

Tablet Oscilloscope

Automotive Oscilloscope

Optical-fiber Isolated Probe

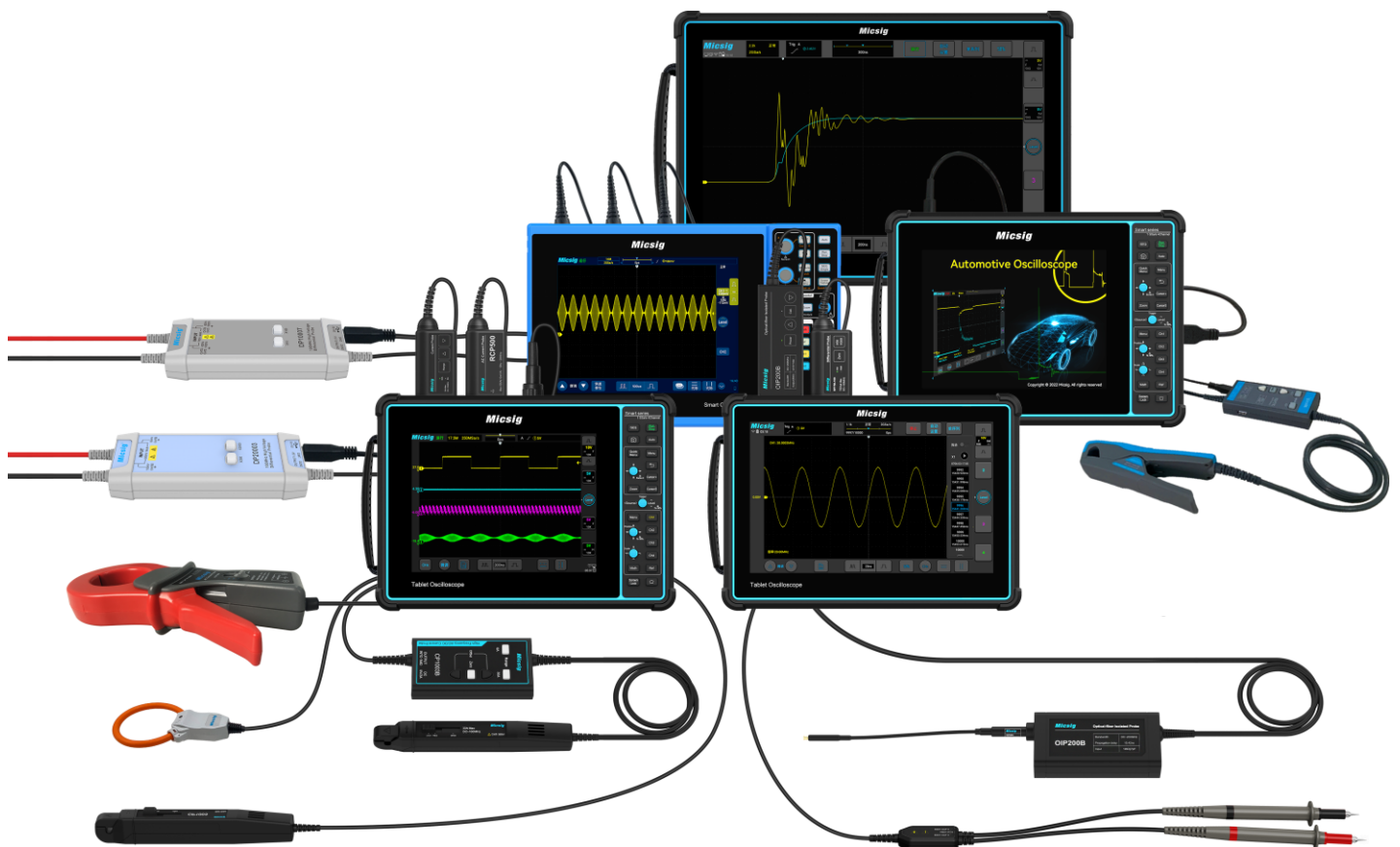
High Voltage Differential Probe

High Frequency AC/DC Current Probe

Low Frequency AC/DC Current Probe

AC Current Probe

# PRODUCT CATALOG



Version: V1.5

Shenzhen Micsig Technology Co., Ltd.  
[www.micsig.com](http://www.micsig.com)

