

Oscilloscope



Features:

- 4 Channels and EXT trigger, 60MHz Bandwidth
- 200MSPS real time sampling rate, 10k-16M Memory depth per channel
- Frequency Counter, FFT Spectrum Analysis
- 8-36V Wide range of input voltage, suitable for vehicle power
- More than 20 kinds of automatic measurement function, PASS/FAIL Check function, is suitable for engineering application

Specifications:

	Model	72-10177
Acquisition	Sample Mode	Real-Time Sample
	Sample Rate	200MSPS
	Average	N acquisitions, all channels simultaneously, N is selectable from 2, 4, 8, 16, 64, and 128
Input	Input Coupling	DC, AC, GND
	Input Impedance	Resistance: 1MΩ; Capacitance: 25pF
	PP-80,PP-150,PP-200 Probe Attenuation	10X
	Support Current Measure	1X, 10X
	Maximum Input Voltage	400Vpk (DC + peak)
Horizontal	Scanning Speed Range(Sec/Div)	5ns/div ~ 1000s/div(1-2-5 sequences)
	Sample Rate and Delay Time Accuracy	±50ppm(any interval ≥1ms)
	Wave form Interpolation	Step, Linear, Sin(x)/x
	Memory Depth(Sample Points)	10K ~ 16M for each channel; 16M: 5ns/div-1000s/div
	Analog Bandwidth	60MHz (-3dB)
	A/D converter	8 bit resolution
Vertical	Vertical Scale(Volt/div) Range	10mV ~ 5V/div @ x1 probe(1,2,5 sequence); 100mV ~ 50V/div @ x10 probe
	Position Range	±4division
	Selectable Analog Bandwidth Limit(typical)	20MHz
	Lower Frequency Response(-3dB)	≤ 10Hz(at input BNC)
	Rise Time at BNC(typical)	≤5.8ns
	DC Gain Accuracy	±3%



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Trigger	Trigger Source	CH1,CH2, CH3, CH4, EXT	
	Trigger Mode	Auto, Normal and Single	
	Trigger Type	Edge, Pulse, Video, Alternative	
	Trigger Sensitivity	0.02 div increments	
	Trigger Level Range	±4V	
	Trigger Level Accuracy	±4 division	
	Edge Trigger Slope	Rising, Falling	
	Pulse Width Trigger	Trigger Condition: Trigger when <, >, =, or ≠; Positive pulse or Negative pulse Pulse Width Range: Selectable from 20ns to 10s	
	Video Trigger Type (Signal Formats and Field Rates)	Supports NTSC, PAL and SECAM broadcast systems for any field or any line	
	Alternative Trigger	CH1/CH2/CH3/CH4: Internal Trigger, Edge, Pulse Width, Video	
Measurement	Cursor Measure	Amplitude difference between cursors (ΔV); Time difference between cursors (Δt); Reciprocal of Δt in Hertz ($1/\Delta t$) (Cross, Trace, Horizontal, Vertical)	
	Auto Measure	Voltage	Vp-p, Vmax, Vmin, Vmean, Vamp, Vtop, Vbase, Vmid, Vrms, Vcrms, Preshoot, Overshoot
		Time	Frequency, Period, Rise Time(10%~90%), Fall Time(10%~90%), Positive Width, Negative Width, Duty Cycle
Arbitrary Waveform Generator	Waveform Frequency	DC ~ 25MHz	
	DAC clock	2K ~ 200MHz adjustable	
	Frequency Resolution	0.10%	
	Waveform Depth	4K Sample	
	Vertical Resolution	12 bit	
	Frequency Stability	<30ppm	
	Wave Amplitude	±3.5V Max.	
	Output Impedance	50Ω	
	Output Current	50mA ,Ipeak=50mA	
	System BW	25MHz	
	Harmonic Distortion	-50dB(1KHz), -40dB(10KHz)	
Environmental	Temperature	Operating: 0°C to 40°C Non-operating: -20°C to +60°C)	
	Cooling Method	Forced air	
	Humidity	Below +35°C, ≤90% relative humidity; +35°C to +40°C, ≤60% relative humidity	
	Altitude	Operating: 3,000m or below; Non-operating: 15,000m or below	

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Mechanical	Size	190mm(L)×100mm(W)×35mm(H)
	Heavy	Without Packaged 0.29kg; Packaged 0.9kg;
Accessories	Probe	X1, X10 two passive probes. The passive probes have a 6MHz bandwidth (rated 100Vrms CAT III) when the switch is in the X1 position, and a maximum bandwidth (rated 300Vrms CAT II) when the switch is in the X10 position. Each probe consists of all necessary fittings.
	Adapter	A power adapter special for this product. In addition to the power adapter shipped with your instrument, you may purchase another one certified for the country of use.
	USB Line	A USB A-B line, used to connect external devices with USB-B interface like a printer or to establish communications between PC and the oscilloscope.
	Installation CD	A software installation CD and it also contains the user manual for the Tenma Oscilloscope.

Part Number Table

Description	Part Number
Oscilloscope, PC, 4 CH, 60MHz, AFG	72-10177

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