ΔV) 、 cursor time difference (ΔT) 、
		ΔT reverse reading (Hz)(1/ ΔT)
	Chase Mode	The voltage value and time value of waveform point
Automatic measurement	Peak to peak, max, min, top, bottom, mean, RNS, overshoot, pre-shoot, frequency, period, rising falling, positive pulse, negative pulse, positive duty cycle, delay	

		time and etc..
Mathematics		Add, Subtract, Multiply, Divide,
Storage Waveform		10 waveforms, 10 settings
FFT	Window	Hanning,Hamming,Blackman-Harris,Rectangular
	Sampling Point	1024 points
X-Y Phase difference	Phase difference	± 3 degrees
Multimeter Function		
DC Voltage	Range : 400.0mV, 4.000V, 40.00V, 400.0V Accuracy : $\pm (1\% + 5 \text{ digits })$	
AC Voltage (40Hz ~ 400Hz)	Range: 400.0mV, 4.000V, 40.00V, 400.0V Accuracy : $\pm (1.2\% + 5 \text{ digits })$	
Resistance	Range : 400 Ω , 4k Ω , 40k Ω , 400k Ω , 4M Ω , 40M Ω Accuracy : $\pm (1.5\% + 5 \text{ digits })$	
Continuity Buzzer	<70.0 Ω	
Diode	Postive decline 0.5V ~ 0.8V	
DC Current	Range : 4mA, 40.mA, 400.0mA	

	Accuracy : $\pm (1\% + 5 \text{ Digits })$ Range : 4A Accuracy : $\pm (1.5\% + 5 \text{ digits })$
Display	
Display type	5.7 inch LCD display
Display Resolution	320 ×RGB×240 (TFT)
LCD	Color
Backlight	300nit
Language Support	Chinese , English

Voltage Output (Typical)	About 3V, Peak Value $\geq 1 \text{ M}\Omega$
Frequency (Typical)	1kHz

Ports	
Standard	1xUSB DEVICE 1xUSB HOST Multimeter Host
Optional	GPIB & LAN

Power	
Power Voltage	100-240VAC _{RMS} , 45-440Hz , CAT II

Power Consumption	Less than 50VA
Fuse	F 1.6AL 250V。 Locate and nearly in power socket.

Environment	
Temperature	Operating Environment : 0°C ~ +40°C
	Non-Operating Environment : -20°C ~ +60°C
Cool Down Method	Auto cool down
Temperature	+ 10°C ~ + 30°C:≤95%±5%RH , + 30°C ~ + 40°C:≤75%±5%RH
	+ 10°C ~ + 30°C:≤95%±5%RH , + 30°C ~ + 40°C:≤75%±5%RH
High Temperature	Operating 3 , 000 米
	Non-Operating 15 , 000 米

Specification		
Size (For Reference Only)	Widen	336mm
	Height	177mm
	Depth	174mm
Weight (Gross Weight)	Weight without gift box	3.8kg
	With Gift Box	6.5kg

IP protection	IP2X
Calibration Period	One year (Recommendation)