# Tablet Oscilloscope

## TO Series

- ▶ Equipped with Micsig latest SigtestUI™ multitasking system
- ▶ 10.1" integrated touchscreen with 1280\*800 resolution
- ▶ Intelligent bi-directional probe interface -- Micsig UPI\*
- ▶ Standard bus trigger and decode: UART, CAN, LIN, SPI, I<sup>2</sup>C
- ▶ Built-in battery, works on the bench or in the field
- ▶ Intuitive UI & Android OS make sure to use at ease
- ▶ Support Wi-Fi, HDMI, USB 3.0/2.0, USB Type-C
- ▶ Segmented Memory support to capture 10000 events



\*UPI: Universal Probe Interface

Model / Ordering Number	TO3004	TO2004	TO1004
Analog Channels	4	4	4
Bandwidth	300 MHz	200 MHz	100 MHz
Rise Time	≤ 1.16ns	≤ 1.75ns	≤ 3.5ns
Sampling Rate (Max.)	2 GSa/s		1 GSa/s
Memory Depth (Max.)	220 Mpts		110 Mpts
Waveform Capture Rate (Max.)	300,000 wfms/s		78,000 wfms/s
Input Sensitivity Range	1mV/div~10V/div (1MΩ); 1mV/div~1V/div (50Ω)		1mV/div ~ 10V/div (1MΩ)
Bandwidth limit	20MHz, High & Low Pass (30Hz~Full)		20MHz, High & Low Pass (30KHz~Full)
Segmented Storage	Support (up to 10,000 Events)		Not support
Internal Storage	32GB		
I/O Ports	Wi-Fi, USB 3.0/2.0 Host, USB type-C, Grounding, HDMI, Trigger out		
Vertical Resolution	8-bit		
Display	10.1" TFT-LCD capacitive touch screen (1280*800), 11 x 10 divisions		
Trigger Types	Edge, Pulse Width, Logic, Video, Time Out, Slope, Runt, N Edge		
Serial Trigger and Decode	Std.: UART, LIN, CAN, SPI, I <sup>2</sup> C; Opt.: MIL-STD-1553B, ARINC-429, CAN FD		
Math	+, -, *, /, FFT, AX+B, Advanced Math		
Remote Control	PC Software, Smartphone App (iOS & Android), SCPI		
Dimension / Weight	265*192*50 mm / 1.9kg (with battery)		
Battery / Duration	7.4V, 7500 mAh / 2H		7.4V, 7500 mAh / 5H

# Tablet Oscilloscope

## STO Series

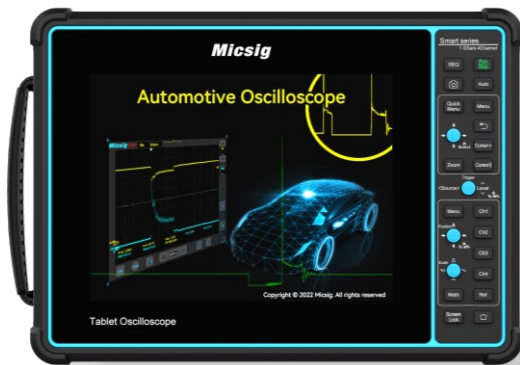


- ▶ Robust hardware design, intuitive Android operation system
- ▶ 32GB storage to save large data / videos / screenshots
- ▶ Rich connectivity: Wi-Fi, HDMI, USB 3.0/2.0 Host/Type-C
- ▶ Support various protocol decoding: UART, CAN, LIN, SPI, I<sup>2</sup>C
- ▶ 8" LCD touchscreen + compact knob/button panel operation
- ▶ Innovative PC & Smartphone App remote control
- ▶ Battery enabled & portable size for easy field work
- ▶ Intelligent bi-directional probe interface - Micsig UPI

