

Product Catalogue

- + Digital Storage Oscilloscope
- + Arbitrary Waveform Generator
- + Programmable DC Power Supply
- + PC Oscilloscope
- + Digital Multimeter



owon[®] product line - Created by LILLIPUT[®]

Distributed By: Metro Electronic Products

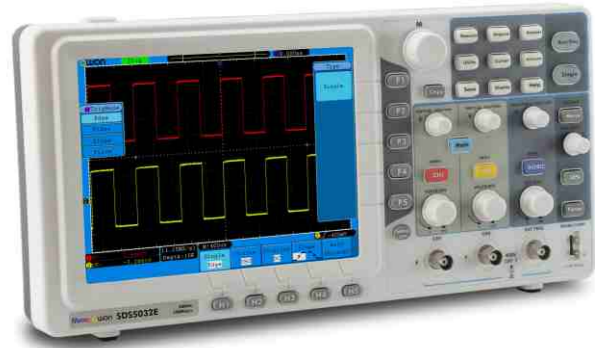
355 , Old Lajpat Rai Market
Chandni Chowk, Delhi 110 006
Tel / Fax: (011) 2386 8195, 2387 5355, 4750 8195
E-mail: sales@metroq.in

JANUARY 2018 ISSUE

Contents

01	Digital Storage Oscilloscope
01	SDS5032E economical type digital storage oscilloscope
03	SDS Series deep memory digital storage
05	MSO Series mixed LA - oscilloscope
07	HDS1021M-N 1-channel handheld digital storage oscilloscope
09	HDS1022M-N 2-channel handheld digital storage oscilloscope
11	TDS Series 4-channel touch screen digital storage oscilloscope
13	SDS1000 Series super - economical type digital storage oscilloscope
15	XDS Series your powerful n-in-1 on-site measurement station
19	PC Oscilloscope
19	VDS1022 / VDS1022I PC Oscilloscope
21	RDS1021 / RDS1021I Pen-type PC Oscilloscope
23	Digital Multimeter
23	B35T bluetooth digital multimeter
25	XDM3051 bench-type digital multimeter
27	Spectrum Analyzer
27	XSA1015-TG spectrum analyzer
28	XSA1036-TG spectrum analyzer
29	Waveform Generator
29	AG1011F single-channel Arbitrary Waveform Generator
31	AG1022F dual-channel Arbitrary Waveform Generator
33	AG4151 single-channel Arbitrary Waveform Generator
35	Power Supply
35	ODP3032 Programmable DC Power Supply
37	Current Probe
38	Oscilloscope Probe

SDS5032E economical type digital storage oscilloscope



- + Bandwidth : 30MHz
- + Sample rate : 250MS/s
- + Ultra-thin body
- + 8 inch high resolution LCD
- + Pass / Fail function
- + SCPI, and LabVIEW supported



+ Performance Specifications

Model	SDS5032E
Bandwidth	30MHz
Sample Rate	250MS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5
Rise Time (at input, typical)	≤11ns
Channel	2 + 1 (external)
Display	8" color LCD, 800 x 600 pixels
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1
Max Input Voltage	400V (DC + AC peak)
DC Gain Accuracy	±3%
Record Length	10K
DC Accuracy (average)	average ≥ 16 : ±(3% reading + 0.05 div) for ΔV
Probe Attenuation Factor	1X, 10X, 100X, 1000X
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)
Sample Rate / Relay Time Accuracy	±100ppm
Interpolation	sin(x)/x
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns), Average > 16 : ±(1 interval time + 100ppm × reading + 0.4ns)
Input Coupling	DC, AC, and GND
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)
Vertical Sensitivity	5mV/div - 10V/div (at input)

Model	SDS5032E	
Trigger Type	Edge, Pulse, Video, Slope, and Alternate	
Trigger Mode	Auto, Normal, and Single	
Trigger Level	±6 divisions from screen center	
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard	
Cursor Measurement	ΔV, and ΔT between cursors	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty, Duty cycle	
Waveform Math	+, -, *, /, invert, FFT	
Waveform Storage	15 waveforms	
Lissajous Figure	Bandwidth	full bandwidth
	Phase Difference	±3 degrees
Communication Interface	USB host, USB device, Pass / Fail, LAN, and VGA (optional)	
Frequency Counter	available	
Power Supply	100V - 240V AC, 50/60Hz, CAT II	
Power Consumption	<18W	
Fuse	2A, T class, 250V	
Battery	not supported	
Dimension (W x H x D)	348 x 170 x 78 (mm)	
Device Weight	1.50 kg	

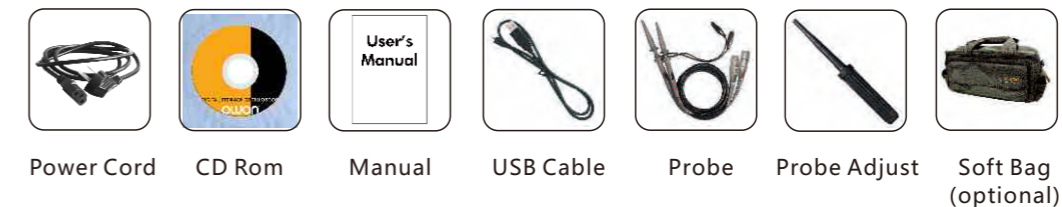
Specifications subject to change without prior notice.

+ Application

electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

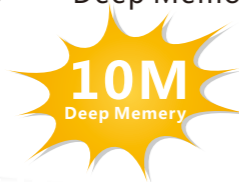
+ Accessories

The accessories subject to final delivery.



Smart DS Series

Deep Memory Digital Storage Oscilloscope



- + Bandwidth : 60MHz - 200MHz
- + Sample rate : 500MS/s - 2GS/s
- + 10M record length for each channel
- + Smart design with easy portability
- + Large 8 inch 800 x 600 pixels LCD
- + LAN remote control
- + Multi-function : auto-scale, Pass / Fail, current measurement, and **digital filtering**
- + SCPI, and LabVIEW supported

- + Optional **BATTERY** available



+ Performance Specifications

Model	SDS6062	SDS7102	SDS8202
Bandwidth	60MHz	100MHz	200MHz
Sample Rate	500MS/s	1GS/s	2GS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	2ns/div - 100s/div, step by 1 - 2 - 5	1ns/div - 100s/div, step by 1 - 2 - 5
Rise Time	≤5.8ns	≤3.5ns	≤1.7ns
Display	8" color LCD, 800 x 600 pixels		
Channel	2 + 1 (external)		
Record Length	10M		
Input Coupling	DC, AC, and GND		
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF		
Channel Isolation	50MHz : 100 : 1, 10MHz : 40 : 1		
Max Input Voltage	400V (DC + AC Peak)		
DC Gain Accuracy	±3%		
DC Accuracy	average≥16 : ±(3% reading + 0.05 div) for ΔV		
Probe Attenuation Factor	1X, 10X, 100X, 1000X		
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)		
Sample Rate / Relay Time Accuracy	±100ppm		
Interpolation	sin(x)/x		
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns); Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)		
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)		
Vertical Sensitivity	2mV/div - 10V/div		
Digital Filtering	low-pass, high-pass, band-pass, and band-reject		

Model	SDS6062	SDS7102	SDS8202
Trigger Type	Edge, Pulse, Video, Slope, and Alternate		
Trigger Mode	Auto, Normal, and Single		
Trigger Level	±6 divisions from screen center		
Acquisition Mode	Sample, Peak Detect, and Average		
Line / Field Frequency (video)	NTSC, PAL and SECAM standard		
Cursor Measurement	ΔV, and ΔT between cursors		
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty, Duty cycle		
Waveform Math	+, -, *, /, invert, FFT		
Waveform Storage	15 waveforms		
Lissajous Figure	Bandwidth	full bandwidth	
	Phase Difference	±3 degrees	
Communication Interface	USB host, USB device, Pass / Fail, LAN, VGA (optional), and RS232 (optional)		
Frequency Counter	available		
Power Supply	100V - 240V AC, 50/60Hz, CAT II		
Power Consumption	< 18W	< 24W	
Fuse	2A, T class, 250V		
Battery (optional)	7.4V, 8000mA		
Dimension (W x H x D)	340 x 155 x 70 (mm)		
Device Weight	1.80 kg		

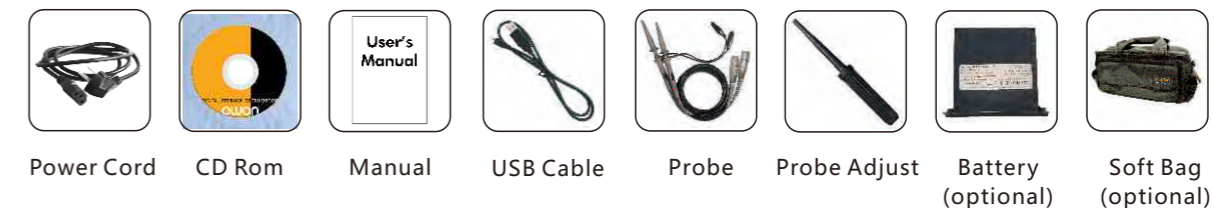
Specifications subject to change without prior notice.

+ Application

electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.



