



New Arriving

CONTENTS

ADS3000A Series - 12 bits Multi-function Digital Oscilloscope	01
ADS800A Series - Digital Oscilloscope	03
ADS900A Series - 12 bits Multi-function Digital Oscilloscope	05
SDS3000 Series - Digital Oscilloscope	07
HDS2102A - Automotive Diagnostic Oscilloscope	09
XSA3000R Series - Real-Time Spectrum + Vector Network Analyzer	11
HSA2000 Series - Multifunction Handheld Spectrum Analyzer	13
OWH67D Series - 2CH High-Power Programmable DC Power Supply	15
OWH80/OWH80Q Series - Programmable DC Power Supply	17
ODP8000 Series - Programmable DC Power Supply	19
OEL1500/OEL3000 Series - Programmable DC Electronic load	21
HPC70 Series - Handheld Process Multimeter	23
HPC79A+ - Handheld Process Multimeter	25
HPC71 Series - Handheld Process Signal Generator	27
OD5000 Series - Active High Voltage Differential Probe	29
OD6000 Series - High-voltage Differential Probes	31
OC5000 Series - Current Probe	33
OC4000 Series - Current Probe	35
OC6000 Series - Current Probe	36
OC7000 Series - Current Probe	37
OIP3000 Series - Optically Isolated Probe	39

ABOUT **owon**[®]

Since 1990, Lilliput steps into the electronics product industry, its 1st product series is a mini color LCD.

Owned by Lilliput, OWON's product line was created to "Meet your best need" in the test and measurement equipment field.

Through 2 decades' of efforts, lilliput gradually grew to be a group corporation, covering 3 product lines mini color LCD, test and measurement equipment, and home energy management system.

OWON's products can be found in Asia, North America, Europe, South America, Oceania, and Africa, with global partners established in more than 80 countries/ regions.

Lilliput (OWON) spares no efforts to be one of top test and measurement equipment original equipment manufacturers in the world.





ADS3000A Series

12 bits Multi-function Digital Oscilloscope

Superior Performance

- Up to **500 MHz bandwidth** & **2.5 GSa/s** real-time sampling
- **12-bit ADC** – 16× higher resolution than standard 8-bit scopes
- **500 Mpts** deep memory, **500,000 wfms/s** refresh rate
- **1 M-point FFT** for precise frequency analysis
- 256-level grayscale & color persistence for vivid waveform display
- Rich trigger options: Edge, Video, Pulse Width, Logic, RS232/UART, I²C, SPI, CAN, LIN
- Built-in Bode plot & waveform cloning functions (AFG models)
- 50 Ω impedance matching for higher accuracy and reduced interference

Designed for Professionals

- Ultra-thin 10 cm profile - perfect for any workspace
- Vertical sensitivity: **500 μ V/div - 10 V/div**
- Time base: **500 ps/div - 1000 s/div**
- Type-C power supply & floating measurement support for field use
- Durable, precision locking mechanism ensures stable testing

Smart Android Platform

- Multi-touch **10.1-inch touchscreen** for intuitive control
- Built-in mic & speaker; supports mouse, keyboard, HDMI output, and LAN
- Easy file management with data viewing, editing & exporting
- Screen video recording for instant sharing
- Optional **Wi-Fi/Bluetooth module** supports FTP, network printing & mobile hotspot

+ Specifications

Model	ADS3102A	ADS3202A	ADS3352A	ADS3502A
Bandwidth (-3 dB)	100MHz	200MHz	350MHz	500MHz
Channel	2+EXT			
Sample Rate	2.5 GSa/s (single channel) 1.25 GSa/s (dual channel)			

Model	ADS3104A	ADS3204A	ADS3354A	ADS3504A
Bandwidth (-3 dB)	100MHz	200MHz	350MHz	500MHz
Channel	4 + EXT			
Sample Rate	2.5 GSa/s (single channel) 2.5 GSa/s (dual channel) 1.25 GSa/s (full channel)			

Acquire mode	Sample, Peak, High Res, Average, Segmentation	Record Length	100M
Waveform Refresh Rate	Max 500,000 wfms/s	Vertical Resolution	12-bit
Vertical sensitivity	500μV/div - 10 V/div	Relay time accuracy	±1 ppm (typical)
Sampling rate range	500ps/div - 1000s/div, step by 1-2-5		
DC Gain Accuracy	3%(≤1mV), 2%(2 mV), 1.5%(≥5 mV)		
Input Impedance	1 MΩ ± 2%, parallel with 15pF ± 5pF, 50Ω ± 2%		
Probe attenuation coefficient	1μX-1MX, step by 1-2-5, support custom		
Trigger type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth, Logic, RS232/UART, I2C, SPI CAN, LIN		
Bus Decoding	RS232 / UART, I2C, SPI, CAN, LIN		
Auto measurement	Period, Frequency, +Width, -Width, Rise Time, Fall Time, Scr Duty, +Duty,-Duty, Vavg, Vpp, VRMS, Overshoot, Vmax, Vmin, Vtop, CycRms, Vbase, Vamp, Preshoot, Std Dev, +Pulse Cnt, -Pulse Cnt, Rise Cnt, Fall Cnt, Area, Cyc Area, Delay(A↑-B↑), Delay(A↑-B↓), Delay(A↓-B↑), Delay(A↓-B↓), Phase(A↑-B↑), Phase(A↑-B↓), Phase(A↓-B↑), Phase(A↓-B↓), FRR(A↑-B↑), FRF(A↑-B↓), FFR(A↓-B↑), FFF(A↓-B↓), LRR(A↑-B↑), LRF(A↑-B↓), LFR(A↓-B↑), LFF(A↓-B↓)		
Waveform Math	+, -, *, /, &&, , ^, !, (, Tan(, Intg(, Diff(, Sqrt(, Lg(, Ln(, Exp(, Abs(, Sine(, CoSin(, User Defined Function, digital filter (low pass, high pass, band pass, band reject), FFT (Vrms, dBVrms, Radians, Degrees)		
Frequency counter	6-digit frequency counter ; Maximum frequency: maximum analog bandwidth of oscilloscope		
Voltmeter	Support DC, AC+DCrms, ACrms ;Resolution: 4 digits (ACV/DCV)		

Arb Waveform Generator (optional) Specification

Max frequency output	50MHz Dual	Sample rate	160 MSa/s
Vertical resolution	14 bits	Standard waveform	Sine, Square, Ramp, Pulse, Noise
Arbitrary waveform frequency	1 μHz - 10 MHz	Arbitrary waveform length	2-16K points
Arbitrary waveform	Exponential Rise/Fall, Sin(x)/x, Step Wave, and others total 28 built-in waveforms		
Amplitude	2mVpp - 10Vpp (high impedance), 1mVpp - 5Vpp (50 Ω)		
Modulation	AM, FM, PM, FSK, Sweep and Burst		

Bode Plot (need AFG function)

Start / End frequency	10 Hz ~ 25 MHz
Amplitude	2mV ~ 6V

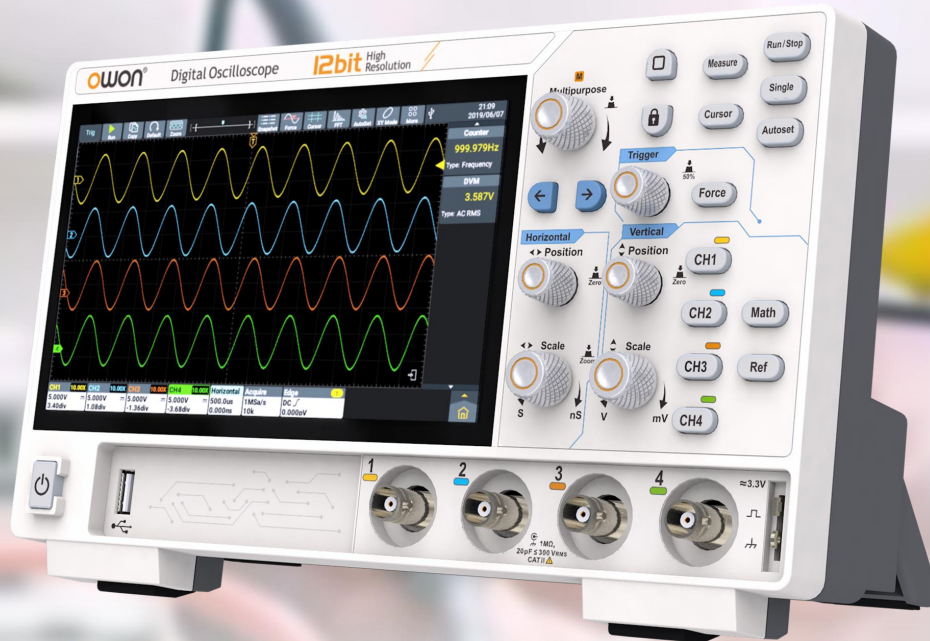
Other

Communication Interface	HDMI, USB device x1, USB Host x3, Trig Out (P/F), Type-C power supply*, LAN		
Display	10.1 inch (1024×600), LCD		
Power	100V – 240 VACRMS, 50/60 Hz, CAT II		
Dimension (W x H x D)	325mm x 209mm x 111.5mm	Weight (without package)	≈3.2kg

* Without generator:the adapter is required to support a handshake protocol of 12V/≥3A

Specifications subject to change without prior notice.

With generator: the adapter is required to support a handshake protocol of 12V/≥4A.



