5. Operation Steps

1) Power the probe: Power the probe with standard adapter;
2) Connect to oscilloscope: Connect the BNC end of the probe to oscilloscope channel (make sure the oscilloscope is grounded);
3) Select Range: Select appropriate voltage range according to the signal;
4) Connect the DUT: Use clips or hooks to connect the DUT.For reducing interference, twist the red and black input leads into a pair prior. If an over-voltage alarm occurs, disconnect the power supply and the circuit immediately;
5) Set on the oscilloscope: Set input impedance to 1MΩ, adjust the channel attenuation ratio.

*Note: Try not to use extension leads when measuring, it could bring more noise. If must use the extension leads, please twist the leads together to reduce noise, and the input frequency should not exceed 5MHz, if not, the test result may not be accutate.

6. Warranty

1) Micsig warrants the main body of this differential probe for 1 year.
During the warranty period, Micsig will be responsible for free maintenance for any failure caused by the quality of the product under normal use.
2) Under the following circumstances, Micsig will refuse to provide maintenance services or charge a fee:
a. No packaging or anti-counterfeiting label.
b. Anti-counterfeit label has been altered or blurred beyond recognition.
c. Unauthorized disassembly, such as: changing wires, dismantling internal components, etc.
d. No sales voucher or the content of sales voucher does not match the product.

7. Safety Precautions

1) Non-professionals do not open the product casing;
2) Do not use while case is open;
3) Do not touch any bare metal while testing;
4) Disconnect the power supply and circuit immediately when over range;
5) Do not use in flammable and explosive environments;

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Quick Guide

High Voltage Differential Probe DP series

(Intergrated design)

1、Overview

The Micsig DP Series High-Voltage Differential Probes provide 100MHz bandwidth, with a maximum differential input voltage of 3000Vpk. A standard BNC interface ensures compatibility with all major oscilloscope brands, and metal shielding enhances anti-interference performance. The probe supports functions including zero calibration, overload protection and power-off memory.

The noise as low as 7.5mVrms and dual-range design optimize the signal-to-noise ratio across different voltage levels. A high-impedance input and low input capacitance minimize loading effects, delivering ±1% measurement accuracy and excellent common-mode rejection (CMRR).The 5MHz bandwidth limit reduces high-frequency noise for accurate, high-speed differential voltage measurements.

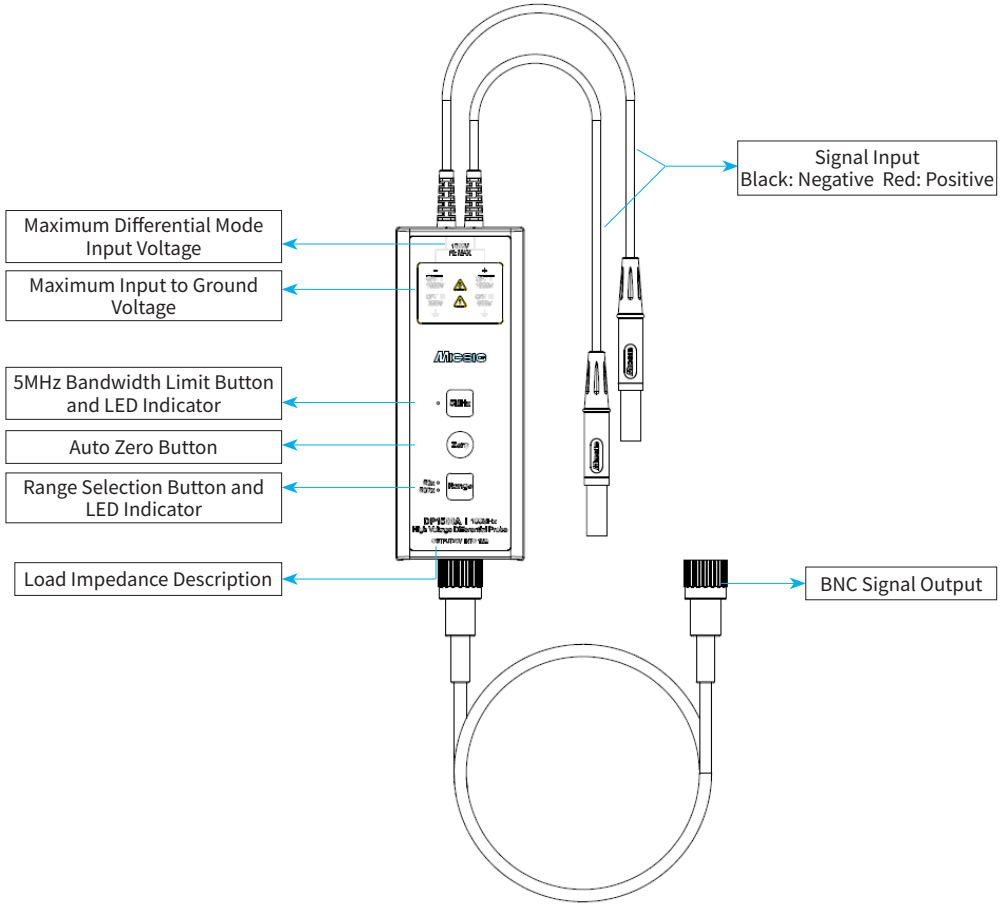
This product is ideal for EV power systems, solar inverters, switching power supplies, and floating or isolated high-voltage signal testing.