MSO Series Mixed LA - Oscilloscope



- + 2 in 1 (DSO + LA)
- + 8 inch color LCD
- + USB data transmission supported
- + 20 automated measurements
- Digital Storage Oscilloscope**
- + Bandwidth : 60MHz - 100MHz
- + Sample rate : 1GS/s
- + Auto-scale function
- + FFT
- Logic Analyzer**
- + Bandwidth : 100MHz
- + Sample rate : 1GS/s
- + 16 input channels

[Digital Storage Oscilloscope] Performance Specifications

Model	MSO7062TD	MSO7102TD
Bandwidth	60MHz	100MHz
Sample Rate	1GS/s	
Rise Time	≤5.8ns	≤3.5ns
Display	8" color LCD , 640 x 480 pixels	
Channel	dual + external trigger	
Horizontal Scale (s/div)	2ns/div - 100s/div, step by 1 - 2 - 5	
DC Accuracy (average)	average > 16 : ±(3% reading + 0.05div) for ΔV	
Vertical Sensitivity	2mV/div - 10V/div	
DC Gain Accuracy	±3%	
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)	
Interpolation	sin(x)/x	
Max Input Voltage	400V (DC + AC peak)	
Probe Attenuation Factor	1X , 10X , 100X , 1000X	
Trigger Mode	Edge, Video, Alternate, Pulse, and Slope	
Acquisition Mode	Normal, Peak Detect, and Average	
Record Length	2M points	
Waveform Storage	4 waveforms	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty	
Waveform Math	+, -, *, /, invert, FFT	
Power Supply	100 - 240V AC, 50Hz / 60Hz, CAT II	

Model	MSO7062TD	MSO7102TD
Lissajous Figure	Bandwidth	60MHz
	Phase Difference	±3 degrees
Communication Interface	USB host, VGA (optional), and USB device	
Fuse	1A, T class, 250V	
Battery	7.4V 8000mAh (optional)	
Dimensions (W x H x D)	370 x 180 x 120 (mm)	
Device Weight	2.20 kg	

[Logic Analyzer] Performance Specifications

Model	MSO7062TD	MSO7102TD
Sample Rate	20S/s - 1GS/s	
Bandwidth	100MHz	
Channel	16	
Record Length	4M points	
Input Impedance	660KΩ ± 5%, in parallel with 15 ± 5pF	
Trigger Mode	Edge, Bus, State, Data Alignment, Data Width, and Distributed Queue	
Trigger Position Setting	Pre-trigger, Mid-trigger, and Re-trigger	
Threshold Voltage	±6V (4 settings)	
Input Signal Range	±30V	
Data Search	available	
Data System	binary, decimal, and hex	
Digital Filter	0, 1, 2 optional	
Setting Storage	10 settings	
USB Flash Disk Storage	available	

Specifications subject to change without prior notice.

+ Application

- design and debug
- circuit function test
- education and training
- mixed signal circuit test

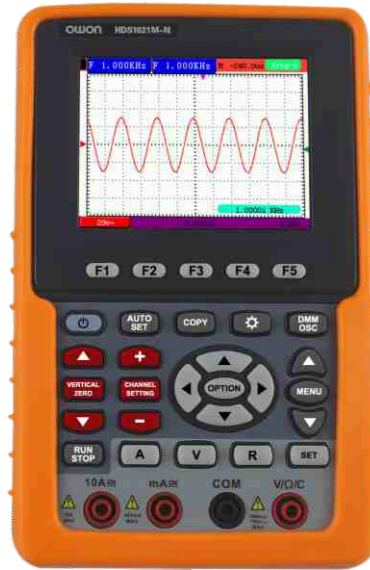
+ Accessories

The accessories subject to final delivery.



HDS1021M-N

1-channel Handheld Digital Storage Oscilloscope



- + 2 in 1 (DSO + Multimeter)
- + Auto-scale function
- + FFT function
- + 20 group automatic measurement options
- + Bandwidth : 20MHz
- + USB data transmission supported
- + Rechargeable Li-ion battery (6 hours' backup)
- + Waveform record and replay
- + Multimeter newly supported SCPI

+ Performance Specifications

Model	HDS1021M-N
Bandwidth	20MHz
Sample Rate	500MS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2.5 - 5
Rise Time (at input, typical)	≤ 17.5ns
Display	3.7" color TFT display (640 x 480 pixels)
Channel	single
Input Impedance	1MΩ ± 2%, in parallel with 18pF ± 5pF
Record Length	6K points
Interpolation	sin(x)/x
Probe Attenuation Factor	1X , 10X , 100X , 1000X
Input Coupling	DC, AC, and GND
DC Accuracy (average)	average >16 : ±(5% reading + 0.05 div) for ΔV
Vertical Sensitivity	5mV/div - 5V/div (at input)
Vertical Resolution (A/D)	8 bits
Max Input Voltage	400V (DC + AC peak, 1MΩ input impedance, probe attenuation 10 : 1), CAT II
Trigger Type	Edge, and Video
Trigger Mode	Auto, Normal, and Single
Trigger Level	±6 divisions from screen center
Acquisition Mode	Sample, Peak Detect, and Average
DC Gain Accuracy	±3%
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty
Waveform Storage	4 waveforms
Communication Interface	mini-USB, mini-RS232
Power Supply	100V-240V AC, 50/60Hz
Li-ion Battery	7.4V, 6 hours' operation
Dimensions (W x H x D)	115 x 180 x 40 (mm)
Device Weight	645.00 g

+ Multimeter Specifications

Full Scale Reading	3 ³ / ₄ digits (max 4000 count)	Diode	0V - 1.5V
Input Impedance	10 MΩ	On / Off Test	<50 (± 30) beeping
Voltage	VDC : 400mV, 4V, 40V, 400V, 1000V : ±(1% ± 1 digit); max input : DC 1000V VAC : 4V, 40V, 400V : ±(1% ± 3 digits), 750V : ±(2% ± 3 digits); Frequency : 40Hz - 400Hz; max input : AC 750V (virtual value)		
Current	DC : 40mA, 400mA : ±(1.5% ± 1 digit), 10A : ±(3% ± 3 digits) AC : 40mA : ±(1.5% ± 3 digits), 400mA : ±(2% ± 1 digit), 10A : ±(5% ± 3 digits)		
Impedance	400Ω : ±(1% ± 3 digits), 40KΩ - 4MΩ : ±(1% ± 1 digit), 40MΩ : ±(1.5% ± 3 digits)		
Capacitance	51.2nF - 100uF : ±(3% ± 3 digits)		

Specifications subject to change without prior notice.

+ Application

electronic circuit debugging education and training circuit testing design and manufacture
automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.



HDS1022M-N

Handheld Digital Storage Oscilloscope



- + 2 in 1 (DSO + Multimeter)
- + Auto-scale function
- + FFT function
- + 20 group automatic measurement options
- + Bandwidth : 20MHz
- + USB data transmission supported
- + Rechargeable Li-ion battery (6 hours' backup)
- + Waveform record and replay
- + Multimeter newly supported SCPI

+ Performance Specifications

Model	HDS1022M-N
Bandwidth	20MHz
Sample Rate	100MS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2.5 - 5
Rise Time (at input, typical)	≤ 17.5ns
Display	3.7" color TFT display (640 x 480 pixels)
Channel	dual
Input Impedance	1MΩ ± 2%, in parallel with 20pF ± 5pF
Record Length	6K points
Interpolation	sin(x)/x
Probe Attenuation Factor	1X , 10X , 100X , 1000X
Input Coupling	DC, AC, and GND
DC Accuracy (average)	average > 16 : ±(5% reading + 0.05 div) for ΔV
Vertical Sensitivity	5mV/div - 5V/div (at input)
Vertical Resolution (A/D)	8 bits
Max Input Voltage	400V (DC + AC peak, 1MΩ input impedance, probe attenuation 10 : 1), CAT II
Trigger Type	Edge, Video, and Alternate
Trigger Mode	Auto, Normal, and Single
Trigger Level	±6 divisions from screen center
Acquisition Mode	Sample, Peak Detect, and Average
DC Gain Accuracy	±3%
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty

Model	HDS1022M-N	
Waveform Math	+, -, *, /, invert, FFT	
Waveform Storage	4 waveforms	
Lissajous Figure	Bandwidth	full bandwidth
	Phase Difference	± 3degrees
Communication Interface	USB	
Power Supply	100V-240V AC, 50/60Hz	
Li-ion Battery	7.4V, 6 hours' operation	
Dimensions (W x H x D)	115 x 180 x 40 (mm)	
Device Weight	645.00 g	

+ Multimeter Specifications

Full Scale Reading	3 ³ / ₄ digits (max 4000 count)	Diode	0V - 1.5V
Input Impedance	10 MΩ	On / Off Test	<50 (± 30) beeping
Voltage	VDC : 400mV, 4V, 40V, 400V, 1000V : ±(1% ± 1 digit); max input : DC 1000V VAC : 4V, 40V, 400V : ±(1% ± 3 digits), 750V : ±(2% ± 3 digits); Frequency : 40Hz - 400Hz; max input : AC 750V (virtual value)		
Current	DC : 40mA, 400mA : ±(1.5% ± 1 digit), 10A : ±(3% ± 3 digits) AC : 40mA : ±(1.5% ± 3 digits), 400mA : ±(2% ± 1 digit), 10A : ±(5% ± 3 digits)		
Impedance	400Ω : ±(1% ± 3 digits), 40KΩ - 4MΩ : ±(1% ± 1 digit), 40MΩ : ±(1.5% ± 3 digits)		
Capacitance	51.2nF - 100uF : ±(3% ± 3 digits)		