ADS800A Series

Digital Oscilloscope

Superior Performance

- **70 MHz - 200 MHz** bandwidth, **1.25 GSa/s** real-time sampling rate
- Built on OWON X-Vision III advanced oscilloscope architecture for lower noise, larger storage, and faster refresh rates
- **50 Mpts** storage depth, up to **700,000 wfms/s** waveform refresh rate
- Vertical sensitivity range: **200 μ V/div - 10 V/div**
- **1 M-point FFT** analysis ensures accurate frequency component display
- 256-level grayscale and color persistence enhance waveform visualization

Android-Based, Extensive Expandability

- Supports external devices such as mouse and keyboard for improved efficiency
- Equipped with **HDMI**, **USB Device**, **USB Host**, **Trig Out (P/F)**, and **LAN**, supporting Web Control and SCPI command tools
- Screen video recording for effortless documentation and sharing
- Optional **Wi-Fi/Bluetooth module** supports FTP, network printing, mobile hotspot, and more

Comprehensive Features

- Integrated with oscilloscope, frequency counter, voltmeter, and FFT spectrum analyzer
- Rich triggering functions: edge, video, pulse width, slope, under-amplitude, over-amplitude, timeout, nth edge, logic, and serial buses including RS232/UART, I²C, SPI, CAN, and LIN
- 2-channel decoding: UART, I²C, SPI, CAN, LIN
- Full-memory hardware measurement, math functions, enhanced FFT, and peak search
- Enhanced FFT and ZOOM capabilities for clearer waveform display and more precise cursor information
- Convenient measurement statistics with measurement indicators, cursor gating, and detailed measurement prompts

Human-Machine Interaction and Design

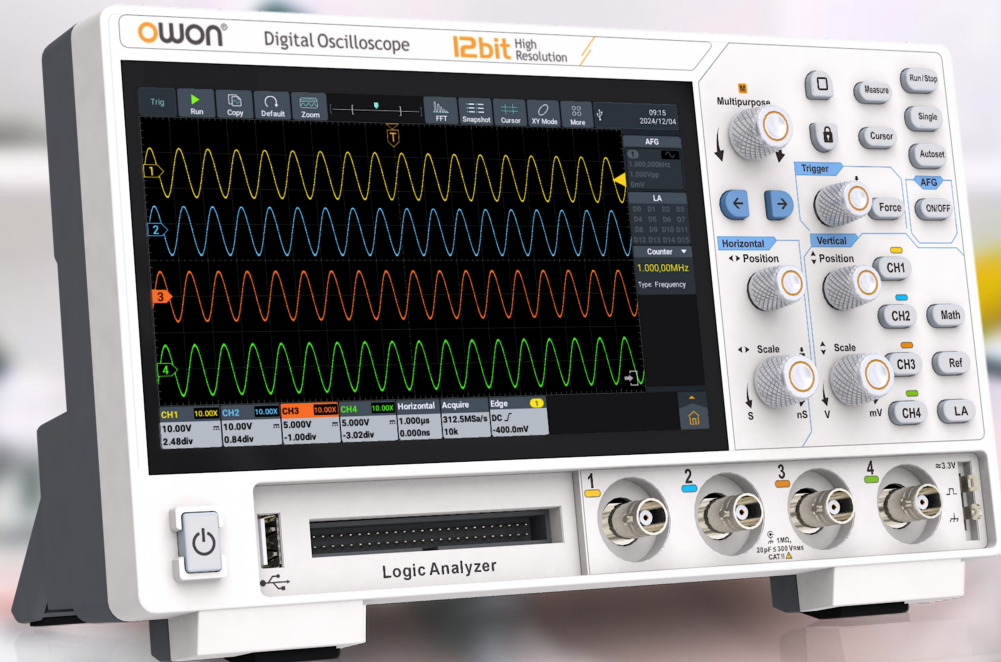
- Ultra-thin design saves valuable workspace
- **7-inch** multi-touch touchscreen for enhanced interactive experience
- **5000 mAh** large-capacity battery, providing around 2 hours of continuous operation
- Supports safe floating ground measurement, effectively isolating mains noise interference for more accurate small-signal measurements and improved data reliability

+ Specifications

Model	ADS802A	ADS812A	ADS822A	ADS804A	ADS814A	ADS824A
Bandwidth (-3 dB)	70MHz	100MHz	200MHz	70MHz	100MHz	200MHz
Channel	2			4		
Max. sample rate	Max. 1.25GSa/s					
Acquire mode	Sample, Peak, High Res, Average, Segmentation			DC Gain Accuracy	3% (≤1 mV) 2% (2 mV) 1.5% (≥5 mV)	
Max. waveform capture rate	Max. 700,000wfms/s			Max memory depth	50M	
Vertical Sensitivity Range	500μV/div - 10 V/div			Vertical resolution	12 bits	
Sampling rate range	1ns/div - 1000s/div, step by 1-2-5			Relay time accuracy	±25 ppm (typical)	
Input Impedance	1 MΩ±2%, parallel with 20 pF±5 pF					
Probe Attenuation Coefficient	1.00μX-1.00MX, step by 1-2-5, support custom					
Trigger type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth, Logic, RS232/UART, I2C, SPI CAN, LIN					
Bus decoding	RS232/UART、 I2C、 SPI、 CAN、 LIN					
Auto measurement	Period, Frequency, +Width, -Width, Rise Time, Fall Time, Scr Duty, +Duty,-Duty, Vavg, Vpp, VRMS, Overshoot, Vmax, Vmin, Vtop, CycRms, Vbase, Vamp, Preshoot, Std Dev, +Pulse Cnt, -Pulse Cnt, Rise Cnt, Fall Cnt, Area, Cyc Area, Delay(A↑-B↑), Delay(A↑-B↓), Delay(A↓-B↑), Delay(A↓-B↓), Phase(A↑-B↑), Phase(A↑-B↓), Phase(A↓-B↑), Phase(A↓-B↓), FRR(A↑-B↑), FRR(A↑-B↓), FRR(A↓-B↑), FRR(A↓-B↓), LRR(A↑-B↑), LRR(A↑-B↓), LRR(A↓-B↑), LRR(A↓-B↓)					
Waveform Math	+, -, *, /,& , , ^, ! , Intg, Diff, Sqrt, Function operation (Lg / Ln / Exp / Abs / Sine / Cosine / Tan), FFT, FFT rms, User Defined, digital filter (low pass, high pass, band pass, band reject)					
Frequency counter	6-digit frequency counter. 7-Maximum frequency: maximum analog bandwidth of oscilloscope					
Voltmeter	Support DC, AC+DCrms, ACrms. Resolution: 4 digits (ACV/DCV)					
Other						
Communication Interface	HDMI, USB device, USB Host, Trig Out(P/F), LAN					
Display	7 inch (1024×600), capacitive multi-touch screen					
Power supply interface	Type-C [1] ;Optional 12V/5000mAh built-in lithium battery					
Dimension (W x H x D)	260mm x 160mm x 78mm					
Weight	≈1.5kg (package excluded)					

[1] The external power bank must meet 12V/3A output.

Specifications subject to change without prior notice.



ADS900A Series

12 bits Multi-function Digital Oscilloscope

Superior Performance

- **125 MHz / 250 MHz** bandwidth, **2 GSa/s** real-time sampling rate
- Built on OWON X-Vision III advanced oscilloscope architecture for lower noise, larger storage, and faster refresh rates
- **100 Mpts** storage depth, up to **700,000 wfms/s** waveform refresh rate
- Vertical sensitivity range: **200 μ V/div - 10 V/div**
- **1 M-point FFT** analysis ensures accurate frequency component display
- 256-level grayscale and color persistence enhance waveform visualization

Android-Based, Extensive Expandability

- Supports external devices such as mouse and keyboard for improved efficiency
- Equipped with **HDMI**, **USB Device**, **USB Host**, **Trig Out (P/F)**, and **LAN**, supporting Web Control and SCPI command tools
- Screen video recording for effortless documentation and sharing
- Optional **Wi-Fi/Bluetooth module** supports FTP, network printing, mobile hotspot, and more

Comprehensive Features

- Integrated with oscilloscope, AFG (optional), logic analyzer (optional), frequency counter, voltmeter, and FFT spectrum analyzer
- Rich triggering functions: edge, video, pulse width, slope, under-amplitude, over-amplitude, timeout, nth edge, logic, and serial buses including RS232/UART, I²C, SPI, CAN, and LIN
- 2-channel decoding: UART, I²C, SPI, CAN, LIN
- Full-memory hardware measurement, math functions, enhanced FFT, and peak search
- Enhanced FFT and ZOOM capabilities for clearer waveform display and more precise cursor information
- Convenient measurement statistics with measurement indicators, cursor gating, and detailed measurement prompts

Human-Machine Interaction and Design

- Ultra-thin design saves valuable workspace
- **7-inch** multi-touch touchscreen for enhanced interactive experience
- **5000 mAh** large-capacity battery, providing around 2 hours of continuous operation
- Supports safe floating ground measurement, effectively isolating mains noise interference for more accurate small-signal measurements and improved data reliability

