

# High-sensitivity Current Probe

**701917** DC to 50 MHz

**701918** DC to 120 MHz

**Precision Making**

**Low noise compact current probe for measuring low level currents from 1 mA to 5 A. Best suited for design and verification applications requiring high-sensitivity at low currents.**

#### High-sensitivity (10x more sensitive than previous models)

In comparison with existing models (701928/701929/701932/701933), the 701917/701918 has 10 times higher sensitivity (Output rate: 1 V/A). By using these probes, low current of about 1 mA can clearly be observed.

#### Slim and light weight sensor head

The sensor head is smaller than existing models, making it easy to use in narrow spaces.

#### Automatic zero-adjustment and demagnetization

Zero-adjustment can be done by simply pushing the button on the termination box. Demagnetization can also be done by holding down the DEMAG button for a quicker setup.

#### Supports DL/DLM/SL series

Adopted BNC connector as the output terminal. The power can be provided from the probe power option on a DL/DLM/SL series instrument by the probe power supply.

#### Application

- LED driver, controller, power supply verification
- Evaluation of the embedded power supply
- Measurement of the power consumption of a low voltage device (FPGA)
- Evaluation of the embedded component for household appliances and car electronics.



## Specifications

Items	701917	701918
Bandwidth <sup>1</sup>	DC to 50 MHz (-3 dB) (See Fig. 1)	DC to 120 MHz (-3 dB) (See Fig. 1)
Rise time <sup>1</sup>	7.0 ns or less	2.9 ns or less
Maximum continuous input range	5 Arms (See Fig. 2, for derating by frequency)	
Maximum peak current	7.5 A <sub>peak</sub> , non-continuous	
Output voltage rate <sup>1</sup>	1 V/A	
Amplitude accuracy <sup>1,2</sup>	±1% of reading ±1 mV typical, ±3.0% of reading ±1 mV	
Noise <sup>1</sup>	60 μArms typical, 75 μArms maximum (with a 30 MHz bandwidth measuring instrument)	
Input impedance	See typical characteristics on Fig. 3	
Temperature coefficient for sensitivity <sup>1,3</sup>	Within ±2% of reading (input: 50 Hz, 5 Arms, after Auto-zero adjustment, without a range of 23±5°C)	
Propagation delay	10 ns typical	
Maximum rated power	3.2 VA (within maximum input range)	
Rated supply voltage	±12 V ±0.5 V	
Operating temperature and humidity	0 to +40°C, 80% RH or less (no condensation)	
Storage temperature and humidity	-10 to +50°C, 80% RH or less (no condensation)	
Effect of external magnetic fields <sup>4</sup>	20 mA or less	5 mA or less
Diameter of measurable conductor	φ5 mm	
Cable lengths	Sensor cable: 1.5 m, Power cable: 1.0 m	
External dimensions	Sensor side: 155 (W) × 18 (H) × 26 (D) mm Termination side: 29 (W) × 83 (H) × 40 (D) mm	
Weight	Approximately 250 g	
Accessories	User's manual, carrying case	
Standards Compliance	Safety	EN61010-2-032
	EMC	EN61326-1

\*1: Accuracy: 23±3°C, thirty minutes after turning ON the power. When used with a digital oscilloscope having an input impedance of 1 MΩ±1%.

\*2: DC or 45 to 66 Hz. \*3: This value is added to the amplitude accuracy.

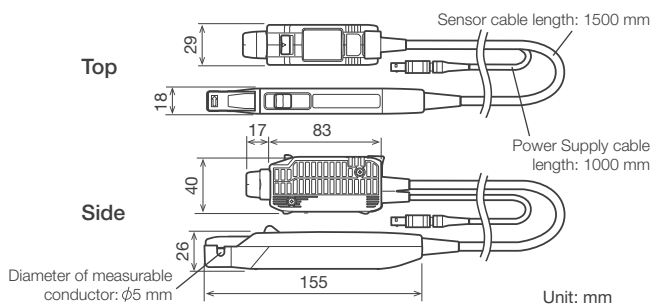
\*4: in a DC or 60 Hz, 400 A/m magnetic field.

## Models

Model	Product	Description
701917	Current probe	5 Arms, DC to 50 MHz, High-sensitivity
701918	Current probe	5 Arms, DC to 120 MHz, High-sensitivity

\*For power supplying, Probe power option for DL/DLM/SL series or Probe power supply are necessary. There is a spatial restriction when connecting to the ScopeCorder modules.

## Dimensions



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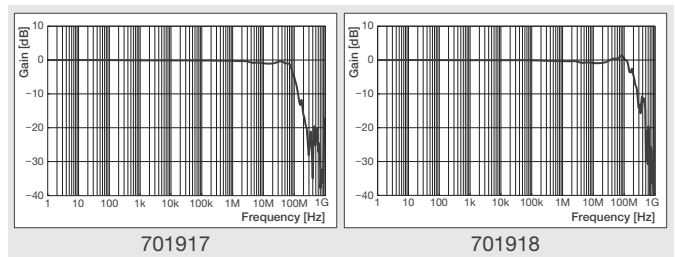


Fig. 1: Typical frequency characteristic

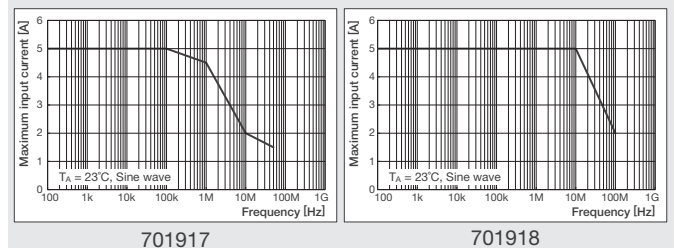


Fig. 2: Typical derating by frequency

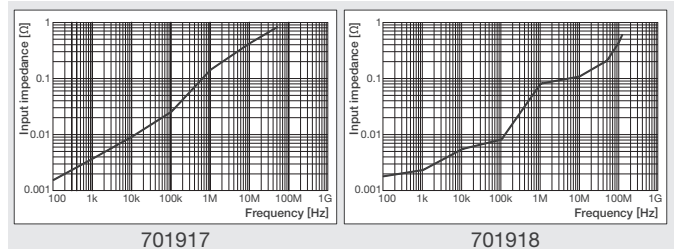


Fig. 3: Typical input impedance

## Related products

### 701934 Probe Power Supply

A power supply for current probes, FET probes, and differential probes. Probes work with both DL probe power connectors and the 701934 probe power supply. Supplies power for up to four probes, including large current probes. Supports both AC100 V and 200 V power supply requirements.

- Number of power supply connectors: 4
- Output voltage: ±12 V±0.5 V
- Rated output current: +12 V: 2.5 A (the total value of four outputs)  
-12 V: 2.5 A (the total value of four outputs)
- Operating temperature and humidity range:  
0 to 40°C, 80% RH or less (no condensation)
- Storage temperature and humidity range:  
-10 to 50°C, 80% RH or less (no condensation)
- Rated supply voltage: AC100 to 240 V (50/60 Hz)
- Maximum rated power: 190 VA
- External dimensions: Approx. 80 (W) × 119 (H) × 200 (D) mm
- Weight: Approx. 1.2 kg

Notice: 701934 does not support 701928 and 701929.



### NOTICE

- Before operating the product, read the user's manual thoroughly for proper and safe operation.

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