

Current Transducer

CTI series product

CT-050I 50A/DC~100kHz

CT-100I 100A/DC~100kHz

CT-200I 200A/DC~100kHz

CT-300I 300A/DC~100kHz



1. Summary

CTI series transducer is used to test on DC, AC and pulse current. The primary side is insulated from the secondary side. The close loop transducer applied Hall theory has high precision, straight linearity, low temperature drift, low insertion loss, and strong anti-interference ability. CTI series have been widely used in the current test of power supply field.

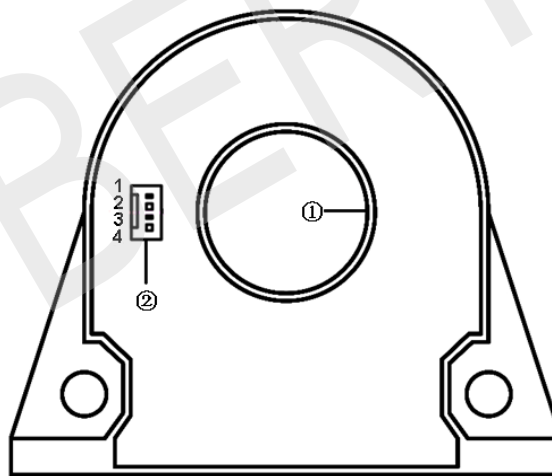
CTI series include CT-050I(50A), CT-100I(100A), CT-200I(200A) and CT-300I(300A). The test aperture diameter is 20 mm, easy to use and reliable.

2. Application

- ✧ AC variable frequency speed regulation, servo motor
- ✧ DC motor speed regulation
- ✧ Battery power supply
- ✧ UPS
- ✧ New energy vehicle electronics
- ✧ SMPS

3. Product and Accessories

■ Product instruction

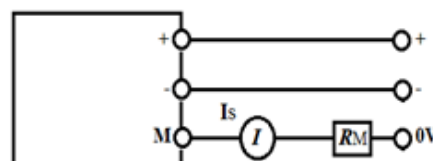


CIT series appearance diagram

- ✧ **1 Transducer Jaw: The input port of the cable under test, diameter 20mm**
- ✧ **2 Communicating Port: including the current output and power port. The pin is defined as the diagram below**

Secondary:

- 1: +12~15V
- 2: -12~15V
- 3: M
- 4: NC



CTI series port diagram

4. Product Specification

4.1 Electronical parameter

Type		CT-050I		CT-100I		CT-200I		CT-300I		
Primary rated current (RMS) I_{PN}		50A		100A		200A		300A		
Primary peak current I_{PM}		±70A		±150A		±300A		±500A		
Conversion ratio K_N		1:1000		1:2000		1:2000		1:2000		
Secondary current I_S		±50mA		±50mA		±100mA		±150mA		
Measuring resistance R_M	Range	R _{M min}	R _{M max}	R _{M min}	R _{M max}	R _{M min}	R _{M max}	R _{M min}	R _{M max}	
		@ ±12V	I _{PN}	0Ω	140Ω	0Ω	121Ω	0Ω	50Ω	0Ω
		I _{PM}	0Ω	70Ω	0Ω	74Ω	0Ω	26Ω	0Ω	7Ω
	@ ±15V	I _{PN}	0Ω	200Ω	0Ω	179Ω	0Ω	73Ω	0Ω	43Ω
		I _{PM}	0Ω	110Ω	0Ω	112Ω	0Ω	40Ω	0Ω	17Ω
DC supply voltage V_c (±5%)		±12V ... ±15V (±5%)								
Current consumption I_c		≤28mA +I _S (@ ±12V)								
Insulation voltage between the primary and secondary V_d		6kV _{rms} (50Hz /1 min)								

4.2 Precision-dynamic parameter

Type	CT-050I	CT-100I	CT-200I	CT-300I
Precision X_G @TA=25°C	±0.5%			
Linearity ε_L	±0.1%			
Zero offset current I_o	≤±0.2mA			
Magnetic offset current I_{oM}	≤±0.2mA			
Temperature offset current I_{oT} (-10°C~70°C)	≤±0.64mA(±0.2mA 典型值)			
Response time t_r	<1us			
Current rising rate di/dt	>100A/us			
Band width (±3dB) BW	100kHz			

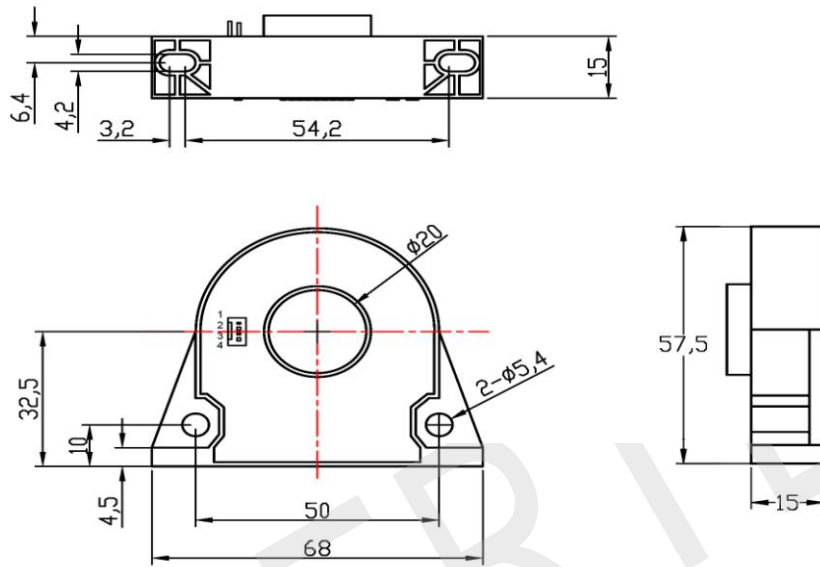
4.3 Ordinary parameter

Type	CT-050I	CT-100I	CT-200I	CT-300I
Operating temperature T_A	-10~70°C			
storing temperature T_S	-25~85°C			
coil resistance R_S	11Ω	23Ω	23Ω	23Ω
Mass m	55g	68g	68g	68g

5. User Tips

- ✧ Please pay attention to the pole of the port when connecting the secondary port.
- ✧ Temperature of conductor under test cannot exceed 100°C
- ✧ Wrong circuit could possibly damage the sensor
- ✧ When I_s flows according to the arrow direction on I_p , the output is positive.

6. Mechanical Specification



Mechanical Specification

- ✧ Natural tolerance: $\pm 0.5\text{mm}$
- ✧ Fastening point: 2 hole $\text{Ø}5.4\text{mm}$
- ✧ Primary Aperture: $\text{Ø}20\text{mm}$
- ✧ Secondary Connection: 2.54mm connector

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