+ Specifications

Model	ADS912A	ADS922A	ADS914A	ADS924A
Bandwidth(-3 dB)	125MHz	250MHz	125MHz	250MHz
Channel	2		4	
Max. sample rate	2GSa/s(single-channel), 1GSa/s (dual-channel), 500MSa/s(full-channel)			
Acquire mode	Sample, Peak, High Res, Average, Segmentation		DC Gain Accuracy	3% (≤ 1 mV), 2% (2 mV) 1.5% (≥ 5 mV)
Max. waveform capture rate	Max. 700,000wfms/s		Max memory depth	100M
Vertical Sensitivity Range	200μV/div ~ 10 V/div		Vertical resolution	12bits
Sampling rate range	1ns/div - 1000s/div, step by 1-2-5		Relay time accuracy	±25 ppm (typical)
Input Impedance	1 MΩ±2%, parallel with20 pF±5 pF			
Probe Attenuation Coefficient	1.00μX-1.00MX, step by 1-2-5, support custom			
Trigger type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth, Logic, RS232/UART, I2C, SPI CAN, LIN			
Bus decoding	RS232/UART, I2C, SPI, CAN, LIN			
Auto measurement	Period, Frequency, +Width, -Width, Rise Time, Fall Time, Scr Duty, +Duty,-Duty, Vavg, Vpp, VRMS, Overshoot, Vmax, Vmin, Vtop, CycRms, Vbase, Vamp, Preshoot, Std Dev, +Pulse Cnt, -Pulse Cnt, Rise Cnt, Fall Cnt, Area, Cyc Area, Delay(A↑-B↑), Delay(A↑-B↓), Delay(A↓-B↑), Delay(A↓-B↓), Phase(A↑-B↑), Phase(A↑-B↓), Phase(A↓-B↑), Phase(A↓-B↓), FRR(A↑-B↑), FRF(A↑-B↓), FFR(A↓-B↑), FFF(A↓-B↓), LRR(A↑-B↑), LRF(A↑-B↓), LFR(A↓-B↑), LFF(A↓-B↓)			
Waveform Math	+, -, *, /, &&, , ^, ! , Intg, Diff, Sqrt, Function operation (Lg / Ln / Exp / Abs / Sine / Cosine / Tan), FFT, FFT rms, User Defined, digital filter (low pass, high pass, band pass, band reject)			
Frequency counter	6-digit frequency counter, Maximum frequency: maximum analog bandwidth of oscilloscope			
Voltmeter	Support DC, AC+DCrms, ACrms, Resolution: 4 digits (ACV/DCV)			
Arb Waveform Generator (optional)Specification				
Max frequency output	30MHz single	Sample rate	160MSa/s	
Standard waveform	Sine, Square, Ramp, Pulse, Noise			
Arbitrary waveform	28 built-in waveforms			
Vertical resolution	14 bits	Arb waveform	1μHz ~ 10MHz	
Arb waveform length	2-8K points	Amplitude	2mVpp ~ 10Vpp , 1mVpp ~ 5Vpp (50 Ω)	
Impedance	50Ω (type)	Modulation	AM, FM, PM, FSK	
Logical analyzer(optional)Specification				
Number of channels	16 input channels (D0-D15) (D0 to D7, D8 to D15)			
Threshold Range	±20.0 V, 10 mV step	Max. input voltage	±40V peak CAT I, transient overvoltage 800Vpk	
Minimum voltage swing	500mVpp	Input Impedance	100kΩ, 8 pF	
Max. Input dynamic range	±10 V+ threshold	Vertical resolution	1 bit	
Other				
Communication Interface	HDMI, USB device, USB Host, Trig Out(P/F), LAN			
Display	7 inch(1024×600), capacitive multi-touch screen			
Power supply interface	Type-C [1]; Optional 12V/5000mAh built-in lithium battery			
Dimension (W x H x D)	260mm x 160mm x 78mm			
Weight	≈1.5kg (package excluded)			

[1] Without generator:the adapter is required to support a handshake protocol of 12V/ ≥ 3 A
With generator: the adapter is required to support a handshake protocol of 12V/ ≥ 4 A

Specifications subject to change without prior notice.



SDS3000 Series

Digital Oscilloscope

- 100 MHz / 150 MHz / 200 MHz bandwidth options
- Dual-channel, 1 GSa/s real-time sampling rate
- 20 Mpts memory depth
- Multiple trigger modes: Edge, Video, Pulse Width, and Slope
- Versatile functions: FFT Spectrum Analyzer, Frequency Counter, X-Y Mode, Cursor Measurement (with Auto Cursor support)
- 30 types of automatic measurements, customizable, with one-click display
- Ultra-thin body design, USB Type-C power supply for easy field use
- USB Host & Device: supports PC connectivity and standard SCPI remote control commands
- 7-inch High-resolution TFT LCD display

+ Specifications

Model	SDS3102	SDS3152	SDS3202
Bandwidth	100MHz	150MHz	200MHz
Channel	2		
Sample rate	1GSa/s		
Acquire mode	Sample, Peak, Average		
Input coupling	DC, AC, Ground		
Input impedance	1 M Ω ±2%, in parallel with 12 pF±5 pF		
Input coupling	1X, 10X, 100X, 1000X		
Max Record length	20M		
Scanning speed (S/div)	2 ns/div – 1000 s/div, step by 1 – 2 – 5		
Vertical Sensitivity	2mV/div ~ 10 V/div		
Max. input voltage	400V (DC+AC, PK - PK)		
Bandwidth limit	20 MHz, full bandwidth		
Sampling rate / relay time accuracy	±100 ppm		
Displacement	±2 V (2 mV/div – 200 mV/div) ; ±100 V (500 mV/div – 10 V/div)		
Waveform inverted	support		
Automatic	Period, Frequency, Mean, PK-PK, RMS, Max, Min, Top, Base, Amplitude, Overshoot, Preshoot, Rise Time, Fall Time, +PulseWidth, -PulseWidth, +Duty Cycle, -Duty Cycle, Delay A→B $\overline{\Phi}$, Delay A→B $\overline{\Psi}$, Cycle RMS, Cursor RMS, Screen Duty, Phase, +PulseCount, -PulseCount, RiseEdgeCnt, FallEdgeCnt, Area, and Cycle Area		
Waveform Math	+, -, ×, ÷, FFT		
Waveform storage	16 waveforms		
Trigger Type	edge, video, pulse, slope		
Communication port	USB 2.0		
Counter	Support		
Cursor	ΔV , ΔT , $\Delta T \& \Delta V$ between cursors, auto cursor		
Lissajous figure	Bandwidth: Full bandwidth ; Phase difference: ±3 degrees		
Display	7" (800 x 480)LCD		
Mains Voltage	Type-C power supply, DC: 5V 3A		
Dimension	260 mm× 160 mm×78 mm (W*D*H)		
Weight	Approx. 1.1 kg		

Specifications subject to change without prior notice.



HDS2102A

Automotive Diagnostic Oscilloscope

- Integrates oscilloscope, multimeter, and automotive diagnostics in one device
- 3.5-inch high-resolution display
- 100MHz bandwidth, 8kpts memory depth, 500MSa/s real-time sampling
- 4½-digit multimeter(20,000 counts), Supports voltage, current, resistance, diode, capacitance, and continuity tests
- Built-in **automotive waveform library** for real-time comparison and fault diagnosis
- Low-power design with 18650 Li-ion battery (3-6 hours continuous operation)
- Standard configuration with **Type-C port**, supports power bank charging

+ Specifications

[Oscilloscope]

Bandwidth	100MHz	Channels	2-CH
Sample Rate	500MSa/s	Acquisition Model	Normal, Peak detect
Record Length	8k	Display	3.5-inch LCD
Waveform Refresh Rate	10,000wfms/s	Input Coupling	DC, AC, and Ground
Input Impedance	1MΩ ± 2%, in parallel with 16pF ± 10pF	Max. input Voltage	400V (DC+AC, PK-PK, 1MΩ input impedance) (10:1 probe attenuation)
Bandwidth Limit (typical)	20MHz	Probe Attenuation Factors	1X, 10X, 100X, 1000X, 10000X
Vertical Resolution	8 bit	Horizontal Scale	2ns/div - 1000s/div, step by 1 - 2 - 5
Vertical Sensitivity	10mV/div - 10V/div	Trigger Type	Edge
Trigger Modes	Auto, Normal, single	Cursor Measurement	ΔV, ΔT, ΔT&ΔV between cursors
Automatic Measurement	Frequency, Period, Amplitude, Max, Min, Mean, PK-PK	Communication Interface	USB Type-C

[Multimeter]

Max. Resolution	20,000 counts	Diode	0 - 2V	Input Impedance	10MΩ
Max Input Voltage	AC:750V DC:1000V	Max Input Current	AC:10A DC:10A		
Resistance(Ω)	200.00Ω/2.0000kΩ/20.000kΩ/200.00kΩ/2.0000MΩ/20.000MΩ/100.00MΩ				
Capacitance(F)	20.000nF/200.00nF/2.0000μF/20.000μF/200.00μF/2.0000mF				
Frequency	(40 - 1000) Hz				
Testing Mode	Voltage, Current, Resistance, Capacitance, Diode ,and Continuity test				

[Vehicle Diagnosis]

Test Items	
Ignition	Independent Ignition System/Distributorless System
Sensors	Accelerator Pedal/Crankshaft/ABS/Camshaft/Lambda/MAP/Throttle Position/Knock
Bus Diagnosis	Physical Layer(FlexRay-P / FlexRay-N / K-line / LIN / CAN)
Engine	Injector Diagnosis/Glow Plugs (Diesel)/Fuel Pump Current/Pressure Control Valve (Bosch
Charge	Charging Circuits(Alternator AC Ripple/Alternator Voltage&Current/Parasitic Drain Current)
Startup	Starting Circuits

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Quick Guide



Type-C Cable



Probe



Multimeter Leads



Auto Test Leads



BNC to Alligator Clip



CP024 Probe



Auto Ignition Probe



COP Extension Cord



Breakout Leads



Test Clip



20_1 Attenuator



6-Way Micro
Breakout Leads
(1mm)



6-Way Small
Breakout Leads
(1.5mm)



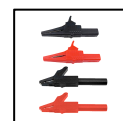
6-Way Medium
Breakout Leads
(2.3mm)



6-Way Large
Breakout Leads
(2.8mm)



Acupuncture
Probe Set



Alligator Clips



XSA3000-R Series

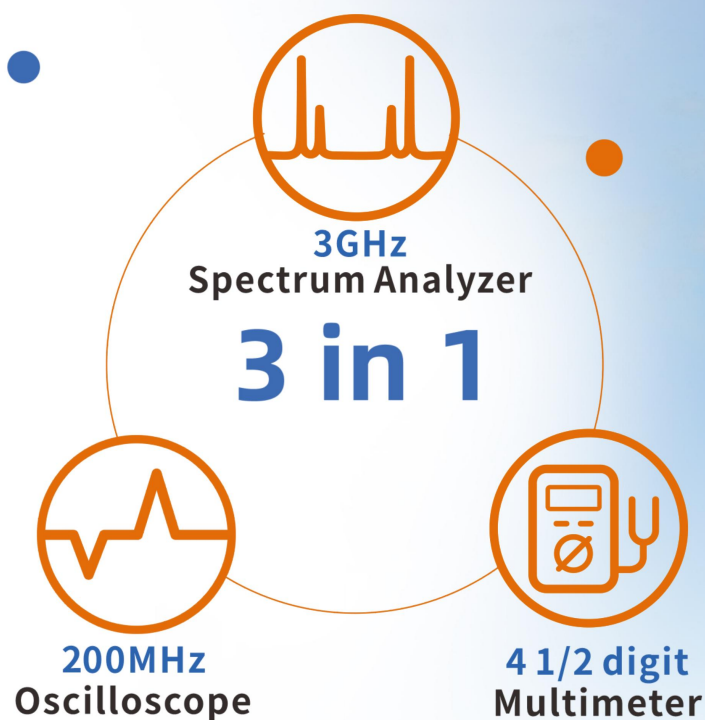
Real-Time Spectrum + Vector Network Analyzer

