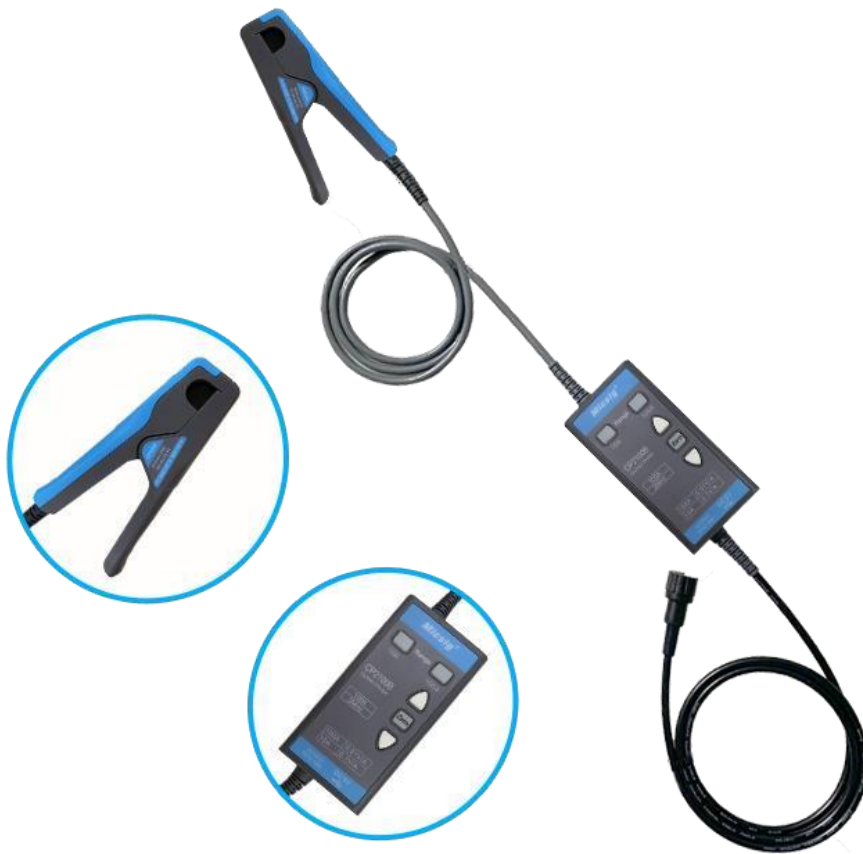


Micsig AC/DC Current Probes CP2100 Series User Manual

Applies to
CP2100A/CP2100B



1.電流プローブの BNC ケーブルをオシロスコープ(または DMM へ)接続し、5V 出力の USB ケーブルを接続して電流プローブに電力を供給します。

(USB5V 出力電源と接続用ケーブルは、ご使用者側でご用意ください。市販の USB 電源が利用できます)

2.電流に応じて、プローブの適切な範囲を選択します。対応するボタンのライトが緑色に変わります。

3.オシロスコープの設定を調整します。

1mS/div、100mV/div あたりにして、トリガーはオートモードを使い、トレースが見える様にして置きます。

入力インピーダンスは 1M Ω にして、DC 結合にします。

垂直軸(V 軸=A 軸)表示単位は、電流プローブのレンジ・感度により変換します。

電流モードを持った DSO(オシロ)の場合は、直読出来るよう設定します。

(対応するチャンネルのプローブ減衰乗数を設定します)

プローブが 100A(0.01V / A)レンジの場合、オシロスコープは 100X になります。

プローブが 10A(0.1V / A)の場合、オシロスコープは 10X になります。

4.オートゼロボタンを押して、プローブのオートゼロ調整を実現します。

ゼロ調整が成功すると、ブザーが 1 回鳴ります。そうでない場合、「ビーブ」音は 3 になり、ゼロ調整が失敗したことを示します。外部磁場は、プローブの DC ゼロにわずかに影響を与える場合があります。

ゼロ調整が完了した後、大きな範囲で動かさないでください。

5.電流プローブのクランプを開き、クランプヘッドが示す方向に従って

テスト対象の導体をクランプします。注:測定された電流の方向がクランプヘッドが示す方向と反対の場合、出力は負になります。

6.オシロスコープを調整して、最適に波形を表示させ、波形や電流値を確認します。

ご注意:

*電流が範囲を超えると、ブザーが長時間鳴り、ボタンのライトが点滅します。

*感度不足時はクランプするワイヤを2回3回と巻き付けると見やすくなります。

(実電流は、表示値の巻き数分の1となります)

*電流はアースに落ちる点でも、ある電位の点でも同じように測れます。

*DC 電流が大きく、飽和する場合、逆向きに電流を流せば相殺されます。

*DC 電流はあまり気にしないで、波形(AC)のみ注視する場合、オシロの入力を AC 結合にすれば、波形が安定した状態になります。

(AC 結合では低周波分が減衰しますからご注意。

AC 結合では DC 電流は測れません) 詳細は英文取説等ご参照ください

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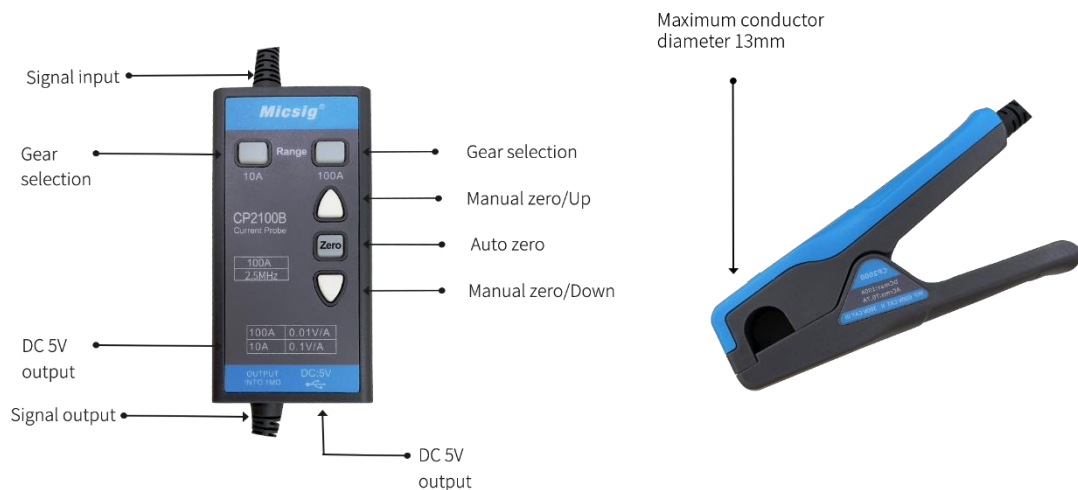
Safety Precautions

- The measuring circuit should be CAT II 600V or below.
- Do not measure bare conductor.
- Do not touch the conductor under test and the sensor head while measuring.
- Do not operate in wet/damp conditions.
- Do not touch the instrument or the object under test with wet hands.
- Please use this product within the scope permitted by the terminal.
- Please use this product as required.
- Please ground the product through the USB power cable.