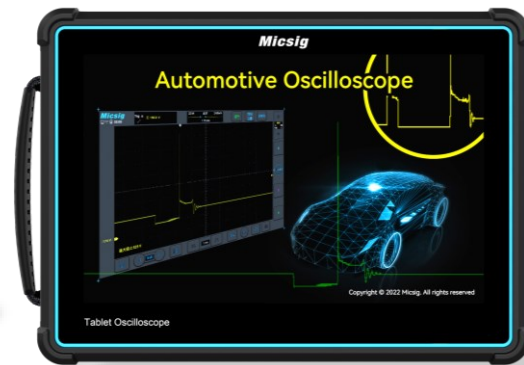
Model / Ordering Number	STO1004
Analog Channels	4
Bandwidth	100 MHz
Rise Time	≤ 3.5ns
Sampling Rate (Max.)	1 GSa/s (single-channel)
Memory Depth (Max.)	70 Mpts (single-channel)
Waveform Capture Rate (Max.)	130,000 wfms/s
Input Sensitivity Range	1mV/div~10V/div (1MΩ)
Internal Storage	32GB
Vertical Resolution	8-bit
I/O Ports	Wi-Fi, USB 3.0/2.0 Host, USB type-C, Grounding, HDMI, Trigger out
Display	8" TFT-LCD capacitive touch screen (800*600), 14 x 10 divisions
Trigger Types	Edge, Pulse Width, Logic, Video, Time Out, Slope, Runt, N Edge
Serial Trigger and Decode	Std: UART, LIN, CAN, SPI, I <sup>2</sup> C ; Opt: MIL-STD-1553B, ARINC-429, CAN FD
Bandwidth Filter	20MHz, High Pass, Low Pass (to 30KHz)
Auto Measurements	31 types
Remote Control	PC Software, Smartphone App (iOS & Android), SCPI
Dimension / Weight	265*192*50 mm / 1.9kg (with battery)
Battery (built-in) / Duration	7.4V, 7500 mAh Li-ion battery / 5H

# Automotive Oscilloscope

## SATO & ATO Series



SATO1004



ATO1004 / ATO2004 / ATO3004

-   
Auto Diagnostics
-   
IOS
-   
Android
-   
Touch Screen
-   
PC software
-   
Video Record
-   
HDMI
-   
Wi-Fi
-   
USB