- Spectrum Analyzer Frequency Range: 9kHz – 8GHz
- Vector Network Analyzer Frequency Range From 100kHz – 8GHz
- 100% POI 6.25 μ s, Dynamic Range 60 dB
- -165dBm/Hz Displayed Average Noise Level (Typ.)
- -106dBc/Hz.@10 kHz Offset Phase Noise (1 GHz, Typ.)
- 1Hz Minimum Resolution Bandwidth (RBW)
- Full Amplitude Accuracy < 0.7 dB (Typ.)
- Pre Amplifier and Tracking Generator Standard
- Standard 40 MHz, Optional 100 MHz Real Time Analysis Bandwidth
- Distance To Fault Mode (Standard)
- Supports Probability Density Spectrum, PvT, 3D and Other Display Modes For Multi-dimensional Observation Of Complex Transient Signals
- EMI Measurement Software (Opt.)
- 10.4 inch Multi-Touch Screen , Mouse and Keyboard Supported
- Web Browser Remote Control on PC and Mobile Terminals and File Operation
- Communication Interfaces: LAN, USB Device, USB Host

+ Specifications

Model	XSA3036-R	XSA3060-R	XSA3080-R
Frequency Range	9kHz - 3.6GHz	9kHz - 6GHz	9kHz - 8GHz
Resolution Bandwidth (RBW)	1Hz-5MHz		
DANL	-165 dBm/Hz		
SSB Phase Noise	< -106 dBc/Hz		
Third-order Intercept Point(TOI)	+14 dBm		
Amplitude Accuracy	< 0.7 dB		
Tracking generator	100kHz - 3.6GHz	100kHz - 6GHz	100kHz - 8GHz
Real-time Analysis Bandwidth	40MHz, 100MHz (optional)		
Spurious-Free Dynamic Range (SFDR)	60dB		
100% Response Shortest Signal Duration	6.25μs		
Real-time Spectrum View	Probability Density Spectrum, Waterfall Chart, 3D Spectrum, PvT		
Vector Network Analysis(VNA)	Vector S11, Vector S21		
Network Analysis Dynamic Range	90dB		
Cable Fault Location	Distance to fault		
Advanced Measurement	CHP, ACPR, OBW, CNR, Harmonic, Monitor, CCDF, SEM, TOI		
Vector Signal Modulation Analysis	AM, FM, PM		
EMI Measurement	EMI Filter and Quasi-Peak Detector, Log Scale and Limit Line		
Communication Interfaces	LAN, USB Device, USB Host		
Remote Control Capability	SCPI / Labview / IVI based on USB-TMC / VXI-11 / Socket / Telnet		
Remote Controller	NI-MAX, Web Browser, Spectrum Vision Software		

Specifications subject to change without prior notice.



HSA2000 Series

Handheld Multifunction Spectrum Analyzer

- All-in-One: Spectrum Analyzer + Oscilloscope + Multimeter.
- Spectrum Analyzer: 9kHz to 3GHz frequency range, 100Hz frequency resolution.
- Oscilloscope: max.200MHz bandwidth, 1GSa/s sampling rate, 8K memory depth.
- Up to 10,000 wfms/s waveform refresh rate, supports auto measurements.
- Multimeter: 4 1/2 digits multimeter, supports standard measurements of voltage, current, resistance, capacitance, diode, and continuity testing.
- Standard USB Type-C interface, supports PC communication.

+ Specifications

[Oscilloscope]

Model	HSA2105	HSA2307	HSA2310	HSA2320
Bandwidth	50MHz	70MHz	100MHz	200MHz
Max Sample Rate	250MSa/s		500MSa/s	1GSa/s
Channel	Dual			
Acquisition Model	Sample, Peak			
Record Length	8K			
Waveform Refresh Rate	10000wfms/s			
Probe Attenuation	1X, 10X, 100X, 1000X, 10000X			
Sampe Rate Range	5ns/div - 1000s/div, Step by1-2-5		2ns/div - 1000s/div, Step by1-2-5	
Vertical Resolution	10mV/div - 10V/div			
Trigger Type	Edge			
Trigger Model	Auto, Normal, Single			
Cursor Measurement	ΔV , ΔT			
Automatic Measurement	Period, Frequency, Mean, PK-PK, Max, Min, RMS, Rise Time, Fall Time, +Width, -Width			

[Spectrum Analyzer]

Frequency Range	9kHz to 1.5GHz	9kHz to 3GHz
Frequency Resolution	100Hz	
Frequency sweep range	zero span, 300Hz to the maximum frequency of the instrument	
Continuous power	+20 dBm (100mW)	
SSB Phase Noise (20°C-30°C, $f_c=1\text{GHz}$)	< -60dBc/Hz (type) @10kHz, offset < -62dBc/Hz (type) @100kHz, offset	
Resolution Bandwidth (-3dB)	200 Hz to 850 kHz, steps by 200Hz-1-3-10-30-100-300-600-850kHz	
DANL (input attenuation @ 0 dB, RBW = VBW = 100Hz, 20°C to 30°C, input impedance = 50Ω)	<-120dBm (10MHz to 1.5GHz)	<-120dBm (10MHz to 2GHz)
	-	<-115dBm (2GHz to 3GHz)

[Multimeter]

Display	4 1/2 digits (max 20000 count)	Testing Modes	Voltage, Current, Resistance, Capacitance, Diode, Continuity
Input Resistance	10MΩ	Diode	0-2V
DC Voltage	20.000mV - 1000.0V	AC Voltage	20.000mV - 750.00V
DC Voltage	20.000mA-10.000A	AC Current	20.000mA -10.000A
Resistance	200.00Ω - 100.00MΩ	Capacitance	2.000nF - 2.000mF

[Other]

Display	3.5 inch LCD
Communication Interface	USB TYPE-C
Power	Power adapter or Battery
Dimension (W x H x D)	96 × 198 × 38 mm
Device Weight	0.6 kg

Specifications subject to change without prior notice.



OWH67D Series

Dual-channel High-Power Programmable DC Power Supply

- 2U standard rack size, front and rear panel output, suitable for rack-mounted applications
- Supports wide-range AC input and wide voltage output, with constant power up to **1000W / 6000W**.
- **0.05% high-precision** output and excellent stability, providing reliable assurance for demanding applications such as precision experiments, testing and measurement, and industrial manufacturing.
- Supports 100-step LIST waveform programmable output
- Selectable CC/CV Priority with smooth startup and no overshoot, adaptable to different load conditions.
- Built-in discharge circuit to eliminate residual high voltage when power is turned off
- Equipped with **USB, LAN, and RS485** interfaces, supporting **SCPI and Modbus protocols** separately. Enables real-time monitoring, flexible output configuration, and easy integration into automation systems.
- Supports **photovoltaic simulator output** function, embedded with EN50530, Sandia and other PV standard curves for direct evaluation of PV inverter MPPT efficiency (optional)
- 3.5-inch TFT display provides real-time, intuitive visualization of voltage/current waveforms and parameters, making power status monitoring clearer and safer.

+ Specifications

Model		OWH67010D-80	OWH67060D-150	OWH67060D-300	OWH67060D-600
Channel		2			
Rated Output (0°C-40°C)	Output Voltage Range	0-80V ;0-80V	0 -150V ;0 -150V	0 -300V ;0 -300V	0-600V ;0-600V
	Output Current Range	0-20A ;0-20A	0-30A ;0-30A	0-15A ;0-15A	0-10A ;0-10A
Power		1000W	6000W	6000W	6000W
Power Supply		100V-240Vac ;45Hz-65Hz			
Load Regulation±(% of Output+Offset)	CV	≤0.05% ± 20mV	≤0.03% ± 20mV	≤0.03% ± 30mV	≤0.03% ± 50mV
	CC	≤0.05% ± 20mA	≤0.1% ± 30mA	≤0.1% ± 30mA	≤0.1% ± 30mA
linear Regulation±(% of Output+Offset)	CV	≤0.05% ± 20mV	≤0.03% ± 20mV	≤0.03% ± 30mV	≤0.03% ± 50mV
	CC	≤0.05% ± 20mA	≤0.1% ± 30mA	≤0.1% ± 30mA	≤0.1% ± 30mA
Settings Resolution		10mV/1mA			
Readback Resolution		10mV/1mA	1mV/1mA	1mV/1mA	1mV/1mA
Settings Accuracy	CV	≤0.05% ± 20mV	≤0.05% ± 20mV	≤0.05% ± 50mV	≤0.05% ± 100mV
	CC	≤0.05% ± 20mA	≤0.1% ± 20mA	≤0.1% ± 20mA	≤0.1% ± 30mA
Readback Accuracy	CV	≤0.05% ± 20mV	≤0.05% ± 20mV	≤0.05% ± 50mV	≤0.05% ± 100mV
	CC	≤0.05% ± 20mA	≤0.1% ± 20mA	≤0.1% ± 20mA	≤0.1% ± 30mA
Noise/Ripple(*)	CV	≤50mVp-p	≤150mVp-p	≤250mVp-p	≤500mVp-p
	CC	≤20mArms	≤50mArms	≤50mArms	≤50mArms
Temperature Coefficient (0°C-40°C)		100ppm/°C (Voltage) ;200ppm/°C (Current)			
Readback Temperature Coefficient		100ppm/°C (Voltage) ;200ppm/°C (Current)			
Recovery Time (10%~90% rated load)		≤5.0ms			
Operation Temperature		0-40°C			
Interface		USB / LAN / RS485			
Display		3.95 inch LCD			
Size (W*H*D mm)		215.0 x 88.0 x 453.0	430.0 x 88.0 x 453.0		
Weight (kg)		5	13		

* Noise bandwidth 20MHz, ripple bandwidth 1MHz,
connect 10uF electrolytic capacitor in parallel with
0.1uF ceramic capacitor to eht output terminal for testing.

Specifications subject to change without prior notice.