1. Introduction

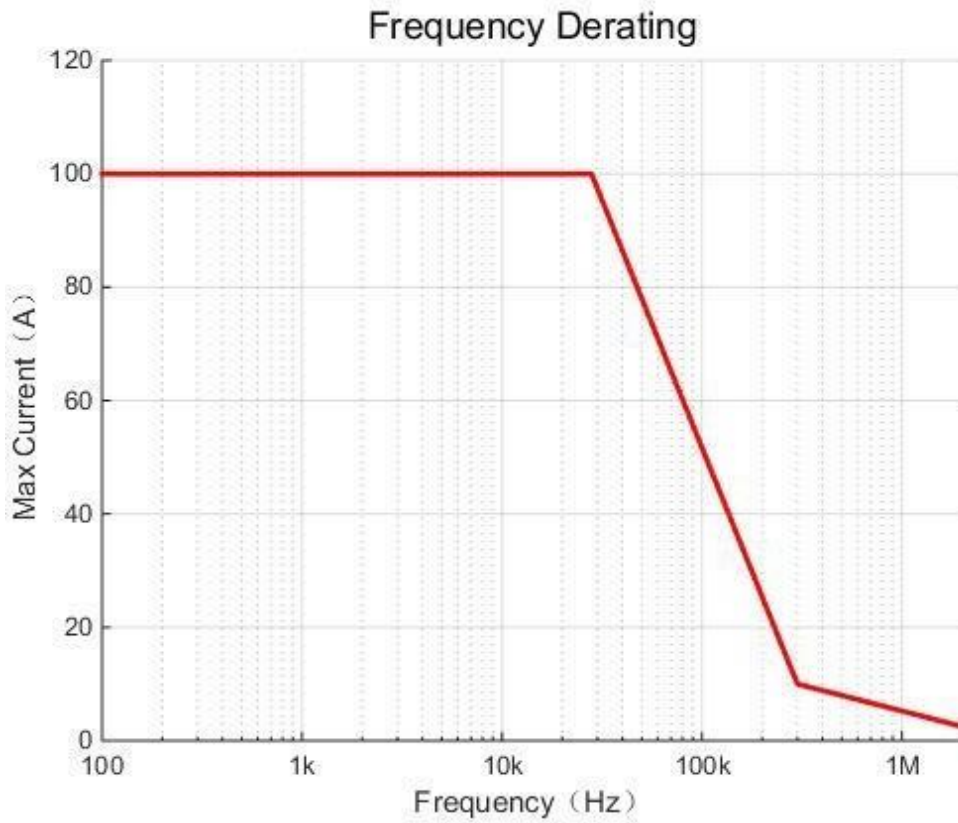
The CP2100 series is a current probe that can measure both DC and AC. It is a split-type design that is small and beautiful. It uses a standard BNC interface for oscilloscopes or a multi-connector for adapters. The maximum current that can be measured is 100A_{pk} (70Arms); it is divided into 2 models, CP2100A measurable bandwidth range is DC~800KHz, CP2100B measurable bandwidth range is DC~2.5MHz, The CP2100 series current probe has two optional ranges: 10A and 100A . With automatic and manual zero adjustment, USB power supply, no additional power supply, making measurement more convenient. Often used in motor drive, power frequency, inverter, power supply, avionics and other fields.