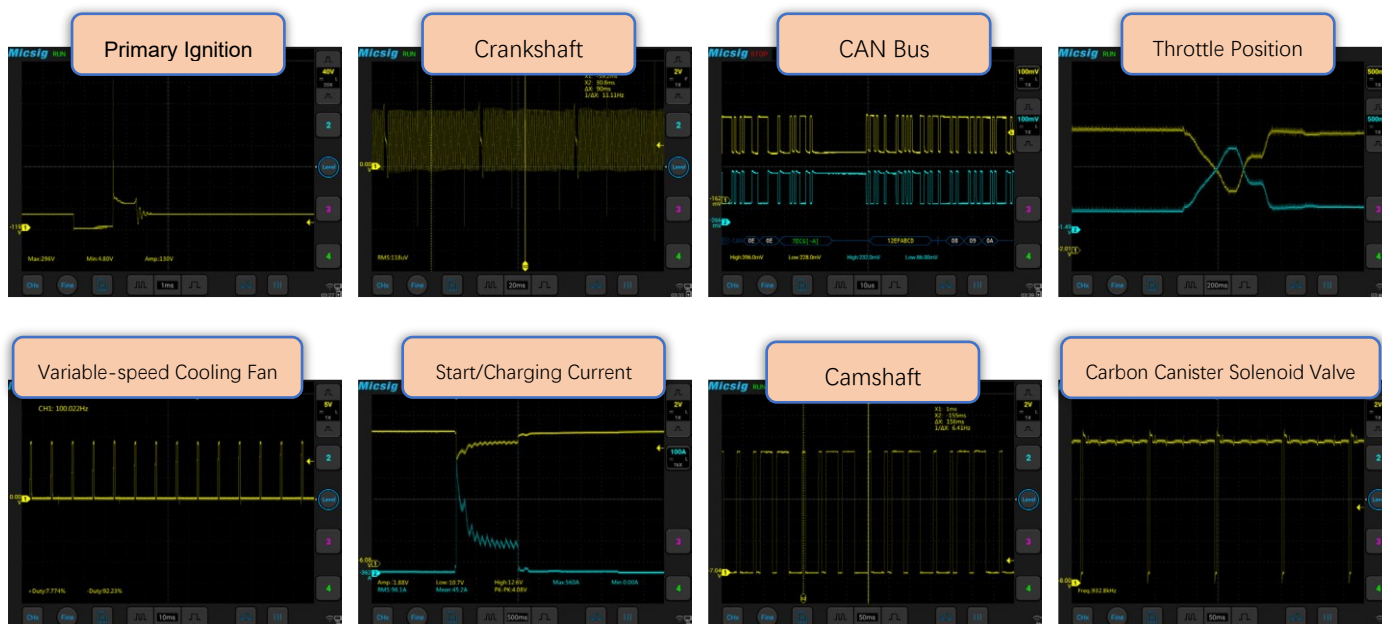
Model / Ordering Number	SATO1004	ATO1004	ATO2004	ATO3004
Analog Channels	4	4	4	4
Bandwidth	100MHz	100MHz	200MHz	300MHz
Sampling Rate (Max.)	1 GSa/s	1 GSa/s	2 GSa/s	2 GSa/s
Memory Depth (Max.)	70Mpts	110Mpts	220Mpts	220Mpts
Waveform Capture Rate (Max.)	130,000 wfms/s	78,000 wfms/s	300,000 wfms/s	300,000 wfms/s
Display	8" LCD, 800*600, 14*10 divisions	10.1" LCD, 1280*800, 11*10 divisions		
Support Diagnostic Tests	Charging Circuits, Starter Circuits, Sensors, Actuators, Ignition, Networks (CAN, CAN FD, LIN, Flexray, K line), Combination Tests			
Bandwidth Filter	20MHz, Low Pass (to 30KHz)		20MHz, Low Pass (to 30Hz)	
I/O Ports	Wi-Fi, USB 3.0/2.0 Host, USB type-C, Grounding, HDMI, Trigger out			
Battery / Duration	7.4V, 7500mAh / 5H		7.4V, 7500mAh / 2H	
Dimension / Net Weight	265*192*50mm / 1.9kg (with battery)			

## Features

- ❖ Comprehensive auto diagnostic presets
- ❖ Powerful signal capture and analysis capability
- ❖ Support PC & Smartphone remote control
- ❖ Portable design with all-in-one functions
- ❖ HDMI function for training & education
- ❖ Life-long free software online update



## References



### SATO1004 Standard Kit

	 2 x Passive probe	 2 pair x Test needle	 Power Cable
 4 x BNC banana lines	 2 pair x Alligator clips	 Adapter	
 Battery(built-in)	 Micsig		
 Screen Protector			

### SATO1004 Master Kit

	 2 x Passive probe	 2 pair x Test needle	 Power Cable
 4 x BNC banana lines	 2 pair x Alligator clips	 Adapter	
 Battery(built-in)	 Secondary Ignition Pickup		
 Screen Protector	 Multimeter Probe	 Hardshell Suitcase	

Remarks: ATO series has the same packaging configurations as SATO1004

# Optical-fiber Isolated Probe

## SigOFIT

With Micsig's exclusive SigOFIT™ optical isolation technology, the SigOFIT probe has extremely high CMRR and isolation voltage performance, unveils true signal within its full bandwidth range.