2. Characteristcs

Model	DP700A	DP700A Pro	DP1500A	DP1500A Pro	DP3000A	DP3000A Pro
Bandwidth	100MHz	100MHz	100MHz	100MHz	100MHz	100MHz
Rise time	⩽ 3.5ns	⩽ 3.5ns	⩽ 3.5ns	⩽ 3.5ns	⩽ 3.5ns	⩽ 3.5ns
Attenuation	20X / 200X	20X / 200X	50X / 500X	50X / 500X	100X / 1000X	100X / 1000X
Accuracy	±2%	±1%	±2%	±1%	±2%	±1%
Max. input Differential Voltage (DC+AC PK)	70V（20X） 700V（200X）		150V（50X） 1500V（500X）		300V（100X） 3000V（1000X）	
Max. Voltage to ground	CAT I 600V CAT II 450V		CAT II 1000V CAT III 600V		CAT II 1000V	
Noise	Full Bandwidth: 20X: ⩽ 20mVrms 200X: ⩽ 90mVrms		Full Bandwidth: 50X: ⩽ 50mVrms 500X: ⩽ 200mVrms		Full Bandwidth: 100X: ⩽ 100mVrms 1000X: ⩽ 500mVrms	
CMRR	DC : >-80dB 100kHz: >-60dB 10MHz: >-30dB 100MHz: >-26dB		DC : >-80dB 100kHz: >-60dB 10MHz: >-30dB 100MHz: >-26dB		DC : >-80dB 100kHz: >-60dB 10MHz: >-30dB 100MHz: >-26dB	
Delay time	11.7ns(20X) 11.7ns(200X)		12.5ns(50X) 12.1ns(500X)		11.7ns(100X) 11.5ns(1000X)	
Input impedance	6MΩ/1.67pF (differential) 3MΩ/3.3pF (each input to ground)		13.2 MΩ/1.67pF (differential) 6.6MΩ/3.3pF (each input to ground)		30MΩ/0.78 pF (differential) 15MΩ/1.57pF (each input to ground)	
Output voltage	⩽ 3.5V		⩽ 3V		⩽ 3V	
Output impedance	1MΩ					
Power supply	DC 5V					
Overrange	LED flashes, Buzzer beeps					
Dimensions	L*W*H: 13.5 *5*2.5 /cm					
Cable length	Approx. 31 cm (Input); Approx. 130cm (Output)					
Temperature	Operating: 0°C ~ 40 °C Non-operating: -30 °C ~ 70 °C					
Humidity	Operating: 5 ~ 85% RH (0°C ~ 40 °C) Non-operating: 5% ~ 85% RH (⩽ 40 °C) ; 5% ~ 45% RH (40 °C ~70 °C)					
Implementation standard	Q/MKX001-2023					
LVD standard	EN 61010-1:2010; EN IEC 61010-2-030:2021; EN 61010-031:2015+A1:2021+A11:2021					
EMC standard	EN IEC 61326-1:2021; EN IEC 61326-2-1:2021; EN61000-3-2:2019+A1:2021; EN61000-3-3:2013+A1:2019+A2:2021					

3. Appearance

The main body of the DP series high-voltage differential probe (intergrated version) is as follows:



4. Precautions

1) The bandwidth of the oscilloscope should be no less than the bandwidth of the probe, channel input impedance should be 1MΩ.
2) Calibrate the probe before use:
Short-circuit the input ends, power on, press “Zero” button, after hearing a “Di” sound, then calibration succeeds; Otherwise, if you hear “Di Di Di”, the calibration fails, then you need to calibrate again;
3) Recommend to use after 10 mins warm-up to get more accurate result.
4) When the range LED indicator flashes and beeps rapidly, it indicates Overvoltage warning, please switch the probe to higher range or stop testing.