2. Appearance



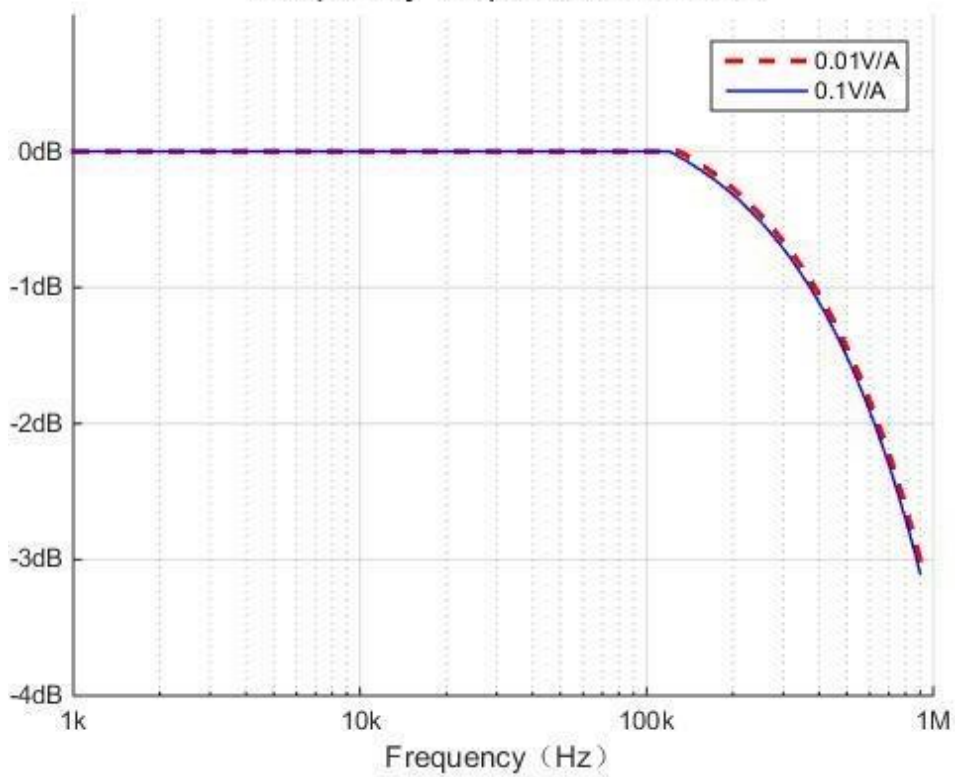
2. Specifications

Parameter	CP2100A	CP2100B
Bandwidth	DC~800KHz	DC~2.5MHz
Rise time	≤583ns	≤175ns
Ranges	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)	
DC signal linearity (typical)	DC signal linearity, typical on page 6	
Measuring range	50mA~10Apk (10A) 1A~100Apk (100A)	
Maximum measurable current	100Apk, 70.7Arms (DC+ACpk) 200Apk-pk, 70.7Arms (AC)	
Maximum working voltage	CAT III 300V CAT II 600V	
Maximum float voltage	CAT III 300V CAT II 600V	
Maximum conductor diameter	13mm	
Overload indication	The buzzer beeping, the button light flashing	
Power supply	DC 5V	
Probe head size	11*6.1*2.5cm	
Control box size	10.8*5.6*2.6cm	
Length	228cm	
Weight	290g	
Single package weight	1000g	
Single package size	29.5*23.6*5.7cm	
Operating Temperature	0°C ~50°C	
Storage Temperature	-20°C ~80°C	
Operating Humidity	5%~95% (0°C ~40°C, No condensation) 5%~65% (40°C ~50°C, No condensation)	
Operating Altitude	≤3000m	
Storage Altitude	≤12000m	