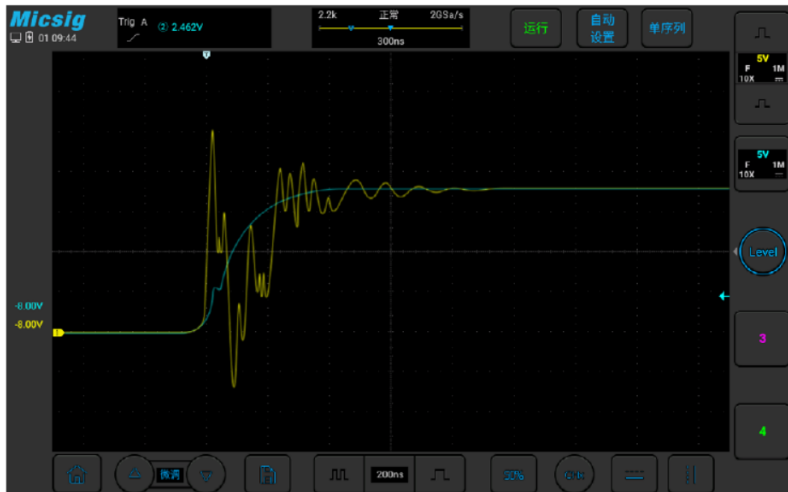
**Unveil  
Real Signal  
You've  
Never Seen**



**Common Mode Rejection Ratio (CMRR)**

Probe Tip	DC	1MHz	100MHz	200MHz	350MHz	500MHz	800MHz	1GHz
SMA	160dB	152dB	112dB	106dB	102dB	100dB	94dB	92dB
OP10	160dB	120dB	96dB	92dB	90dB	86dB	84dB	82dB
OP20	160dB	120dB	92dB	90dB	86dB	84dB	82dB	80dB
OP50	160dB	115dB	86dB	82dB	80dB	78dB	75dB	74dB
OP500	160dB	96dB	56dB	48dB	40dB	32dB	28dB	26dB
OP1000	160dB	90dB	50dB	42dB	34dB	26dB	22dB	20dB
OP2000	160dB	90dB	50dB	42dB	34dB	26dB	22dB	20dB

## SigOFIT



- CMRR up to 112dB at 100MHz, over 100dB at 500MHz
- DC gain accuracy up to 1%
- Safe to Test Gallium Nitride (GaN)

■ Differential Probe     
 ■ SigOFIT Probe

- Laser-powered, ensures long-time stable test
- Differential mode signals from  $\pm 1.25V$  to  $\pm 2500V$
- Compact design, simple to use



### Specifications

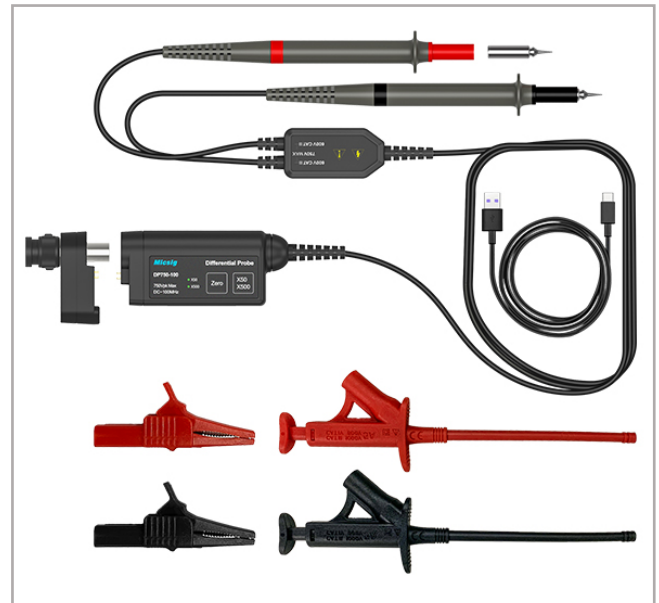
Model	MOIP01P	MOIP02P	MOIP03P	MOIP05P	MOIP08P	MOIP10P
Bandwidth	100MHz	200MHz	350MHz	500MHz	800MHz	1GHz
Rise Time	$\leq 3.5ns$	$\leq 1.75ns$	$\leq 1ns$	$\leq 700ps$	$\leq 438ps$	$\leq 350ps$
SMA input impedance	1M $\Omega$    10pF					
Output Voltage	$\pm 2.5V$			$\pm 1.25V$		
Differential Voltage Range	1X: $\pm 2.5V$ 10X: $\pm 25V$ 20X: $\pm 50V$ 500X: $\pm 1250V$ 1000X: $\pm 2500V$			1X: $\pm 1.25V$ 20X: $\pm 25V$ 50X: $\pm 62.5V$ 1000X: $\pm 1250V$ 2000X: $\pm 2500V$		
Noise	$< 1.41mVrms$					
Power Supply	USB Type-C; DC: 5V					
DC Gain Accuracy	1%					
Common Mode Voltage Range	60kVpk					
Cable Length	2 m (customizable)					