OWH80/OWH80Q Series

Programmable DC Power Supply

- 1/2 3U rack cabinet size, suitable for installation in standard 19-inch racks
- High-Performance Power: **1800W/2000W** output with **0.05% accuracy**
- Provides massive **80V** voltage and huge current up to **120A**.
- High setting resolution: 10mV/1mA; readback resolution: 10mV/1mA
- CV/CC priority setting
- Built-in bleed circuit to ensure no residual high voltage at shutdown
- 4.3-inch TFT LCD color screen display with curve output and online 1-minute data logging
- Full digital control integrated with OVP, OCP, OPP, over-temperature, and input undervoltage protection
- Supports **LAN**, **RS485**, **RS232** serial communication interfaces, and support **SCPI**

+ Specifications

Model		OWH80120-1800	OWH50120-1800	OWH8080-2000
Channel		1	1	1
Rated output (0°C-40°C)	Voltage	0 - 80V	0 - 50V	0-80V
	Current	0 - 120A	0-120A	0-80A
Power		1800W	1800W	2000W
Input power		100V-240Vac* ;45Hz-65Hz		
Load regulation (%of output+offset)	CV	$\leq 0.03\% + 20\text{mV}$	$\leq 0.03\% + 20\text{mV}$	$\leq 0.03\% + 20\text{mV}$
	CC	$\leq 0.05\% + 30\text{mA}$	$\leq 0.05\% + 30\text{mA}$	$\leq 0.05\% + 30\text{mA}$
Input power regulation (%of output+offset)	CV	$\leq 0.03\% + 20\text{mV}$	$\leq 0.03\% + 20\text{mV}$	$\leq 0.05\% + 20\text{mV}$
	CC	$\leq 0.05\% + 30\text{mA}$	$\leq 0.05\% + 30\text{mA}$	$\leq 0.05\% + 30\text{mA}$
Setting resolution		10mV/1mA		
Readback resolution		1mV/1mA		
Setting accuracy	Voltage	$\leq 0.05\% \pm 40\text{mV}$	$\leq 0.05\% \pm 40\text{mV}$	$\leq 0.05\% \pm 40\text{mV}$
	Current	$\leq 0.1\% \pm 0.1\%\text{FS}$	$\leq 0.1\% \pm 0.1\%\text{FS}$	$\leq 0.1\% \pm 0.1\%\text{FS}$
Readback accuracy	Voltage	$\leq 0.05\% \pm 40\text{mV}$	$\leq 0.05\% \pm 40\text{mV}$	$\leq 0.05\% \pm 40\text{mV}$
	Current	$\leq 0.1\% \pm 0.1\%\text{FS}$	$\leq 0.1\% \pm 0.1\%\text{FS}$	$\leq 0.1\% \pm 0.1\%\text{FS}$
Ripple noise	Voltage	$\leq 100\text{mVp-p}$	$\leq 100\text{mVp-p}$	$\leq 100\text{mVp-p}$
	Current	$\leq 100\text{mArms}$	$\leq 100\text{mArms}$	$\leq 120\text{mArms}$
Model		OWH8080Q-2000	OWH8040Q-600F	OWH8020Q-1000F
Channel		4		
Rated output (0°C-40°C)	Voltage	0 - 80V	0 - 80V	0 - 80V
	Current	0 - 20A	0 - 10A	0 - 5A
Power		4*500W	4*150W	4*250W
Input power		198V-240Vac ;45Hz-65Hz	100V-240Vac ;45Hz-65Hz	
Load regulation (%of output+offset)	CV	$\leq 0.05\% + 20\text{mV}$	$\leq 0.03\% + 20\text{mV}$	$\leq 0.03\% + 20\text{mV}$
	CC	$\leq 0.1\% + 30\text{mA}$	$\leq 0.05\% + 30\text{mA}$	$\leq 0.05\% + 30\text{mA}$
Input power regulation (%of output+offset)	CV	$\leq 0.05\% + 20\text{mV}$	$\leq 0.03\% + 20\text{mV}$	$\leq 0.05\% + 20\text{mV}$
	CC	$\leq 0.1\% + 30\text{mA}$	$\leq 0.05\% + 30\text{mA}$	$\leq 0.05\% + 30\text{mA}$
Setting resolution		10mV/1mA		
Readback resolution		1mV/1mA		
Setting accuracy	Voltage	$\leq 0.05\% \pm 20\text{mV}$	$\leq 0.05\% \pm 40\text{mV}$	$\leq 0.05\% \pm 40\text{mV}$
	Current	$\leq 0.1\% \pm 30\text{mA}$	$\leq 0.1\% \pm 0.1\%\text{FS}$	$\leq 0.1\% \pm 0.1\%\text{FS}$
Readback accuracy	Voltage	$\leq 0.05\% \pm 20\text{mV}$	$\leq 0.05\% \pm 40\text{mV}$	$\leq 0.05\% \pm 40\text{mV}$
	Current	$\leq 0.1\% \pm 30\text{mA}$	$\leq 0.1\% \pm 0.1\%\text{FS}$	$\leq 0.1\% \pm 0.1\%\text{FS}$
Ripple noise	Voltage	$\leq 50\text{mVp-p}$	$\leq 100\text{mVp-p}$	$\leq 100\text{mVp-p}$
	Current	$\leq 30\text{mArms}$	$\leq 100\text{mArms}$	$\leq 120\text{mArms}$
Output temp drift coefficient(0°C-40°C)		100ppm/°C (Voltage) ; 200ppm/°C (Current)		
Readback temp drift		100ppm/°C (Voltage) ; 200ppm/°C (Current)		
Transient response (10%-90% rated load)		$\leq 5.0\text{ms}$		
Working temperature		0-40°C		
Display		USB, LAN, RS485, RS232		
Interface		4.3-inch TFT LCD screen		
Dimension (W×H×D mm)		215.0 x 133.0 x 446.2		
Weight (kg)		$\approx 7\text{kg}$		

*Input voltage: 100-120Vac, output power reduced by half.

Specifications subject to change without prior notice.



ODP8000 Series

Programmable DC Power Supply

- **3 or 4-channel** independent adjustable output channels;
CH1 and CH2 support series/parallel connection
- CH1/CH2: **5A/102W** constant power; CH3/CH4: **3A/24W** constant power
- **5-digit** voltage/current display with 1mV / 1mA resolution
- Low ripple and noise: $\leq 1\text{mVrms}$ / 5mVpp
- OVP, OCP, OTP, OPP protection for safety and reliability
- Intelligent CV/CC mode switching
- Supports 100 sets of timed output sequences
- Remote voltage sensing supported
- Built-in **data logger** for displaying voltage, current, and power in table or waveform format
- System parameter save/recall, with expandable data storage

+ Specifications

Model	ODP8353	ODP8354
Output Ratings	3 (independent controllable channel)	4 (independent controllable channel)
Voltage / Current	CH1: 32V/5A, Maximum 102W constant power output CH2: 32V/5A, Maximum 102W constant power output CH3: 24V/3A, Maximum 24W constant power output	CH1: 32V/5A, Maximum 102W constant power output CH2: 32V/5A, Maximum 102W constant power output CH3: 24V/3A, Maximum 24W constant power output CH4: 24V/3A, Maximum 24W constant power output
CH1、CH2 Parallel	64V/5A, Maximum 204W constant power output	64V/5A, 204W constant power output
CH1、CH2 Series	32V/10A, Maximum 204W constant power output	32V/10A, 204W constant power output
Max out put power	228W	252W

The specifications below are based on the instrument having run for at least 30 minutes continuously under the specified operating temperature.

Model	ODP8353	ODP8354
Settings	1mV/1mA	
Read Back	1mV/1mA	
Settings Accuracy (Within 12 months)	Voltage	Independent: $\pm (0.03\% \text{ of reading} + 10) \text{ mV}$; Parallel: $\pm (0.03\% \text{ of reading} + 10) \text{ mV}$
	Current	Independent: $\pm (0.1\% \text{ of reading} + 5) \text{ mA}$; Parallel: $\pm (0.2\% \text{ of reading} + 20) \text{ mA}$;
Read Back Accuracy (25°C $\pm$ 5°C)	Voltage	Independent: $\pm (0.03\% \text{ of reading} + 10) \text{ mV}$; Parallel: $\pm (0.03\% \text{ of reading} + 10) \text{ mV}$
	Current	Independent: $\pm (0.1\% \text{ of reading} + 5) \text{ mA}$; Parallel: $\pm (0.2\% \text{ of reading} + 10) \text{ mA}$;
Noise and Ripple* (20Hz-20MHz)	Voltage	Independent: $\leq 5 \text{ mVp-p}$; Parallel: $\leq 5 \text{ mVp-p}$; Series: $\leq 10 \text{ mVp-p}$
	Voltage	$\leq 1 \text{ mVrms}$
	Current	Independent: $\leq 5 \text{ mArms}$; Parallel: $\leq 10 \text{ mArms}$; Series: $\leq 5 \text{ mArms}$
Load Regulation	Voltage	Independent: $\leq 0.01\% + 5 \text{ mV}$; Parallel: $\leq 0.01\% + 50 \text{ mV}$; Series: $\leq 0.01\% + 50 \text{ mV}$
Voltage Regulation	Voltage	$\leq 0.01\% + 3 \text{ mV}$
	Current	$\leq 0.01\% + 3 \text{ mA}$
Read Back Temperature	Voltage	100ppm/°C
	Current	200ppm/°C
Programmable output	Storage	1M points; 100 groups
	Time	Second
Data Record Function	10k groups of data (voltage, current)	
Working temperature	0-40°C	
Ports	USB Host, USB Device, RS232, LAN, supports USB TMC protocol	
Display	4.3 inch IPS LCD	
Dimension	290mm (W) *212mm (H) *130mm (D)	
Device weight	$\approx 9 \text{ kg}$	

*Noise bandwidth 20MHz, ripple bandwidth 1MHz,
connect 10uF electrolytic capacitor in parallel with
0.1uF ceramic capacitor to eht output terminal for testing.

Specifications subject to change without prior notice.