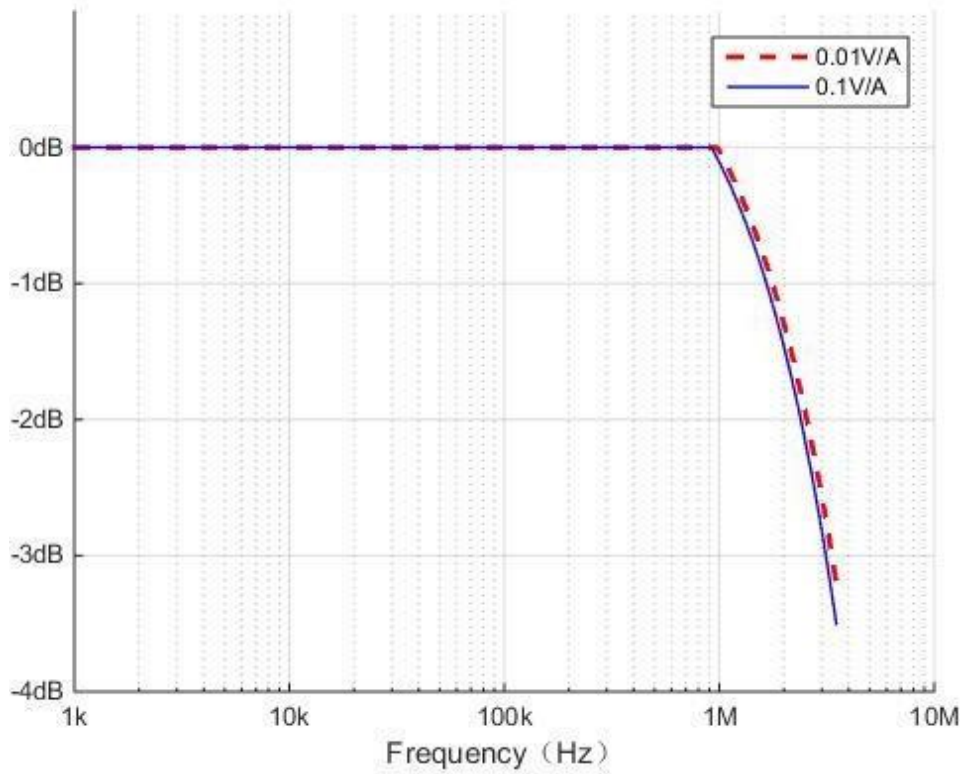
Maximum current versus frequency

Frequency response CP2100A

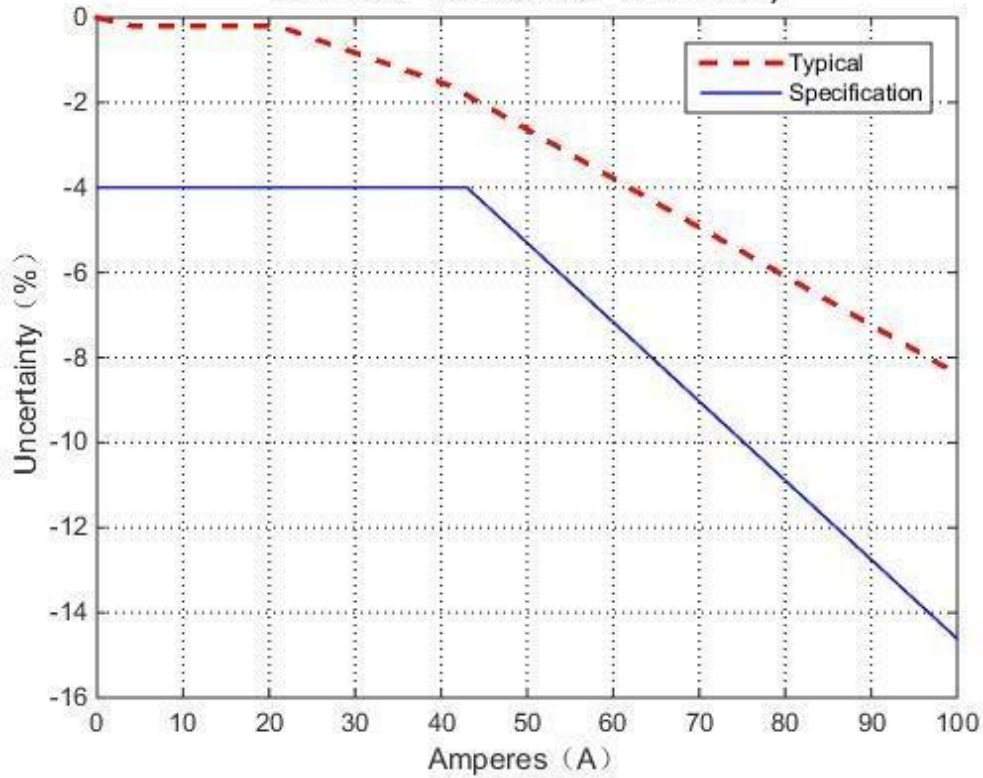


Amplitude-frequency characteristic curve -CP2100A

Frequency response CP2100B



Amplitude-frequency characteristic curve -CP2100B
CP2100 DC线性度 (0.01V/A)



DC signal linearity

3. Instructions:

1. Connect the BNC of the current probe to the oscilloscope (or other instrument) and connect the USB cable to power the current probe.
2. According to the current, select the appropriate range on the probe, the corresponding button light turns green.
3. Adjust the oscilloscope settings: input impedance $1M\Omega$; Select current or set display unit as A; Set the probe attenuation multiplier of the corresponding channel. If the probe is $100A(0.01V/A)$, the oscilloscope should be 100X, if the probe is $10A(0.1V/A)$, oscilloscope is 10X.
4. Press the auto zero button to realize the auto zero adjustment of the probe. After the zero adjustment is successful, the buzzer will beep for once. Otherwise, the “beep” sound will be 3, indicating that the zero adjustment fails; The external magnetic field may have a slight influence on the DC zero of the probe. After the zero adjustment is completed, please do not move it in a large range.
5. Open the clamp of the current probe to clamp the conductor under test according to the direction indicated by the clamp head. Note: If the measured current flow direction is opposite to the direction indicated by the clamp head, the output is negative.
6. Adjust the oscilloscope to get the best waveform.
Note: When the current exceeds the range, the buzzer will sound for a long time and the button light will flash.

5. Maintenance

During the product warranty period and under normal use, the company will be responsible for free maintenance due to the failure of the product itself due to quality problems.

Please keep the product as dry, clean and tidy. If there is dirt, use a soft cloth or sponge with alcohol to remove dirt. Do not use water.

In order to ensure the performance of the product, it is recommended to conduct an inspection or calibration once a year.

Version	Modify content	release time
1.0	First release	2019.05

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