# High Voltage Differential Probe

## DP Series



▲ DP10007 / DP10013 / DP20003



▲ DP750-100

- ✧ High accuracy, low noise, measuring voltage up to 5600V
- ✧ Most compact design with professional performances
- ✧ One-press Zero calibration & Automatic overrange alarm
- ✧ Powered by oscilloscope USB output, no adapter needed
- ✧ DP750-100 can be powered directly by Micsig UPI oscilloscope
- ✧ DP750-100 automatically matches attenuation with Micsig UPI oscilloscope



Model / Ordering Number	DP10007	DP10013	DP20003	DP750-100
Bandwidth	100MHz	100MHz	100MHz	100MHz
Rise Time	≤ 3.5ns	≤ 3.5ns	≤ 3.5ns	≤ 3.5ns
Attenuation Range	10X, 100X	50X, 500X	200X, 2000X	50X, 500X
Gain Accuracy	±2%	±2%	±2%	±2%
Max. Differential Test Voltage (DC+AC PK)	70V (10X) 700V (100X)	130V (50X) 1300V (500X)	560V (200X) 5600V (2000X)	75V (50X) 750V (500X)
Max. Input Common Mode Voltage	CAT II 600V CAT I 1000V	CAT II 1000V	CAT III 1000V	CAT II 1000V
Table continued...				



	DP10007	DP10013	DP20003	DP750-100
Input Referred Noise	$\leq 15\text{mVrms (10X)}$ $\leq 60\text{mVrms (100X)}$	$\leq 40\text{mVrms (50X)}$ $\leq 230\text{mVrms (500X)}$	$\leq 160\text{mVrms (200X)}$ $\leq 920\text{mVrms (2000X)}$	$\leq 240\mu\text{Vrms}$ $(50X, 500X)$
Common Mode Rejection Ratio (CMRR)	$> 80\text{dB (50Hz / DC)}$ $> 60\text{dB (20KHz)}$ $> 45\text{dB (1MHz)}$	$> 80\text{dB (DC)}$ $> 60\text{dB (100KHz)}$ $> 50\text{dB (1MHz)}$	$> 80\text{dB (DC)}$ $> 60\text{dB (100KHz)}$ $> 50\text{dB (1MHz)}$	$> 80\text{dB (DC)}$ $> 60\text{dB (100KHz)}$ $> 50\text{dB (1MHz)}$
Input Impedance	$8\text{M}\Omega/1.25\text{pF}$ (differential) $4\text{M}\Omega/2.5\text{pF}$ (single end to ground)	$10\text{M}\Omega/1\text{pF}$ (differential) $5\text{M}\Omega/2\text{pF}$ (single end to ground)	$50\text{M}\Omega/1.25\text{pF}$ (differential) $25\text{M}\Omega/2.5\text{pF}$ (single end to ground)	$8\text{M}\Omega/1.25\text{pF}$ (differential) $4\text{M}\Omega/2.5\text{pF}$ (single end to ground)
Output Voltage	$\leq 7\text{V}$	$\leq 3\text{V}$	$\leq 3\text{V}$	$\leq 1.5\text{V}$
Power	1.25W	0.85W	0.85W	1W
Power Supply	DC 5V, USB	DC 5V, USB	DC 5V, USB	DC 5V, USB; UPI
Overrange Alarm	Flashing Light			
Input cable length	45cm			15cm
Output cable length	90cm			100cm
Operating temperature	0°C-45°C			
Operating humidity	10%-85%			