OEL1500/OEL3000 Series

Programmable DC Electronic load

- Compact size, Portable and movable high-performance programmable electronic load
- 2.8-inch TFT color LCD display
- Four operation modes:
Constant Voltage (CV), Constant Current (CC), Constant Resistance (CR), Constant Power (CP)
- Supports dynamic current testing up to 5kHz
- High resolution readback: 1mV/0.1mA
- Supports remote sensing compensation
- Multiple protections including OVP/OCP/OPP/OTP
- Standard interfaces: RS232 and RS485 with SCPI protocol support
- Optional test functions: Battery Discharge Test, OCP Test, OPP Test (Order No.OEL-T1)
- 4.3-inch (480*272) IPS screen for sharp and vivid display
- Supports USB 2.0, RS232, and LAN communication interfaces

+ Specifications

The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

Model		OEL1515	OEL1520	OEL1530	OEL3015	OEL3020	OEL3030
Rated Output	Voltage	0-150V			0-300V		
	Current	0-15A	0-20A	0-30A	0-15A	0-20A	0-30A
	Power	150W	300W		150W	300W	
Min. Operate Voltage		0.8V@15A	0.9V@20A	1.1V@30A	0.8V@15A	0.9V@20A	1.1V@30A
CV Mode							
Range		0-150V			0-300V		
Resolution		1mV					
CC Mode							
Range		0-15A	0-20A	0-30A	0-15A	0-20A	0-30A
Resolution		1mA					
CR Mode							
Range		0.05Ω - 7.5kΩ					
CP Mode							
Range		150W	300W		150W	300W	
Resolution		10mW					
Dynamic Mode							
T1&T2		0.1ms-50s					
Rise/Fall Slope		0.01A/ms-2000A/ms					
Min. Rise Time		20μs					
Voltage Readback							
Range (V)		0-15V / 0-150V			0-30V / 0-300V		
Resolution		1mV					
Current Readback							
Range		0-15A	0-20A	0-30A	0-15A	0-20A	0-30A
Resolution		0.1mA					
Power Readback							
Range		150W	300W		150W	300W	
Resolution		10mW					
Protection							
Overpower Protection		>OPP, 10ms delay protect					
Overvoltage Protection		>OVP, 0.1ms delay protect					
Overcurrent Protection		>OCP, 0.1ms delay protect					
Overtemperature		85℃					
Optional function		Battery Discharge Test, OCP Test, OPP Test (Oredr NO. OEL-T1)					
Interface		RS232, RS485, USB Device, SCPI support					
Withstand Voltage		1.5KV / AC / 5mA					
Dimension (W x H x D)		84mm*151mm*283mm					
Device Weight		≈ 2.5kg					

Specifications subject to change without prior notice.



HPC77+ / HPC78+ / HPC79+

Handheld Process Multimeter

Powerful Analog Output

- Provides output for DC voltage, active/passive DC current, thermocouple, and RTD (Resistance Temperature Detectors, specific to Model 79+), meeting diverse calibration and testing needs
- Features dual display & smart control for current output: Simultaneous display of mA and Percentage values
- Supports manual stepping (25%/100%), auto-stepping and auto-ramp current output to simulate real-world operational changes

High Precision Output

- Output accuracy up to 0.2% with 5-digit high-resolution display, ensuring clear output status visibility
- Provides 24V loop power while accurately measuring loop current, simplifying loop testing and maintenance
- Comprehensive Measurement Capabilities
- Basic measurement accuracy up to 0.1% with 6000-count display
- Measures AC/DC voltage, AC/DC current, resistance, capacitance, frequency, continuity, diode tests, thermocouple, and RTD (Model dependent)
- VFC (Variable Frequency Control) voltage measurement:
Designed for variable-frequency environments to capture critical signals accurately
- Data Hold (HOLD): Locks measurement results for easy recording and analysis
- Manual/Auto-ranging (Model dependent), offering flexible and efficient operation

Durable Design • User-Friendly Features

- IP65-rated dust and water resistance(excluding Model 77+), suitable for harsh industrial environments
- Auto Power Off: Saves power and extends usage time
- Backlight and flashlight: Clear readings in low-light conditions
- Powered by 3 standard AA batteries, easily replaceable with long battery life

Model		HPC77+	HPC78+	HPC79+
Display		5000 Counts	6000 Counts	
DC Voltage	Range & Optimal Accuracy	50.00V; ±(0.1%+4)	60.00mV / 600.0mV / 6.000V / 60.00V / 600.0V / 1000V; ±(0.2%+4)	
AC Voltage	Range & Optimal Accuracy	500.0V; ±(1%+10)	6.000V / 60.00V / 600.0V; ±(0.5%+4)	
DC Current	Range & Optimal Accuracy	50.00mA; ±(0.1%+4)	60.00mA/600.0mA; ±(0.2%+4)	
AC Current	Range & Optimal Accuracy	/	60.00mA/600.0mA; ±(0.2%+4)	
Resistance	Range & Optimal Accuracy	500.0Ω/5.000KΩ; ±(0.1%+4)	600.0Ω/6.000KΩ/60.00KΩ/600.0KΩ/6.000MΩ/60.00MΩ; ±(0.2%+4)	
Frequency	Range & Optimal Accuracy	/	10.0000Hz/100.000Hz/1000.00Hz/10.0000KHz; ±(0.02%+4)	
Thermocouple	Range & Resolution & Optimal Accuracy	/		K/E/J/T/N/R/S/B; 1℃; ±(0.5%+2℃)
Thermal resistor	Range & Resolution & Optimal Accuracy	/		Cu50/Pt100/Pt1000; 1℃; ±(0.5%+3℃)
Output				
DC Voltage	Range & Optimal Accuracy	10.00V;±(0.2%+4)	100.00mV/1000.0mV/10.000V; ±(0.2%+4)	
DC Current	Range & Optimal Accuracy	20.00mA; ±(0.2%+4)	30.000mA; ±(0.2%+4)	
Resistance	Range & Optimal Accuracy	/	/	400.0Ω; ±(0.2%+4)
Frequency	Range & Optimal Accuracy	/	100.0Hz/1.000KHz/5.00KHz/10.0KHz; ±(0.2%+2)	
Thermocouple	Range & Resolution & Optimal Accuracy	/		R/S/K/E/J/T/B/N; 0.1/1℃; ±(0.2%+2℃)
Thermal resistor	Range & Resolution & Optimal Accuracy	/		Cu50/Pt100; 0.1℃; ±(0.5%+0.6℃)
Other				
Refreshing measurement display		2.5 times/second	Slow speed: 5 times/second, Fast speed: 20 times/second	
Measure the true effective value		/	√	
Bandwidth		/	20Hz - 1KHz	
The duty ratio		/	10% ~ 90%	
Diode test		√		
Continuity beeper		√		
VFC		√		
The reference junction compensation		/		√
℃/℉ conversion		/		√
24V loop power supply and measuring the current		√		
Backlight		√		
Power Supply		3×1.5V AA		
Safety		CAT IV 600V	CAT. III,1000V; CAT. IV,600V	
Electromagnetic compatibility		IEC61326-1, Group2, Class B		
Dimension (W×H×D)		90×189×55mm		
Device Weight		≈0.9kg		

Notice: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the highest resolution.

Specifications subject to change without prior notice.



HPC79A+

Handheld Process Multimeter

Output Basic Characteristics

- Output basic accuracy: 0.05%, output display with 5 digits
- Output functions: DC voltage, DC current, resistance, frequency, thermocouple, RTD (Resistance Temperature Detectors), and SIMULATE function to emulate transmitters
- Dual display for DC current output: Simultaneously shows mA and Percentage values; supports manual stepping (25%/100%), auto-stepping, and auto-ramp current output
- Built-in 24V loop power supply

Measurement Basic Characteristics

- Measurement functions: AC/DC voltage, resistance, capacitance, AC/DC current, continuity, diode testing, frequency, thermocouple, and RTD
- High precision: 0.05% basic accuracy with 55,000 counts display
- Measurement rate: Fast mode (20 readings/sec), slow mode (5 readings/sec)
- Manual or auto range option, with hold function
- Relative value measurement (REL %)
- Low-pass filtering function (VFC) enables accurate voltage measurement in variable-frequency drives or other noisy environments
- Dual functionality: Simultaneously powers 24V loops and measures loop current
- Built-in optional 250Ω HART loop resistor for easy use with HART communication devices, eliminating the need for an external load resistor
- Built-in temperature sensor with automatic cold-junction compensation (°C/°F display)
- Manual cold-junction compensation option

Other Features

- IP65-rated dust and water resistance
- CAT IV 600V and CAT III 1000V safety standards

+ Specifications

Model		HPC79A+
Display		55000 Counts
DC Voltage	Range & Optimal Accuracy	50.000mV/500.00mV/5.0000V/ 50.000V/500.00V/1000.0V; $\pm(0.05\%+5)$
AC Voltage	Range & Optimal Accuracy	5V/50V/500V/1000V; $\pm(0.5\%+4)$
DC Current	Range & Optimal Accuracy	50.000mA/500.00mA; $\pm(0.1\%+5)$
AC Current	Range & Optimal Accuracy	50.000mA/500.00mA; $\pm(0.15\%+10)$
Resistance	Range & Optimal Accuracy	500.00 Ω /5.0000K Ω /50.000K Ω /500.00K Ω /5.0000M Ω /50.000M Ω ; $\pm(0.05\%+10)$
Capacitance	Range & Optimal Accuracy	10.00nF/100.0nF/1000nF/10.00uF/100.0uF/1000uF; $\pm(0.5\%+5)$
Frequency	Range & Optimal Accuracy	10.0000Hz/100.000Hz/1000.00Hz/10.0000KHz; $\pm(0.02\%+4)$
Thermocouple	Range & Resolution & Optimal Accuracy	K/E/J/T/N/R/S/B; 0.1°C/1°C; $\pm(0.1\%+1^\circ\text{C})$
Thermal resistor	Range & Resolution & Optimal Accuracy	Cu50/Pt100/Pt1000; 0.1°C; $\pm(0.1\%+1^\circ\text{C})$
DC Voltage Output	Range & Optimal Accuracy	100.00mV/1000.0mV/10.000V; $\pm(0.05\%+3)$
DC Current Output	Range & Optimal Accuracy	30.000mA $\pm(0.05\%+4)$
Resistance Output	Range & Optimal Accuracy	400.0 Ω /4.000K Ω ; $\pm(0.05\%+2)$
Frequency Output	Range & Optimal Accuracy	100.0Hz/1.000KHz/5.00KHz/10.0KHz; $\pm(0.05\%+2)$
Thermocouple Output	Range & Resolution & Optimal Accuracy	R/S/K/E/J/T/B/N; 0.1/1°C; $\pm(0.05\%+1^\circ\text{C})$
Thermal resistor Output	Range & Resolution & Optimal Accuracy	Cu50/Pt100/Pt1000; 0.1°C; $\pm(0.05\%+0.6^\circ\text{C})$
Refreshing measurement display		Slow speed: 5 times/second, Fast speed: 20 times/second
Measure the true effective value		√
Bandwidth		20Hz~1KHz
The duty ratio		10%~90%
Diode test		√
Continuity beeper		√
VFC		√
The reference junction compensation		√
°C/°F conversion		√
24V loop power supply and measuring the current		√
Backlight		√
Power Supply		4×1.5V AA or AC adapter(option)
Safety		CAT. III,1000V; CAT. IV,600V
Electromagnetic compatibility		IEC61326-1, Group2, Class B
Dimension (W×H×D)		97×206×60mm
Device Weight		≈1.7kg

Notice: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the highest resolution.