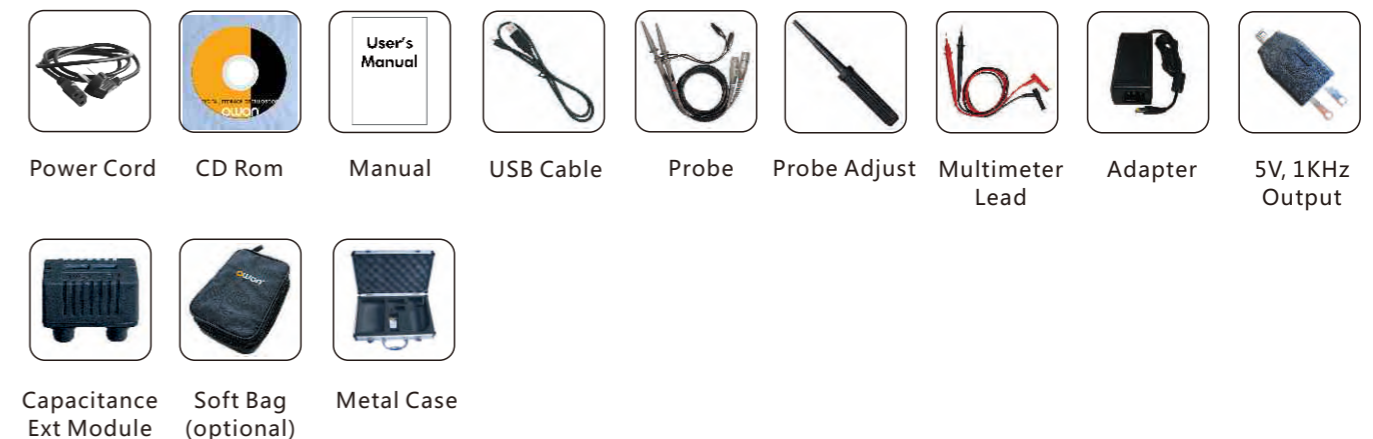
Specifications subject to change without prior notice.

+ Application

electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

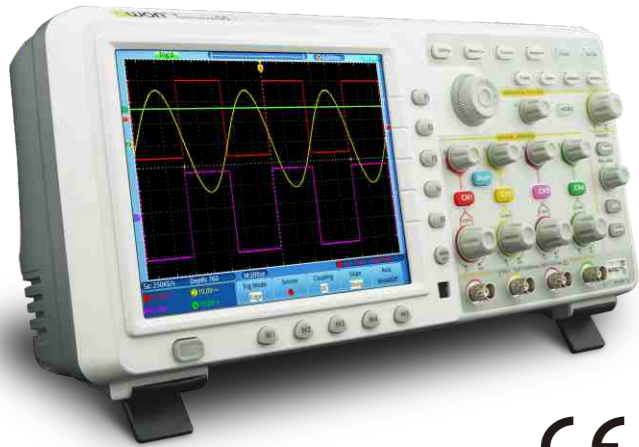
+ Accessories

The accessories subject to final delivery.



TOUCH 4-CH
TDS Series

Touch Screen Digital Storage Oscilloscope



- + 100MHz bandwidth, 1GS/s realtime sample rate
- + 7.6M record length
- + 50,000 wfms/s waveform capture rate
- + waveform zooming (horizontal / vertical), and saving
- + FFT points (length, and resolution variable)
- + multi-window extension
- + 8 inch 800 x 600 pixels high resolution LCD
- + multi- communication interface : USB, VGA, and LAN
- + LabVIEW supported

+ Performance Specifications

Model	TDS7104
Bandwidth	100MHz
Channel	4
Sample Rate	1GS/s
Waveform Capture Rate	50,000 wfms/s
Display	8" color LCD
Input Coupling	DC, AC, and GND
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF; 50Ω ± 1%
Probe Attenuation Factor	1X, 10X, 100X, 1000X
Max Input Voltage	1MΩ input impedance : 400V (DC + AC peak) ; 50Ω input impedance : 5V (DC + AC peak)
Channel Isolation	50Hz : 100 : 1 ; 10MHz : 40 : 1
Interpolation	sin(x)/x
Record Length	7.6M
Horizontal Scale (s/div)	2ns/div - 100s/div, step by 1 - 2 - 5
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns), Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)
Vertical Resolution (A/D)	8 bits (4 channels simultaneously)
Vertical Sensitivity	2mV/div - 10V/div (at input)
Analog Bandwidth	100MHz
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)
Rise Time	≤3.5ns

Model	TDS7104	
DC Accuracy	±3%	
Trigger Type	Edge, Pulse, Video, and Slope	
Trigger Mode	Auto, Normal, and Single	
Trigger Level Range	±6 division from the screen center	
Trigger Level Accuracy (typical)	±0.3 division	
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty	
Waveform Math	+, -, *, /, FFT	
Waveform Storage	4 reference waveforms	
Lissajous Figure	Bandwidth	full Bandwidth
	Phase Difference	±3 degrees
Cursor Measurement	ΔV, and ΔT between cursors	
Communication Port	USB host, USB device, VGA (optional), and LAN	
Power Supply	100 - 240 V AC, 50/60Hz, CAT II	
Dimension (W x H x D)	380 x 180 x 115 (mm)	
Device Weight	1.50 kg	

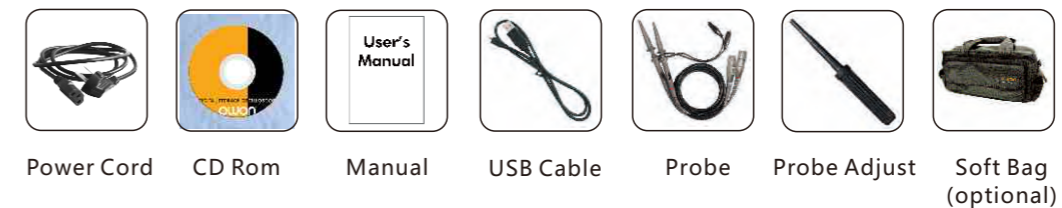
Specifications subject to change without prior notice.

+ Application

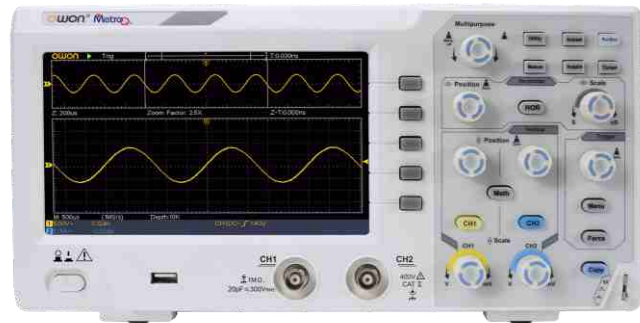
electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.

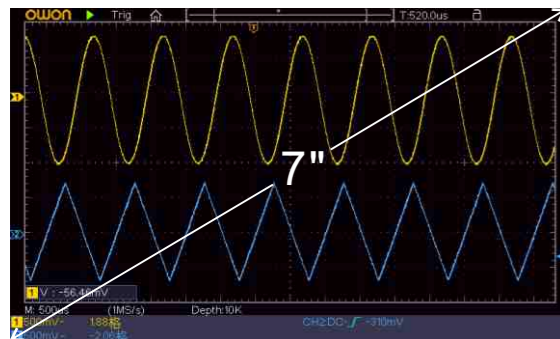


SDS1000 Series super- economical type digital storage oscilloscope



- + Bandwidth : 20MHz-100MHz
- + 2-Channel
- + Sample rate : 100MS/s - 1GS/s
- + Ultra-thin body
- + 7 inch high resolution LCD
- + SCPI, and LabVIEW supported

7" high resolution LCD

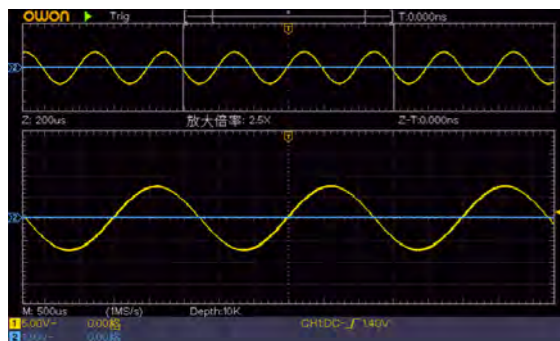


ultra-thin device body, assures super portability

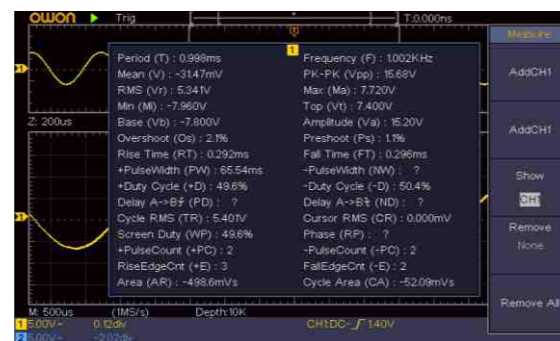
sided power socket better suit for industrial environment measurement



windows extension



snapshot



+ Performance Specifications

Model	SDS1022	SDS1052	SDS1102
Bandwidth	20MHz	50MHz	100MHz
Sample Rate	100MS/s	500MS/s	1GS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	2ns/div - 100s/div, step by 1 - 2 - 5	
Rise Time (at input, typical)	≤17.5ns	≤7ns	≤3.5ns
Channel	2		
Display	7" color LCD, 800 x 480 pixels		
Input Impedance	1MΩ ± 2%, in parallel with 20pF ± 5pF		

