



Speciality Magnetic Components  
QUALIFIED TO ISO 9001:2008

## Miniature Hall Effect Current Transformer Type HTP50CPT



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The HTP50CPT is a closed loop Hall Effect Current Transformer suitable for measuring currents up to 50A. The product provides an output current into an external load resistance which is galvanically isolated from the primary conductor. All contacts, including the primary, are designed for PCB mounting.

The HTP50CPT complements the existing HTP range giving comparable accuracy in a substantially smaller volume, and a smaller footprint. There are three separate primary conductors which should be connected in parallel to give the full rated current.

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### Features

- Miniature Package
- 5kV Proof Stress
- Fast Response
- Contacts Via PCB
- Designed In Quality

### Benefits

- Small PCB Footprint
- Galvanic Isolation
- High Accuracy
- Ease Of Assembly
- High Reliability

### Applications

- Variable Speed Drives
- UPS Systems
- D.C Power Supplies
- Low Frequency Current Measurement
- Overcurrent Protection
- Robotics
- Frequency Inverters
- Power Factor Monitoring

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## TECHNICAL DATA

Nominal Primary Current	50A
Measurement Range	$\pm 200\text{A}$ peak ( load resistance = $20\ \Omega$ )
Turns Ratio (primaries in parallel)	1000:1
Nominal Power Supply	$\pm 15\text{V} \pm 5\%$
Supply Current	16mA per rail + output current
Load Resistance	20 to $80\ \Omega$
Operating Temperature Range	0 to $+85^\circ\text{C}$
Storage Temperature Range	$-25^\circ\text{C}$ to $+90^\circ\text{C}$

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## SPECIFICATION

Linearity	0.1% of nominal primary current
Overall accuracy	0.5% of nominal primary current
Output Offset Current	$< \pm 100\ \mu\text{A}$ at primary current = 0
Output Offset Current After Overload	$< \pm 250\ \mu\text{A}$ at primary current = 0
Zero Offset /Temperature	$< 3\ \mu\text{A}/^\circ\text{C}$
Zero Offset/Supply Variation	$< 2\ \mu\text{A}/\text{V}$
Coil Resistance at $25^\circ\text{C}$	$30\ \Omega$
Primary Conductor Resistance (each conductor)	$300\ \mu\Omega$
Bandwidth (1dB)	DC to 70kHz
di/dt following	$> 50\text{A}/\mu\text{s}$
Delay time	$0.4\ \mu\text{s}$
dV/dt Immunity	$10\text{kV}/\mu\text{s}$
Proof Stress Voltage	5kV a.c., r.m.s, 50Hz for 1minute
Creepage Distance	7.4 mm
Clearance Distance	7.4 mm

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## GENERAL DATA

Weight	11.4g nominal
Housing	PBT 15% Glass Filled Flammability Rating V0 , CTI Rating $> 140$
Mounting	Direct mounting to PCB by 9 pins
Primary conductor material	Copper Tin Plated
Signal Sense	Positive output obtained when current flows as shown by arrow.

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## DIMENSIONS