Specifications subject to change without prior notice.



0.2%

Accuracy

24V

Loop
Power

OL

Overload
protection

HPC71 Series

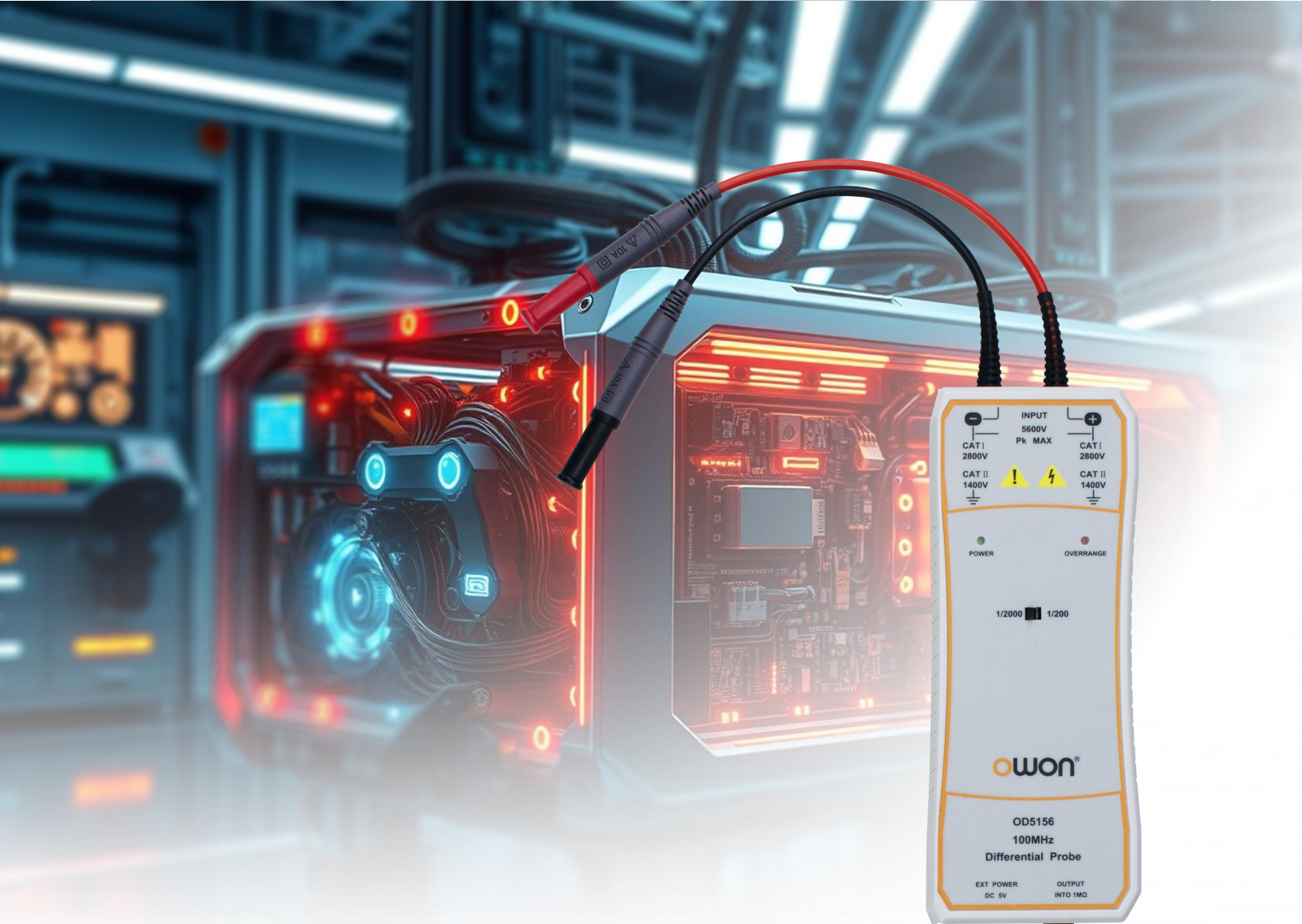
Handheld Process Signal Generator

- Basic accuracy of 0.2% for measurement/output functions
- Measures/outputs multiple process parameters: voltage, current, thermocouple (only for 71B)
- Provides 24V loop power supply for field transmitter debugging
- Manual step output for V/mA value and automatic waveform output
- Manual/automatic thermocouple cold junction compensation
- Compact design for one-handed operation, ideal for tight spaces
- Over 4 hours continuous operation powered by 3 AAA batteries
- LCD screen and built-in flashlight for better visibility in low-light conditions

+ Specifications

Model		HPC71A	HPC71B
SOURCE			
DC millivolt	Range & Accuracy & Resolution	110mV; 0.2%+4; 100uV	
DC voltage	Range & Accuracy & Resolution	10V; 0.2%+4; 10mV	
DC current	Range & Accuracy & Resolution	0 - 22mA; 0.2%+4; 0.01mA	
Sink current	Range & Accuracy & Resolution	0 - 22mA; 0.2%+4; 0.01mA	
	External power supply	5 ~ 28V	
Thermocouple	Range & Accuracy & Resolution	/	8 types(R/S/K/E/J/T/B/N); 0.2%+4; 1°C
Measure			
DC Millivolt	Range & Accuracy & Resolution	-10 - 110mV; 0.2%+4; 100uV	
DC Voltage	Range & Accuracy & Resolution	-5 - 30V; 0.2%+4; 10mV	
DC Current	Range & Accuracy & Resolution	0 - 22mA; 0.2%+4; 0.01mA	
Loop Power	Range & Accuracy & Resolution	24V; 10%; 25mA	
Thermocouple	Range & Accuracy & Resolution	/	8 types(R/S/K/E/J/T/B/N); 0.2%+4; 1°C
Other functions			
Manual Step Output		√	
Automatic Waveform Output		√	

Specifications subject to change without prior notice.



OD5000 Series

Active High Voltage Differential Probe

- Bandwidth: 50 MHz / 100 MHz
- Maximum differential voltage: 5.6 kV (DC + Peak AC)
- Accuracy: $\pm 2\%$
- Power supply: USB adapter (5 V, 1 A)
- Over-range alarm function

+ Specifications

Model		OD5013	OD5113	OD5026	OD5126	OD5056	OD5156
Bandwidth (-3dB)		50MHz	100MHz	50MHz	100MHz	50MHz	100MHz
Rise Time		7ns	3.5ns	7ns	3.5ns	7ns	3.5ns
Attenuation ratio		50X/500X		100X/1000X		200X/2000X	
Maximum differential measurement voltage (DC + Peak AC)		50X: 130V		100X: 260V		200X: 560V	
		500X: 1300V		1000X: 2600V		2000X: 5600V	
Maximum common mode input voltage		1000Vrms, CATⅡ 600Vrms, CATⅢ		2000Vrms, CATⅠ 1000Vrms, CATⅡ		2800Vrms, CATⅠ 1400Vrms, CATⅡ	
Accuracy		±2%					
Input impedance	Single end to ground	4MΩ		8MΩ		16MΩ	
	Between the two input terminals	8MΩ		16MΩ		32MΩ	
Input capacitance	Single end to ground	7pF				4pF	
	Between the two input terminals	3.5pF				2pF	
Noise		1/50: ≤ 1.5mVrms 1/500: ≤ 1mVrms		1/100: ≤ 1.5mVrms 1/1000: ≤ 1mVrms		1/200: ≤ 1.5mVrms 1/2000: ≤ 1mVrms	
Linearity		±1%					
Delay time		20ns±1ns					
CMRR		DC: ≥80dB; 100Hz: ≥ 60dB; 1MHz: ≥ 50dB					
Over range alarm voltage threshold (DC+peak AC)		1/50: 140V ± 4V 1/500: 1400V ± 40V		1/100: 280V ± 8V 1/1000: 2800V ± 80V		1/200: 580V ± 16V 1/2000: 5800V ± 160V	
Power adapter output voltage		DC5V, 1A					
Power adapter input power supply		AC100~240V, 50~60Hz					
Input line length		OD5013/OD5026/OD5056: ≈60cm; OD5113/OD5126/OD5156: ≈30cm					
Output line length		≈90cm					
Alligator clip		≈85×40×13 (mm)					
Probe hook		≈160×45×13 (mm)					
Probe body		176×65×25 (mm)					

Specifications subject to change without prior notice.