Model	SDS1022	SDS1052	SDS1102
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1		
Max Input Voltage	400V (PK - PK) (DC+AC, PK - PK)		
DC Gain Accuracy	±3%		
Record Length	10K		
DC Accuracy (average)	Average ≥ 16 : ±(3% reading + 0.05 div) for ΔV		
Probe Attenuation Factor	1X, 10X, 100X, 1000X		
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)		
Sample Rate / Relay Time Accuracy	±100ppm		
Interpolation	sin (x) / x		
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm x reading + 0.6ns), Average > 16 : ±(1 interval time + 100ppm x reading + 0.4ns)		
Input Coupling	DC, AC, and GND		
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)		
Vertical Sensitivity	5mV/div - 5V/div (at input)		
Trigger Type	Edge, Video		
Trigger Mode	Auto, Normal, and Single		
Trigger Level	±5 divisions from screen center		
Line / Field Frequency (video)	NTSC, PAL and SECAM standard		
Cursor Measurement	ΔV, and ΔT between cursors		
Automatic Measurement	Vpp, Vavg, RMS, Frequency, Period, Vmax, Vmin, Vtop, Vbase, Width, Overshoot, Pre-shoot, Rise time, Fall time, +Width, -Width, +Duty, -Duty, Delay A→B, Delay A→B		
Waveform Math	+, -, x, ÷, invert, FFT		
Waveform Storage	16 waveforms		
Lissajous Figure	Bandwidth	full bandwidth	
	Phase Difference	±3 degrees	
Communication Interface	USB host, USB device		
Frequency Counter	available		
Power Supply	100V - 240V AC, 50/60Hz, CAT II		
Power Consumption	< 15W		
Fuse	2A, T class, 250V		
Dimension (W x H x D)	301 x 152 x 70 mm		
Device Weight	1.10 kg		

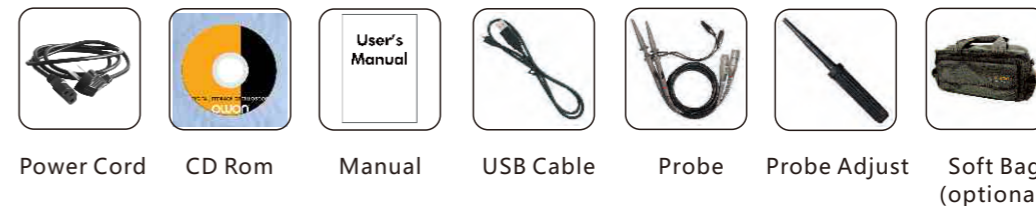
Specifications subject to change without prior notice.

+ Application

- electronic circuit debugging
- education and training
- circuit testing
- design and manufacture
- automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.



XDS Series your powerful n-in-1 on-site measurement station



12 bits
high resolution ADC



Super Performance

- + 12-bit high resolution ADC, restoring the waveform detail fully
- + 40M record length, and 75,000 wfms/s waveform refresh rate
- + low background noise, vertical sensitivity in 1 mV/div - 10 V/div
- + multi-trigger, and bus decoding function
- + SCPI, and LabVIEW supported

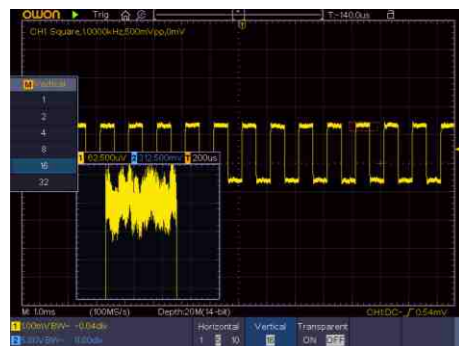
Creative New Look

- + ultra-thin body-design, less space accommodation
- + multi-interface integration - USB host, USB device, USB port for PictBridge, LAN, AUX, and more
- + VGA port - better solution for video expansion, and teaching demonstration
- + 8 inch 800 x 600 high resolution LCD
- + optional multi-point touch screen, more user-friendly operation experience

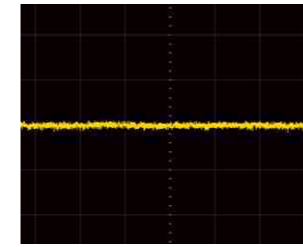
n-in-1

functions as data logger, and multimeter with data logging function, and dual-channel 25MHz arbitrary waveform generator, furthermore, battery pack, and WiFi module supported

- XDS series introduce 12 bits hardware ADC, the precision is 16 times against other oscilloscope on market. Equipping with OWON's original magnifier function, it can observe the signal low down to 31.25μV/div.



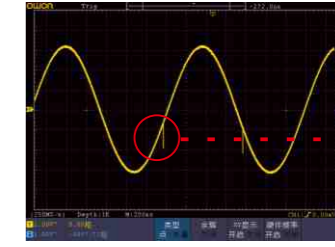
2. Xvisual platform - restore the waveform detail fully



low background noise

M Length
1000
10K
100K
1M
10M
20M
40M

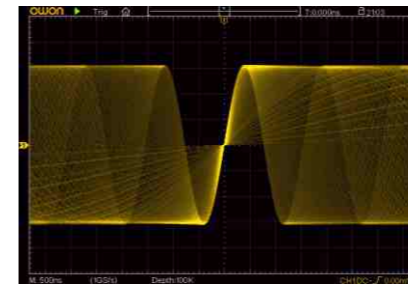
40M record length



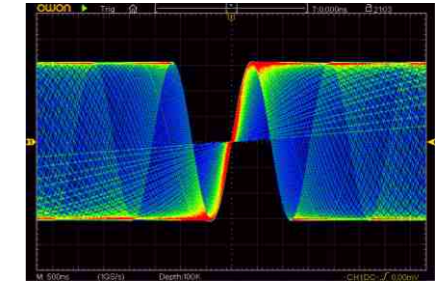
and 75,000 wfms/s refresh rate, easily capturing exceptional, and low probability events



3. multi-level grayscale, and color temperature display



within certain unit time, more frequent one waveform pixel appears, more vivid it is



the frequency of waveform reflecting in color temperature value, larger the value is, more frequent the waveform appears

4. multi-trigger supported - Logic, Time-out, I²C, SPI, RS232, Runt, Windows, Nth Edge, and CAN

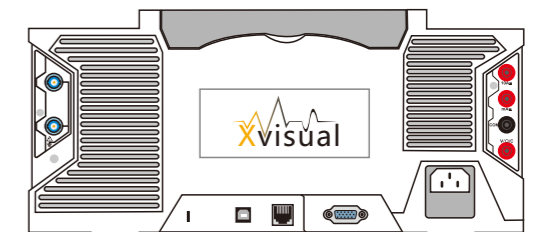
5. serial bus coding available in I2C, SPI, RS232, and CAN

M Bus Type
RS232
I2C
SPI
CAN

M Single
Edge
Video
Pulse
Slope
Runt
Windows
Timeout
Nth Edge

6. built-in multimeter module, with auto-scale, and data logging function

7. built-in dual-channel 25MHz arbitrary waveform generator module, with sample rate of 125MS/s



8. its multi-point touchscreen improves operation efficiency considerably



9. optional battery makes floating measurements possible, advancing the operation convenience



XDS Series

your powerful n-in-1 on-site measurement station

+ Performance Specifications

Model	XDS3062A	XDS3102A
Bandwidth	60MHz	100MHz
Sample Rate	1GS/s	
Vertical Resolution (A/D)	12 bits	
Record Length	40M	
Waveform Refresh Rate	75,000 wfms/s	
Horizontal Scale	2ns/div - 1000s/div, step by 1 - 2 - 5	
Rise Time (at input, typical)	≤5.8ns	≤3.5ns
Channel	2+1 (external)	
Display	8" color LCD, 800 x 600 pixels	
Input Impedance	1MΩ ± 2 %, in parallel with 15pF ± 5pF	
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1	
Max Input Voltage	1MΩ ≤ 300Vrms; 50Ω ≤ 5Vrms	
DC Gain Accuracy	±1.5%	
DC Accuracy	average ≥ 16: ±(3% reading + 0.05 div) for ΔV	
Probe Attenuation Factor	0.001X - 1000X, step by 1 - 2 - 5	
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)	
Sample Rate / Relay Time Accuracy	±1ppm	
Interpolation	sin(x)/x, x	
Interval (ΔT) Accuracy (fullbandwidth)	Single: ±(1 interval time + 1ppm x reading + 0.6ns); Average > 16: ±(1 interval time + 1ppm x reading + 0.4ns)	
Input Coupling	DC, AC, and GND	
Vertical Sensitivity	1mV/div - 10V/div (at input)	
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I ² C, SPI, RS232, and CAN	
Bus Decoding	I ² C, SPI, RS232, and CAN	
Trigger Mode	Auto, Normal, and Single	
Vertical Range	±2V (1mv/div - 50mv/div), ±20V (100mv/div - 1V/div), ±200V (2V/div - 10V/div)	
Line / Field Frequency (video)	NTSC, PAL and SECAM standard	
Cursor Measurement	ΔV, and ΔT between cursors, ΔV and ΔT between cursors, and auto- cursors	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Duty Cycle, Delay A→B, Delay A→B, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count	
Waveform Math	+, -, *, /, FFT	
Waveform Storage	100 waveforms	
Lissajou's Figure	Bandwidth	full bandwidth
	Phase Difference	±3 degrees
Communication Interface	USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA	
Frequency Counter	available	
Power Supply	100 - 240 V AC, 50/60Hz, CAT II	
Power Consumption	< 15W	
Fuse	2A, T class, 250V	
Battery (optional)	3.7V, 13200mAh	
Dimension (W x H x D)	340 x 177 x 90 (mm)	
Device Weight	2.60 kg	