# High Frequency AC/DC Current Probe

## CP Series



CP503B / CP1003B



CP503 / CP1003

- ▶ AC/DC measuring capabilities
- ▶ Degaussing / Auto Zero setting
- ▶ Overload flashing light indicator
- ▶ Superior 1% DC accuracy (typical)
- ▶ USB adapter or Micsig UPI power supply
- ▶ Auto match Range with Micsig UPI oscilloscope (CP503/CP1003 only)

Model / Ordering Number	CP503	CP1003	CP503B	CP1003B
Bandwidth	50MHz	100MHz	50MHz	100MHz
Rise Time	≤ 7ns	≤ 3.5ns	≤ 7ns	≤ 3.5ns
Power interface	Micsig UPI		Standard BNC	
Range	6A (2X) / 30A (10X)			
Output Sensitivity	1V/2A (6A) 1V/10A (30A)			
DC Accuracy (typical)	±1%±10mA (6A) ±1%±50mA (30A)			
Delay	< 6ns (6A) < 6ns (30A)		< 30ns (6A) < 30ns (30A)	
Input Current Range	20mA~6Apk (6A) 50mA~30Apk (30A)			
Max. Current Input	30Apk, 60Apk-pk, 21.21Arms			
Noise	≤ 1.4 mA RMS (@ 20 MHz; Range 30A, 10X)			
Max. Working Voltage	CAT I 300V			
Max. Floating Voltage	CAT I 300V			
Max. Conductor Diameter	5mm			
Overload Indicator	Flashing light			
Power Supply	DC 12V (Micsig UPI)		DC 5V 3A (Std. Adapter)	

# Low Frequency AC/DC Current Probe

## CP2100 Series

- Bandwidth up to 2.5MHz
- Switchable Current Range: 10A / 100A
- Compact design with reliable performance
- USB power supply, no need extra adapter
- Compatible with any BNC-type oscilloscope