OD6000 Series

High-voltage Differential Probes

- Up to 200MHz bandwidth
- Maximum differential measurement voltage: $\pm 7000\text{V}$ (DC + Peak AC)
- Maximum common-mode voltage: $\pm 7000\text{V}$ (DC + Peak AC)
- High common-mode rejection ratio (CMRR)
- Measurement accuracy: $\pm 2\%$
- Over-range audible and visual alarm
- Automatic save of current settings
- Powered via USB for greater convenience

+ Specifications

Model		OD6007	OD6015	OD6115	OD6215	OD6128	OD6070	OD6170
Bandwidth (-3dB)		70MHz	50MHz	100MHz	200MHz	100MHz	70MHz	100MHz
Attenuation ratio		10X/100X	50X/500X			100X/1000X		
Maximum differential measurement voltage (DC + Peak AC)		10X: ±70V	50X: ±150V			100X: ±280V	100X: ±700V	
		100X : ±700V	500X: ±1500V			1000X: 2800V	1000X: ±7000V	
Common mode voltage (DC + Peak AC)		±700V	±1500V			±2800V	±7000V	
Accuracy		±2%						
Zero point accuracy		5mV						
Maximum input voltage-to-earth		600V CAT I 450V CAT II	1000V CAT II 600V CAT III			1000V CAT II 600V CAT III	2300V CAT I 1000V CAT III	
Input impedance	Single end to ground	2.5MΩ±1%	5MΩ±1%				20MΩ±1%	
	Between the two input terminals	5MΩ±1%	10MΩ±1%				40MΩ±1%	
Input capacitance	Single end to ground	< 4pF					< 5pF	
	Between the two input terminals	< 2pF					< 2.5pF	
CMRR		> 80dB (DC), > 60dB (100kHz), > 50dB (1MHz), > 30dB (3.2MHz), > 26dB (50MHz)						
Delay time		21n	16ns	14ns		16ns	21n	16ns
Bandwidth limit (5MHz)		≥ -3dB@5MHz						
Overload indicator light (red light)		√						
Overload alarm sound		√ (can be turned off)						
Auto-save function		√						
Adjustable offset function		√ (adjustable when entering test mode)						
Terminal load requirements		≥100kΩ						
Power adapter		USB 5V/1A adapter						

Specifications subject to change without prior notice.



OC5000 Series

Current Probe

- Bandwidth coverage: 500 kHz to 5 MHz
- Maximum measurable peak current: up to 100 A
- Measurement accuracy: up to $\pm 3\%$, suitable for most testing needs
- Dual-range design: 0.01 V/A and 0.1 V/A
- One-click zeroing for easy use, eliminates tedious zeroing adjustments
- Dual power modes: adapter and battery, suitable for indoor and outdoor use
- Low-battery indicator, overload indicator, and audible alert, plus additional protective features

+ Specifications

Electrical performance

Model	OC5010A	OC5110	OC5310	OC5510
Bandwidth (-3dB)	500kHz	1MHz	3MHz	5MHz
Rise time	≤700ns	≤350ns	≤116ns	≤70ns
Gear level	L		H	
Current Ranges	50mA~10A peak		1A~100A peak	
Range sensitivity	0.1V/A		0.01V/A	
DC accuracy,typical	3%±50mA		500mA~40A peak: 4%±50mA; 40A~100A peak: ±15%max	
Phase shift	DC ~ 65Hz: <1.5°		DC ~ 65Hz: <1°	
Working voltage RMS	CAT I 600V CAT II 600V CAT III 300V			
Common mode voltage RMS	CAT I 600V CAT II 600V CAT III 300V			
Power adapters	Power adapters: DC12V/1A ; alkaline batteries: 9V			
Low battery indicator function	When the battery voltage <6.5V, the battery indicator is red.			
Overload indication function	Measured current exceeds range, buzzer sounds			
Current clamp size (L*W*H)	Approximately 230*33*70mm			
Maximum size of the measured conductor	Calibre approximate 12mm			
Length of current clamp output coaxial cable	Approximately 1.5m			
Weights	Approximately 300g(Battery not included)			

Voltage and current rating table

Rating	Maximum working current(A)		Maximum working voltage(V)	Maximum floating(V)
	H (0.01V/A)	L (0.1V/A)		
DC	100 A	10 A	600 V	600 V
DC+AC peak	100 A	10 A	600 V	600 V
AC peak	100 A	10 A	600 V	600 V
AC peak-peak	200 A	20 A	1200 V	-
RMS CAT III	70.7 A	7.07 A	300 V	300 V
RMS CAT II	70.7 A	7.07 A	600 V	600 V
RMS CAT I	70.7 A	7.07 A	600 V	600 V

Specifications subject to change without prior notice.



OC4000 Series

Current Probe

- Maximum peak test current: 40 A
- Bandwidth: up to 50 MHz
- Measurement accuracy: up to $\pm 3\%$, meeting most testing needs
- Maximum voltage to ground: 400 V (DC + peak AC)
- Noise: ≤ 1 mVrms

Electrical Performance

Model	OC4022	OC4052	OC4024	OC4054
Bandwidth (-3dB)	25MHz	50MHz	25MHz	50MHz
Rise time	14ns	7ns	14ns	7ns
Maximum measured current	20A (DC + peak AC)		40A (DC + peak AC)	
Current conversion ratio	100mV/A		50mV/A	
Accuracy	± 3%			
Maximum measured pulse current	30A (Tp ≤10μs)		60A (Tp ≤10μs)	
Maximum measured voltage to ground	400V (DC + peak AC)			
Noise	≤ 1mVrms			
Linearity	±1%			
Delay time	20ns±1ns			
Power adapter output voltage	DC12V, 1A			
Power adapter input power supply	AC100~240V, 50~60Hz			

Specifications subject to change without prior notice.

OC6000 Sereis

Current Probe

- Maximum peak current: 75 A
- Bandwidth: up to 120 MHz
- One-click degauss and zeroing for easy operation
- Audible and visual over-current alarm to prompt switching to the appropriate range
- Locking mechanism ensures reliable contact between upper and lower magnetic cores
- Measurement accuracy up to 1%, meeting most testing requirements
- Dual-range design for measuring different current levels

Electrical Performance

Model	OC6053	OC6123	OC6055
Bandwidth (-3dB)	DC-50MHz	DC-120MHz	DC-50MHz
Rise time	≤7ns	≤2.92ns	≤7ns
Peak current	50Apk		75Apk
Current transfer ratio	5A: 1V/A		7.5A: 1V/A
	30A: 0.1V/A		50A: 0.1V/A
Accuracy (DC,45-66Hz maximum continuous current)	5A: ±1%±1mA		7.5A: ±1%±1mA
	30A: ±1%±10mA		50A: ±1%±10mA
Jaw diameter	5mm		

Specifications subject to change without prior notice.



OC7000 Series

Current Probe

- Measurement bandwidth range: 5 MHz - 12 MHz
- Maximum peak current: 750 A
- Locking mechanism ensures reliable contact between upper and lower magnetic cores, with measurement accuracy up to 1%
- Jaw diameter: 20 mm
- Dual-range design for measuring different current levels
- Audible and visual over-current alarm to prompt switching to the appropriate range
- Over-current protection to prevent damage from overheating

+ Specifications

Model		OC7015	OC7030	OC7050
Bandwidth (-3dB)		12MHz	6MHz	5MHz
Rise time		≤29ns	≤58ns	≤70ns
Maximum measured current		150Arms	300Arms	500Arms
Peak current		300Apk	500Apk	750Apk
Range		1/10:30A	1/10:50A	1/10:75A
		1/100:150A	1/100:300A	1/100:500A
Over-current alarm value		1/10: ≥30A	1/10: ≥50A	1/10: ≥75A
		1/100: ≥300A	1/100: ≥500A	1/100: ≥750A
Current transfer ratio		30A: 0.1V/A	50A: 0.1V/A	75A: 0.1V/A
		150A: 0.01V/A	300A: 0.01V/A	500A: 0.01V/A
Resolution		30A: 10mA	50A: 10mA	75A: 10mA
		150A: 100mA	300A: 100mA	500A: 100mA
Accuracy (DC,45-66Hz maximum continuous current)		30A: ±1%± 10mA	50A: ±1%± 10mA	75A: ±1%± 10mA
		150A: ±1%± 100mA	300A: ±1%± 100mA	500A: ±1%± 100mA
Delay time-lapse	Probe host	36ns	41ns	42ns
	BNC(1m)	5ns		
Terminal load requirements		≥100kΩ		
Power supply mode		DC 12V/2A (Standard adapter)		
Maximum voltage to ground(Bare conductor)		600V CAT II 300V CAT III		
Jaw diameter		20mm		
Cable length		1.5m (Current clamp handle to control box)		
Coaxial output line length		1m		
Current clamp handle size(L*W*H)		172.5*65*28mm		
Control box size(L*W*H)		100*50*27mm		
Probe body weight		500g		

Specifications subject to change without prior notice.



OIP3000 Series

Optically Isolated Probe

- Common-mode isolation voltage up to 60kVpk
- Supports input voltages from 25V to 2500V by matching different attenuators meeting diverse voltage measurement requirements
- Ensures 1.5% measurement accuracy within the effective accuracy bandwidth and DC gain accuracy better than 1%
- Rapid probe response: Power-on and measure capability (no warm-up delay), enabling real-time precision signal output

+ Specifications

Model	OIP3015	OIP3035	OIP3050	OIP3080	OIP3100
Bandwidth	DC-150MHz	DC-350MHz	DC-500MHz	DC-800MHz	DC-1GHz
Rise Time	2.3ns	1ns	0.7ns	0.43ns	0.35ns
Output Voltage	$\pm 2.5V$				
Isolation Voltage	60kV				
Accuracy	1% (typical)				
Measurement Voltage Range	OPA3-10 attenuator 10X (standard) : $\pm 25V$ OPA3-20 attenuator 20X (optional) : $\pm 50V$ OPA3-100 attenuator 100X (optional) : $\pm 250V$ OPA3-1000 attenuator 1000X (optional) : $\pm 2500V$				
Noise	40mV				
Terminating Impedance	1M Ω				
Operating Temperature	0~40°C				
Operating Humidity	$\leq 85\%$ RH				
Fiber Optic Cable Length	$\approx 2m$				
Power	Transmitter battery-powered with approx. 8 hours operating time and 30 days standby time Receiver USB 5V/2A or adapter-powered				

Specifications subject to change without prior notice.

owon® product line - Created by **LILLIPUT®**

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