+ Multimeter Specifications

Full Scale Reading	3¼ digits (max 4000 count)	Diode	0V - 1.5V
Input Impedance	10MΩ	Continuity Test	<50 (±30) beeping
Capacitance	51.2nF - 100uF: ±(3% ± 3 digits)		
Voltage	VDC: 400mV, 4V, 400V: ±(1 ± 1 digit); max input: DC 1000V VAC: 4V, 40V, 400V: ±(1 ± 3 digits); frequency: 40Hz - 400Hz; max input: AC 400V (virtual value)		
Current	DC: 40mA, 400mA: ±(1.5% ± 1 digit); 10A: ±(3% ± 3 digits) AC: 40mA: ±(1.5% ± 3 digits), 400mA: ±(2% ± 1 digit), 10A: ±(3% ± 3 digits)		
Impedance	400Ω: ±(1% ± 3 digits), 4KΩ - 40MΩ: ±(1% ± 1 digit)		

+ Arb Waveform Generator Specifications

Max Frequency Output	25MHz
Sample Rate	125MS/s
Channel	available in 1-ch, or 2-ch
Vertical Resolution	14 bits
Amplitude Range	2mVpp - 6Vpp
Waveform Length	8K
Standard Waveform	Sine, Square, Pulse, and Ramp

+ Decoding Kit

DEC	RS232 / SPI / IIC
CAN	CAN decoding

+ Module / Function

VGA + AV port	√
Touch Screen	√

Specifications subject to change without prior notice.

+ Application

electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.



mobile app accessible via scanning QR code

VDS Series PC Oscilloscope



- + 25MHz bandwidth, and max 1GS/s real-time sample rate
- + Max 10M record length
- + Friendly UI : FFT, or X-Y, and waveform 2 views displayed on the same screen
- + Multi-trigger option : edge, video, slope, pulse, and alternate
- + USB isolation - less signal interference, more PC protection
- + USB bus powering, and LAN remote control (optional)
- + Ultra-thin body design, easy portability
- + SCPI supported

+ Performance Specifications

Model	VDS1022I	VDS1022
Bandwidth	25MHz	
Channel	2+1 (multi)	
Sample Rate	100MS/s	1GS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	
Rise Time	≤14ns	
Record Length	5K	
Input Coupling	DC, AC, and GND	
Input Impedance	1MΩ ± 2%, in parallel with 10pF ± 5pF	
Channel Isolation	50Hz : 100 : 1 ; 10MHz : 40 : 1	
Max Input Voltage	400V (DC + AC peak)	40V (DC + AC peak)
DC Gain Accuracy	±3%	
DC Accuracy	Average ≥ 16 : ±(3% reading + 0.05 div) for ΔT	
Probe Attenuation Factor	1X, 10X, 100X, 1000X	
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)	
Sample Rate / Relay Time Accuracy	150ps	
Interpolation	sin(x)/x	
Interval (ΔT) Accuracy (full bandwidth)	Single : ± (1 interval time + 100ppm × reading + 0.6ns), Average > 16 : ±(1 interval time + 100ppm × reading + 0.4ns)	
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)	

Model	VDS1022I	VDS1022
Vertical Sensitivity	2mV/div - 5V/div	
Trigger Type	Edge, Pulse, Video, Slope, and Alternate	
Trigger Mode	Auto, Normal, and Single	
Trigger Level	±5 divisions from screen center	
Acquisition Mode	Sample, Peak Detect, and Average	
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard	
Cursor Measurement	ΔV, and ΔT between cursors	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty	
Waveform Math	+, -, *, /, invert, FFT	
Lissajous Figure	Bandwidth	full bandwidth
	Phase Difference	±3 degrees
Communication Interface	USB2.0 (isolation)	USB2.0
Multi-function Interface	Signal Type	synchronized input / output, Pass / Fail, external trigger input
	Level Standard	TTL
Power Supply	5.0V/500mA	
Power Consumption	≤2.5W	
Dimensions (W x H x D)	170 x 120 x 18 (mm)	
Device Weight	0.26 kg	

Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



Probe Probe Adjust Power Cord* CD Rom Manual USB Cable Adapter* Silicon Gel Case Soft Bag (optional)

* Power cord and adapter only available for models with LAN port.

Wave Rambler

Pen-type PC Oscilloscope



- + 25MHz bandwidth
- + 100MS/s sample rate
- + 5K record length
- + FFT function
- + human engineering design
- + multi- action mode via creative trackball
- + multi- trigger option : edge, slope, and pulse
- + 5mV micro signal supported
- + USB bus powering, and optional USB isolated function
- + easy portability, pocket accommodated



The full DSO in your pocket

Pen-type design with easy portability, the ideal solution for on-site measurement.

Designed to be easily- disassembled

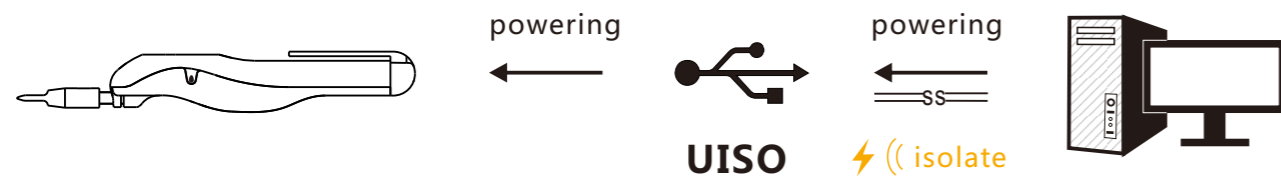
Special metal material made probe- tip assures durable lifetime.



	The running/ stopping of Wave Rambler, is under the control of trackball.
	The zero voltage position, horizontal trigger position, and voltage base / time base could be adjusted by rolling the trackball, which makes the device-operation more comfortable, and convenient.
	The waterdrop-shape button brings you into 4 control options - the setting of trackball function, single trigger, force trigger, and autoset.

UISO function

Creative USB isolation function fulfills direct device- powering via USB port, and supports floating measurement (isolation voltage upto 1000V), making the operation more user-friendly, assuring safer T&M environment, and decreasing the interference to micro signal- measuring to the minimum.



+ Performance Specifications

Model	RDS1021	RDS1021I
Bandwidth	25MHz	
Sample Rate	100MS/s	
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	
Rise Time	≤14ns	
Record Length	5K	
Input Coupling	DC, AC, and GND	
Input Impedance	10MΩ±2% (X10), 1MΩ±2% (X1)	
Input Capacitance	20pF±5pF	
Max Input Voltage	50V (DC + AC peak)	400V (DC + AC peak)
DC Gain Accuracy	±3%	
DC Accuracy (average)	average≥16 : ±(3% reading + 0.05 div) for ΔV	
Analog Bandwidth	25MHz	
Probe Attenuation Factor	1X, 10X	
LF Respond (AC,-3dB)	≥10Hz	
Interpolation	sin(x)/x	
Displacement	±10 divisions	
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns), Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)	
Vertical Resolution (A/D)	8 bits	
Vertical Sensitivity	5mV/div - 5V/div	
Trigger Type	Edge, Pulse, and Slope	
Trigger Mode	Auto, Normal, and Single	
Trigger Level	±5 divisions from screen center	
Acquisition Mode	Sample, Peak Detect, and Average	
Cursor Measurement	ΔV and ΔT between cursors	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty	
Waveform Math	FFT	
Communication Interface	USB2.0	
Dimension (W x H x D)	150 x 20 x 18 (mm)	
Device Weight	0.27 kg	

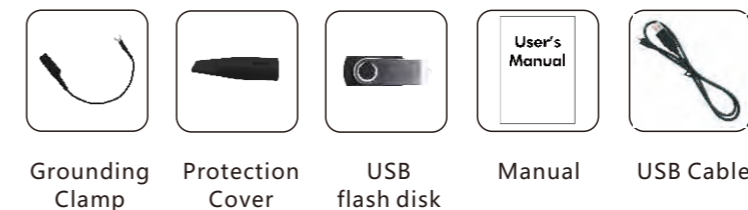
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



B35T Bluetooth Digital Multimeter

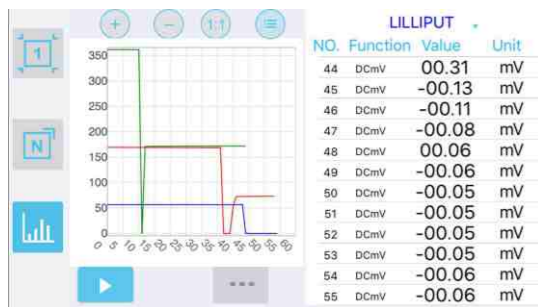


CAT III 1000V CE

- + function as 3 in 1 : datalogger + multimeter + temperature meter
- + multi-connection (more than one device) supported via mobile app
- + the change trend analysis accessible via special chart mode
- + voice warning supported, which assures measurement safety
- + smart voice-reading accessible
- + 6000 - count full scale reading
- + larger display, easier data-reading; simulated bar chart
- + true RMS value available
- + Bluetooth 4.0 version
- supports mobile device with Android 4.3 or above / iOS 7.0 or above OS, and equipped with ble 4.0 module

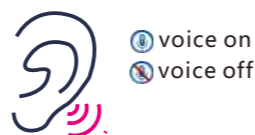
functioning as multimeter + datalogger

the measured data always updated, and auto- recorded to mobile device, saving labor to do on-site records; the recording duration, and sampling duration could be customized, accessible in chart mode, facilitating comparison analysis between several multimeters