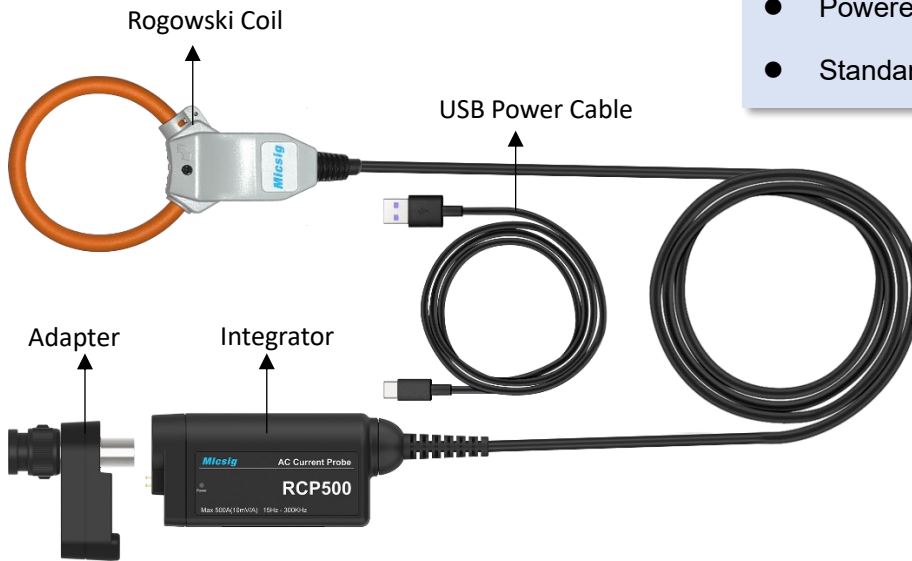


Model / Ordering Number	CP2100A	CP2100B
Bandwidth	DC~800KHz	DC~2.5MHz
Rise Time	≤437.5ns	≤140ns
Range	10A/100A	
Output Sensitivity	0.1V/A (10A) ; 0.01V/A (100A)	
DC Accuracy (typical)	3%±50mA (10A) 4%±50mA (100A, 500mA~40Apk) 15% (100A, 40Apk~100Apk)	
Signal Delay	< 150ns (10A) < 200ns (100A)	
Current Range	50mA~10Apk (10A) 1A~100Apk (100A)	
Max. Measuring Range	100Apk, 70.7Arms (DC+AC, pk) 200Apk-pk, 70.7Arms (AC)	
Max. Working Voltage	CATIII 300V ; CAT II 600V	
Max. Conductor Diameter	13mm	
Overrange Alarm	Buzzer beeps, flashing light	
Power Supply	DC 5V	
Input Cable Length	45cm	
Output Cable Length	90cm	
Operating Temperature	0°C-50°C	
Operating Humidity	10%-85%	

# AC Current Probe

## RCP500

- Compactly designed, exquisite appearance
- 1% high accuracy with less than 2mV noise
- Rogowski coil measurement system
- Powered directly by Micsig UPI
- Standard adapter for all BNC interface



Model / Ordering Number	RCP500
Bandwidth	15Hz - 300KHz (-3dB )
Current Range	200mA (pk) - 500A (pk)
Output Sensitivity	10mV/A
Output Noise	< 2mV rms
Typical Accuracy	1%
Phase Accuracy	≤0.8° (45Hz-66Hz)
Offset Voltage	±1mV or below
Max. Voltage	AC 10kV RMS (1 minute), (50Hz/60Hz) (Rogowski coil part only)
Conductor Under Test Diameter	≤φ50mm
Power Supply	Micsig UPI probe interface; Adapter (USB cable)
Conductor Positional Accuracy	Within ±1% (Deviation from the Center)
Influence of External Magnetic Fields	1.5% f.s. or below (400A/m,50Hz/60Hz)
Coil to Integrator Cable Length	2m (customizable)
Operating Temperature	-20-70°C
Operating Altitude	≤ 2000m

# AC Current Probe

## ACP1000

- Open clamp design
- BNC connection to all oscilloscope
- Operating frequency: 10Hz–100kHz
- Max. peak current: 2000A (2s)
- Output signal: mV/A
- Maximum accuracy: 1%
- Safety category: CAT III 600V



Model / Ordering Number	ACP1000
Input Current	0.1-10A 0.1-100A 1-1000A
Rated Output	100mV/A 10mV/A 1mV/A
Frequency	10Hz-100KHz
Rated Load	≥ 100KOhms
Accuracy	3%±10mV 2%±5mV 1%±1mV
Current range	0.1A-1000A
Frequency	10Hz–100kHz
Maximum accuracy	1%
Safety category	CAT III 600V
Max. conductor diameter	52mm
Size	111mm x 216mm x 45mm

Accessories

**MS-A-001**

BNC to banana lead



**MS-A-004**

IC pincer clips / pair



**MS-A-005**

multimeter probe / pair



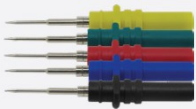
**MS-A-006**

alligator clips B / pair



**MS-A-007**

piercing needle / 5pcs



**MS-A-008**

automotive pickup



**MS-A-009**

flexible needle / pair



**MS-A-010**

multimeter pen



**MS-A-011**

alligator clips S / pair



**MS-A-012**

piercing test hook



**T3100**

HV probe 2000V/100X



**P130A**

BNC probe 600v/200MHz



**P300**

BNC probe 600v/300MHz



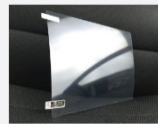
**MS-Adapter**

power adapter 12V 4A



**MS-Mask**

Screen protector



**MS-HB**

oscilloscope handbag



**MS-SC-1**

STO1004 & New TO series



**MS-SC-2**

Suitcase for SATO1004



**STO-BA-A750**

Battery for STO1000C/E

/STO2000C series



**MS-A-B747500**

Battery for STO1004/SATO

/ATO/TO series





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