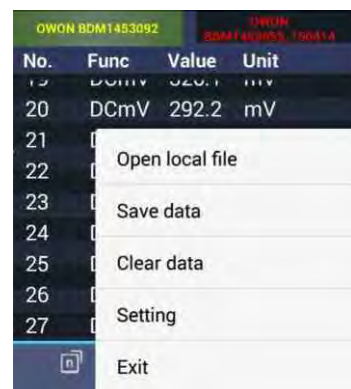
remote control supported

the function activated after TTS voice pack installed, which frees the eye-watch, making on-site measurement more comfortable



data- saving, recalling, and comparatively analyzing

CSV format data export supported, the history data could be recalled for comparison analysis; with the assistance of chart mode, the measured result more visualized, easier for decision- making



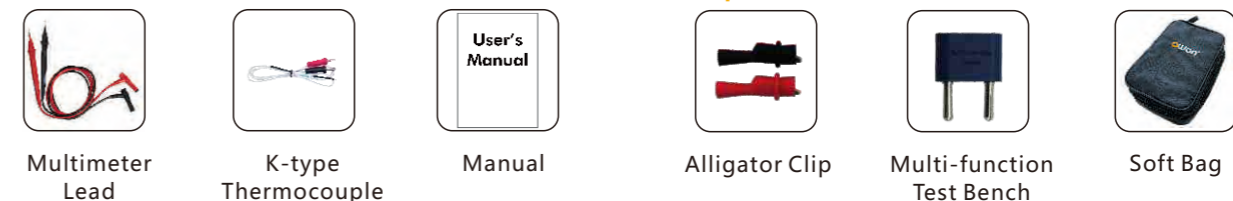
+ Performance Specifications

Model	B35T			
	Measurement Range	Resolution	Accuracy	
DC Voltage	mV	60.00mV / 600.0mV	0.01mV	±(0.5%+2-digit)
	V	60.00mV / 600.0mV / 6.000V / 60.00V / 600.0V / 1000V	0.1mV / 0.1V	
AC Voltage	mV	60.00mV / 600.0mV	0.01mV	±(0.8%+2-digit)
	V	60.00mV / 600.0mV / 6.000V / 60.00V / 600.0V / 750V	1mV / 0.1V	±(0.8%+2-digit) / ±(1%+3-digit)
DC Current	µA	600.0µA	0.1µA	±(0.8%+2-digit)
	mA	600.0µA / 6.000mA / 60.00mA / 600.0mA / 6.000A	0.01mA	±(0.8%+2-digit)
	A	20.00A	1mA	±(1.2%+3-digit)
AC Current	µA	600.0µA	0.1µA	±(1%+3-digit)
	mA	600.0µA / 6.000mA / 60.00mA / 600.0mA / 6.000A	0.01mA	±(0.8%+2-digit)
	A	20.00A	1mA	±(2%+3-digit)
Resistance	600.0Ω / 6.000kΩ / 60.00kΩ / 600.0kΩ / 6.000MΩ / 10.00MΩ		0.1Ω	±(0.8%+2-digit)
	60.00MΩ		0.01MΩ	±(2%+3-digit)
Capacitance	40.00nF / 4.000µF / 40.00µF		0.01nF	±(2.5%+3-digit)
	400.0µF / 4000µF		0.1µF	±(3%+5-digit)
Frequency	9.999Hz / 99.99Hz / 999.9Hz / 9.999kHz / 99.99kHz / 999.9kHz / 9.999MHz		1mHz	±(0.8%+2-digit)
Duty Ratio	0.1% - 99.9% (typical value: Vrms = 1V, f = 1kHz)		0.1%	±(1.2%+3-digit)
	0.1% - 99.9% (≥1kHz)			±(2.5%+2-digit)
Temperature	(-50°C) - (+400°C)		1°C	±(2.5%+3-digit)
	(-58°F) - (+752°F)		1°F	±(4.5%+5-digit)

Display	6000 count	LCD Size	69mm x 52mm
Frequency Response	40Hz - 400Hz	Display Area	67 x 46 mm (effective area 66 x 45 mm)
Shift Rate	3 times / s	Battery	3V (1.5V x 2)
Simulated ChartShift Rate	30 times / s	Dimension (W x H x D)	85 x 185 x 30 (mm)
Input Impedance	10MΩ	Device Weight	0.32 kg
Auto-scale	√	Max / Min Value	√
Bluetooth Module	√	LCD Backlight	√
True RMS	√	Simulated Chart	√
Diode Test	√	Input Protection	√
Audion Test	√	Auto Power-off	√
On-off Warning	√	Low-battery Indicator	√
Data Hold	√	Relative Measurement	√

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



XDM3051 Bench-type Digital Multimeter



- + 4 inch 480 x 320 pixels high resolution LCD
- + resolutions up to 5 1/2 digits
- + reading rates up to 150 readings/s
- + true RMS AC voltage / current measurement
- + dual line display supported
- + the change trend analysis accessible via special chart mode
- + SCPI supported - remote control, and data-sharing possible via LAN, USB, RS232 port, and WiFi*
- * WiFi module is optional
- + multi- IO interface: USB Device / Host, RS232, LAN, and ext. trigger input

Data-logger Mode

during recording the measurement value, possible to set the logging duration (min. 5ms), and length, then get access to chart or table result

● Trigger

No.	Function	Reading
63	DCV	6.966 V
64	DCV	6.966 V
65	DCV	6.966 V
66	DCV	3.747 V
67	DCV	3.747 V
68	DCV	3.747 V
69	DCV	1.821 V
70	DCV	1.821 V
71	DCV	1.821 V

-000.54 mVDC

Auto 200 mV

● Trigger

000.23 mVDC

Auto 200 mV

+ Performance Specifications

XDM3051	Measurement Range	Frequency Range	Accuracy: 1 Year ± (% of reading + % of range)
DC Voltage	200mV, 2V, 20V, 200V, 1000V	/	0.015 ± 0.004
True RMS AC Voltage	200mV, 2V, 20V, 200V, 750V	20Hz - 45Hz	1.5 + 0.10
		45Hz - 20kHz	0.2 + 0.05
		20kHz - 50kHz	1.0 + 0.05
		50kHz - 100 kHz	3.0 + 0.05
DC Current	200.000 μA, 2.00000 mA, 20.0000 mA, 200.000 mA, 2.00000 A, 10.0000 A	/	0.055 + 0.005
			0.055 + 0.005
			0.095 + 0.020
			0.070 + 0.008
			0.170 + 0.020
True RMS AC Current	20.0000 mA, 200.000 mA, 2.00000 A, 10.0000 A	20Hz - 45Hz, 45Hz - 2kHz, 2kHz - 10kHz	1.5 + 0.10
			0.50 + 0.10
			2.50 + 0.20
			0.250 + 0.010

XDM3051	Measurement Range	Frequency Range	Accuracy: 1 Year ± (% of reading + % of range)
Resistance	200.000 Ω	/	0.030 + 0.005
	2.00000 kΩ		0.020 + 0.003
	20.0000 kΩ		0.020 + 0.003
	200.000 kΩ		0.020 + 0.003
	2.00000 MΩ		0.040 + 0.004
	10.0000 MΩ		0.250 + 0.003
	100.000 MΩ		1.75 + 0.004
Diode Test	2.0000 V	/	0.05 + 0.01
Continuity	2000Ω	/	0.05+0.01
Frequency Period	200 mV - 750 V	20 Hz - 2 kHz	0.01 + 0.003
		2 kHz - 20 kHz	0.01 + 0.003
		20 kHz - 200 kHz	0.01 + 0.003
		200 kHz - 1 MHz	0.01 + 0.006
	20 mA - 10 A	20Hz-2kHz	0.01 + 0.003
		2 kHz - 10 kHz	0.01 + 0.003
Test Current			
Capacitance	2.000 nF	200 nA	3 + 1.0
	20.00 nF	200 nA	1 + 0.5
	200.0 nF	2 μA	1 + 0.5
	2.000 μF	10 μA	1 + 0.5
	200 μF	100 μA	1 + 0.5
10000 μF	1 mA	2 + 0.5	
Temperature	temperature sensors under 2 categories supported - thermocouple (ITS-90 conversion between B / E / J / K / N / R / S / T type), and thermal resistance (RTD sensor conversion between Pt100 and Pt385 type)		
Miscellaneous	barmeter bar charts, trend chart Vavg, Vmax, Vmin standard deviation DB / DBm Pass / Fail		
Data-logger Function			
Logging Duration	5ms		
Logging Length	1M points		
General			
Dimension (W x H x D)	235 x 110 x 295 (mm)		
Device Weight	3.00 kg		

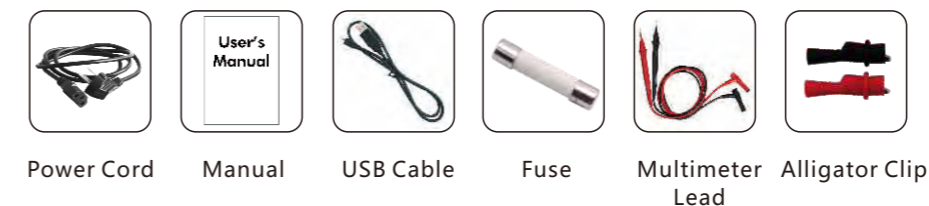
Specifications subject to change without prior notice.

+ Application

- electronic circuit debugging
- education and training
- circuit testing
- automobile maintenance and testing
- design and manufacture

+ Accessories

The accessories subject to final delivery.



XSA1015-TG

Spectrum Analyzer



- + Frequency Range from 9 kHz up to 1.5 GHz
- + 150dBm Displayed Average Noise Level
- + Phase Noise -82dBc/Hz @1Gz and offset at 10KHz
- + Total Amplitude Accuracy <1.5dB
- + 10Hz Minimum Resolution Bandwidth (RBW)
- + EMI Pre-compliance Test Kit
- + 1.5 GHz Tracking Generator Kit
- + 10.4 inches display

+ Performance Specifications

Model No.	XSA1015
Frequency Range	9kHz - 1.5GHz
Frequency Resolution	1Hz
Aging Rate	< 1ppm/year
SSB Phase Noise ($f_c = 1\text{GHz}$)	< -85dBc/Hz@10kHz offset < -100dBc/Hz@100kHz offset (typ.)
Resolution Bandwidth (-3dB)	10Hz - 500kHz, 1-10 step; 1MHz - 3MHz
Resolution Bandwidth (-6dB)	200Hz, 9kHz, 120KHz
Video Bandwidth (-3dB)	10Hz - 3MHz, 1-3-10 step
Displayed Average Noise Level (DANL)	PA on, RBW=VBW=100Hz, sample detector, trace average ≥ 50 , tracking generator off, normalized to 1Hz
100kHz - 1MHz	-150dBm (typ.)
1MHz - 5MHz	-150dBm (typ.)
5MHz - 1.5GHz	-148dBm (typ.)
Trace Detectors	positive-peak, negative-peak, sample, normal, RMS
Trace Functions	clear write, max hold, min hold, view, blank, average
Units of Level Axis	dBm, dBpW, dB μ W, W, dB μ V, dBmV, V
Level Measurement Uncertainty	< 1.5dB (nom.)
TG Frequency Range	100kHz - 1.5GHz
TG Output Level Range	-30dBm - 0dBm
TG Output Level Resolution	1dB
Interfaces	LAN, USB, VGA, phone jack

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



CD-Rom



Manual

XSA1036-TG

Spectrum Analyzer



- + Frequency Range from 9 kHz up to 3.6 GHz
- + 150dBm Displayed Average Noise Level
- + Phase Noise -82dBc/Hz @1Gz and offset at 10KHz
- + Total Amplitude Accuracy <1.5dB
- + 10Hz Minimum Resolution Bandwidth (RBW)
- + EMI Pre-compliance Test Kit
- + 1.5 GHz Tracking Generator Kit
- + 10.4 inches display

+ Performance Specifications

Model No.	XSA1036-TG
Frequency Range	9kHz - 3.6GHz
Frequency Resolution	1Hz
Aging Rate	< 1ppm/year
SSB Phase Noise ($f_c = 1\text{GHz}$)	< -85dBc/Hz@10kHz offset < -100dBc/Hz@100kHz offset (typ.)
Resolution Bandwidth (-3dB)	10Hz - 500kHz, 1-10 step; 1MHz - 3MHz
Resolution Bandwidth (-6dB)	200Hz, 9kHz, 120KHz
Video Bandwidth (-3dB)	10Hz - 3MHz, 1-3-10 step
Displayed Average Noise Level (DANL)	PA on, RBW=VBW=100Hz, sample detector, trace average ≥ 50 , tracking generator off, normalized to 1Hz
100kHz - 1MHz	-150dBm (typ.)
1MHz - 1.5GHz	-150dBm (typ.)
1.5GHz - 3.6GHz	-148dBm (typ.)
Trace Detectors	positive-peak, negative-peak, sample, normal, RMS
Trace Functions	clear write, max hold, min hold, view, blank, average
Units of Level Axis	dBm, dBpW, dB μ W, W, dB μ V, dBmV, V
Level Measurement Uncertainty	< 1.5dB (nom.)
TG Frequency Range	100kHz - 1.5GHz
TG Output Level Range	-30dBm - 0dBm
TG Output Level Resolution	1dB
Interfaces	LAN, USB, VGA, phone jack

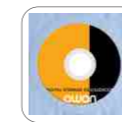
Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



CD-Rom



Manual

AG1011F Series

Single-channel Arbitrary Waveform Generator



- + Advanced DDS technology, 10MHz frequency output
- + 125MS/s sample rate, and 1μHz frequency resolution
- + Vertical Resolution : 14 bits, and 8K arb waveform length
- + Comprehensive waveform output : 5 basic waveforms, and 45 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, FM, PM, FSK, Sweep, and Burst
- + SCPI, and LabVIEW supported
- + 4" high resolution (480 x 320 pixels) LCD

+ could work with OWON SDS Series DSO smoothly

+ Performance Specifications

Model	AG1011F
Channel	single + trigger
Frequency Output	10MHz
Sample Rate	125MS/s
Vertical Resolution	14 bits

Waveform	
Standard Waveform	Sine, Square, Pulse, Ramp, and Noise
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 45 built-in waveforms, and user-defined arbitrary waveform

Frequency (resolution 1μHz)	
Sine	1μHz - 10MHz
Square	1μHz - 5MHz
Pulse	1μHz - 5MHz
Ramp	1μHz - 1MHz
Noise	5MHz (-3dB) (typical)
Arbitrary Waveform	1μHz - 5MHz

Amplitude	
Amplitude	1m Vpp - 12.5 Vpp (50Ω), 1m Vpp - 25 Vpp (high impedance)
Resolution	1m Vpp, or 4 digits
DC Offset Range (AD+DC)	±6.25V (50Ω), ±12.5V (high impedance)
DC Offset Range Resolution	1mV, or 4 digits
Load Impedance	50Ω (typical)

Model	AG1011F
Arbitrary Waveform	
Wave Length	2 pts to 8K pts
Sample Rate	125MS/s
Vertical Resolution	14 bits
Non-volatile Memory	64M byte

Modulation	
Modulation Waveform	AM, FM, PM, FSK, Sweep, and Burst
Modulation Frequency	2mHz to 20.00KHz (FSK 2mHz - 100KHz)

Power Amplifier Module (optional)			
Input Impedance	50 kΩ	Output Impedance	<2 Ω
Max Input Voltage	2.2Vpp	Gain	X10
Max Output Voltage	22Vpp	Offset	<7%
Output Slew Rate	10V/us	Bandwidth (at full power)	DC 100kHz
Max Output Power	10W		

Input / Output	
Display	4 inch (480 x 320 pixels) LCD
Type	external modulation input, external trigger input, external reference clock input
Communication Interface	USB device

Mechanical	
Dimension (W x H x D)	235 x 110 x 295 (mm)
Device Weight	3.00 kg

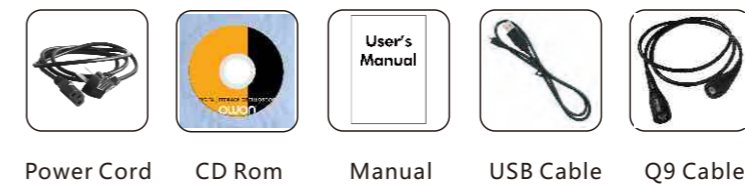
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



AG1022F

Dual-channel Arbitrary Waveform Generator



- + Advanced DDS technology, 25MHz frequency output
- + Up to 125MS/s sample rate, and 1μHz frequency resolution
- + Vertical Resolution : 14 bits, up to 1M arb waveform length
- + Comprehensive waveform output : 5 basic waveforms, and 45 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, FM, PM, FSK, PWM, Sweep, and Burst
- + High-accuracy frequency counter integrated, supported range 100mHz - 200MHz
- + SCPI, and LabVIEW supported
- + 4 inch high resolution (480 x 320 pixels) LCD
- + *could work with OWON SDS Series DSO smoothly*

+ Performance Specifications

Model	AG1022F
Channel	dual
Frequency Output	25MHz
Sample Rate	125MS/s
Vertical Resolution	14 bits

Waveform

Standard Waveform	Sine, Square, Pulse, Ramp, and Noise
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 45 built-in waveforms, and user-defined arbitrary waveform

Frequency (resolution 1μHz)

Sine	1μHz - 25MHz
Square	1μHz - 5MHz
Pulse	1μHz - 5MHz
Ramp	1μHz - 1MHz
Noise	25MHz (-3dB) (typical)
Arbitrary Waveform	1μHz - 10MHz

Amplitude

Amplitude	1m Vpp - 10 Vpp (50Ω), 1m Vpp - 20 Vpp (high impedance)
Resolution	1m Vpp or 4 digits
DC Offset Range (AD+DC)	±5V (50Ω), ±10V (high impedance)
DC Offset Range Resolution	1mV or 4 digits
Load Impedance	50Ω (typical)

Model	AG1022F
-------	---------

Arbitrary Waveform	
Wave Length	2 pts to 8K pts
Non-volatile Memory	64M byte

Modulation	
Modulation Waveform	AM, FM, PM, FSK, Sweep, and Burst
Modulation Frequency	2mHz to 20.00KHz (FSK 1μHz - 100KHz)

Counter	
Function	Frequency Period, +Width, -Width, +Duty, and -Duty
Frequency Range	100mHz - 200MHz
Frequency Resolution	6 digits

Power Amplifier Module (optional)			
Input Impedance	50 kΩ	Output Impedance	<2 Ω
Max Input Voltage	2.2Vpp	Gain	X10
Max Output Voltage	22Vpp	Offset	<7%
Output Slew Rate	10V/us	Bandwidth (at full power)	DC 100kHz
Max Output Power	10W		

Input / Output	
Display	4 inch (480 x 320 pixels) LCD
Type	counter external modulation input, external trigger input, external reference clock input / output
Communication Interface	USB host, and USB device, RS232 (option)

Mechanical	
Dimension (W x H x D)	235 x 110 x 295 (mm)
Device Weight	3.00 kg

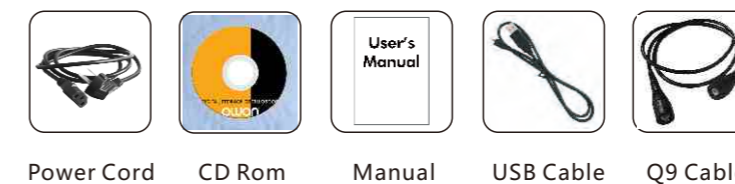
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



AG4151 Single-channel Arbitrary Waveform Generator



- + Advanced DDS technology, 150MHz frequency output
- + 400MS/s sample rate, and 1μHz frequency resolution
- + Vertical Resolution : 14 bits, up to 1M arb waveform length
- + Comprehensive waveform output : 5 basic waveforms, and 45 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, FM, PM, FSK, PWM, Sweep, and Burst
- + SCPI, and LabVIEW supported
- + 4 inch high resolution (480 x 320 pixels) LCD

+ Performance Specifications

Model	AG4151
Channel	single + trigger
Frequency Output	150MHz
Sample Rate	400MS/s
Vertical Resolution	14 bits

Waveform

Standard Waveform	Sine, Square, Pulse, Ramp, and Noise
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 45 built-in waveforms, and user-defined arbitrary waveform

Frequency (resolution 1μHz)

Sine	1μHz - 150MHz
Square	1μHz - 50MHz
Pulse	1μHz - 25MHz
Ramp	1μHz - 1MHz
Noise	50MHz (-3dB) (typical)
Arbitrary Waveform	1μHz - 10MHz

Amplitude

Amplitude	10m Vpp - 10 Vpp (50Ω), 20m Vpp - 20 Vpp (high impedance)
Resolution	1m Vpp or 4 digits
DC Offset Range (AD+DC)	±5V (50Ω), ±10V (high impedance)
DC Offset Range Resolution	1mV or 4 digits
Load Impedance	50Ω (typical)

Model	AG4151
Arbitrary Waveform	
Wave Length	2 pts to 1M pts
Sample Rate	200MS/s
Vertical Resolution	14 bits
Non-volatile Memory	64M byte
Modulation	
Modulation Waveform	AM, FM, PM, FSK, PWM, Sweep, and Burst
Modulation Frequency	2mHz to 20.00KHz (FSK 1μHz - 100KHz)
Input / Output	
Display	4 inch (480 x 320 pixels) LCD
Type	external modulation input, external trigger input / output, external reference clock input / output
Communication Interface	USB host, USB device, RS232, and LAN
Mechanical	
Dimension (W x H x D)	235 x 110 x 295 (mm)
Device Weight	3.00 kg

Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

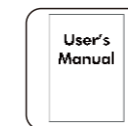
The accessories subject to final delivery.



Power Cord



CD Rom



Manual



USB Cable



Q9 Cable

DP3032

Programmable DC Power Supply



- + two independent controllable channels
- + Max output resolution : 1mV / 1mA
- + Low ripples / low noise : <math><300 \mu\text{Vrms} / 2 \text{ mVpp}</math>
- + Up to 100 group timers
- + Up to 10 group preset system configurations
- + Over-voltage / Over-current protection
- + Auto-cooling system
- + 3.9 inch high resolution (480 x 320 pixels) LCD
- + USB2.0, and RS232 serial port digital communication supported
- + SCPI, and LabVIEW supported

+ Display

Model	ODP3032
Display Type	3.9 inch colored LCD
Display Resolution	480 x 320 pixels
Display Color	65536 colors

+ Mechanical Specifications

Model	ODP3032
Dimension (W x H x D)	250 x 158 x 358 (mm)
Device Weight	10.50 kg

+ Performance Specifications

The specifications based upon the instrument having run for at least 30 minutes continuously, under the specified operating environment.

Model		ODP3032	
Channel		2 (independent)	Fixed 5V
DC Output Rating	Voltage	0- 30V (Independent / Parallel) 0 - 60V (Series) -30V - 30V (Plus-minus)	5V
	Current	0 - 3A (Independent / Series / Plus-minus), 0 - 6A (Parallel)	3A
Line Regulation	CV	$\leq 0.01\% + 3\text{mV}$	$\leq 3\text{mV}$
	CC	$\leq 0.1\% + 3\text{mA}$	/
Load Regulation	CV	$\leq 0.01\% + 3\text{mV}$	$\leq 0.1\% + 3\text{mV}$
	CC	$\leq 0.2\% + 3\text{mA}$	/
Noise and Ripple (20Hz - 7MHz)	CV	$\leq 300 \mu\text{Vrms} / 2 \text{ mVpp}$	
	CC	$\leq 3\text{mArms}$	/
Settings Resolution	Voltage	1mV	/
	Current	1mA	/
Settings Accuracy (25°C ± 5°C)	Voltage	$\leq 0.05\% + 3\text{mV}$	/
	Current	$\leq 0.1\% + 3\text{mA}$	/
Read Back Resolution	Voltage	1mV (< 10V), 10mV ($\geq 10\text{V}$)	/
	Current	1mA	/
Read Back Accuracy (25°C ± 5°C)	Voltage	$\leq 0.05\% + 3 \text{ digits}$	/
	Current	$\leq 0.1\% + 3 \text{ digits}$	/
Communication Interface			

Specifications subject to change without prior notice.

+ Application

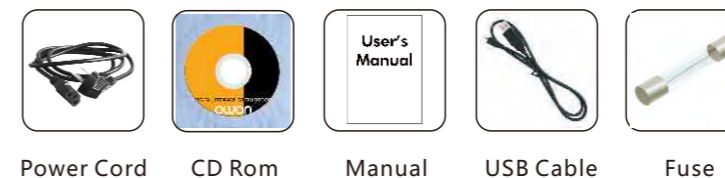
general detection in R&D laboratory
 automobile and electronic circuit test
 electronic components test, aging test
 to monitor battery charging curve

QC test
 power-supplying
 to monitor the real-time status of power system via remote control

industrial automation test
 education / teaching experimentation


+ Accessories

The accessories subject to final delivery.



Power Cord CD Rom Manual USB Cable Fuse

Current Probe

	Model		CP-05+			
	Test Range	1mA - 400A				
Resolution	1mA					
Bandwidth	DC - 200KHz (±3dB)					
Jaw Size	23mm (max)					
Auto Zero at Power-on	√					
Power Supply	9V 6F22 Battery					
Operating Temperature	0°C to 50°C					
Operating Humidity	15% to 70% RH					
AC Current	Range	AC 4A	AC 40A	AC 200A	AC 200A - 400A	
	Accuracy	±2.0%rdg±5-digit			±3.0%rdg±5-digit	
	Sensitivity	1mV/10mA	1mV/0.1A	1mV/1A		
DC Current	Range	DC 4A	DC 40A	DC 200A	DC 200 - 400A	
	Accuracy	±1.5%rdg±5-digit			±3.0%rdg±5-digit	
	Sensitivity	1mV/10mA	1mV/0.1A	1mV/1A		
Dimension (W x H x D)	180 x 30 x 44 (mm)					
Device Weight	about 200g					


Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Soft Bag

	Model		CP-07+			
	Test Range	400mA - 4A				
Resolution	0.1mA					
Bandwidth	DC - 1MHz (±3dB)					
Jaw Size	5mm (max)					
Auto Zero at Power-on	√					
Power Supply	9V 6F22 Battery					
Operating Temperature	0°C to 50°C					
Operating Humidity	15% to 70% RH					
DC Current	Range	DCA 400mA	DCA 4A			
	Accuracy	±1.5%rdg±5-digit				
	Sensitivity	1mV/1mA	1mV/10mA			
AC Current	Range	ACA 400mA	ACA 4A			
	Accuracy	±2.0%rdg±5-digit				
	Sensitivity	1mV/1mA	1mV/10mA			
Dimension (W x H x D)	215 x 36 x 58 (mm)					
Device Weight	about 200g					

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



BNC cable





Extension cord



Soft Bag

Oscilloscope Probe

	Model No		P6060	P6100	P6200
	Attenuation Ratio	1X or 10X		1X or 10X	1X or 10X
Bandwidth	1X : DC-6MHz	1X : DC-6MHz		1X : DC-6MHz	
	10X : DC-60MHz	10X : DC-100MHz		10X : DC-200MHz	
Input R	1MΩ/10MΩ		1MΩ/10MΩ		1MΩ/10MΩ
	1X : 85pF - 120pF	1X : 85pF - 120pF		1X : 85pF - 120pF	
Input C	10X : 18.5pF - 22.5pF		10X : 18.5pF - 22.5pF		10X : 18.5pF - 22.5pF
	1X : <300VDC + AC Vpp	1X : <300VDC + AC Vpp		1X : <300VDC + AC Vpp	
Max Input Voltage	10X : <600VDC + AC Vpp		10X : <600VDC + AC Vpp		10X : <600VDC + AC Vpp

	Model No		P4060	P4100	P4200	P4250
	Attenuation Ratio	100X		100X	100X	100X
Bandwidth	10X : DC-60MHz	10X : DC-100MHz		10X : DC-200MHz		10X : DC-250MHz
	100MΩ	100MΩ		100MΩ		100MΩ
Input C	100X : 18.5pF - 22.5pF		100X : 18.5pF - 22.5pF		100X : 18.5pF - 22.5pF	
	2KV DC + AC Vpp	2KV DC + AC Vpp		2KV DC + AC Vpp		2KV DC + AC Vpp



owon[®] MetroQ[®]