



Speciality Magnetic Components  
QUALIFIED to ISO 9001:2008

## Hall Effect Current Transformer : HTP25MLR

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The HTP25MLR is a closed loop Hall Effect Current Transformer, suitable for measuring currents up to 25A and operating from a single 5 volt power supply. The product provides both an output voltage, proportional to the current in the galvanically isolated primary conductor, centred on 2.5 V and a voltage reference output of 2.5V. By this means bipolar currents may be measured.

All contacts, including the primary, are designed for PCB mounting.

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### Features

- Miniature Package
- 3.25kV Proof Stress
- Fast Response
- All Contacts via PCB
- Single 5V Power Supply
- Cost Effective Design
- D.C. Coupled Design

### Benefits

- Small PCB Footprint
- Galvanic Isolation
- No Primary Side Power Supply
- No Shunt Resistor Required
- No Switching Noise
- Built In Semiconductor Protection
- High Reliability

### Applications

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

## TECHNICAL DATA

Nominal Primary Current	25A (D.C or r.m.s. A.C.)
Scale Factor	40mV/A
Power Supply Voltage	5V $\pm$ 5%
Power Supply Current	20mA min., 70mA max.
Output Load	4.7k $\Omega$ min.
Voltage Reference Output	2.50V nominal
Operating Temperature Range	0 to +70°C
Storage Temperature Range	-25°C to +85°C

## SPECIFICATION (5V Supply, 25°C )

Scale Factor Error	$\pm$ 1% max.
Scale Factor Drift	100ppm/°C max. average over 0 to 70°C
Reference Voltage Error	$\pm$ 50mV
Reference Voltage Drift	$\pm$ 200 $\mu$ V/°C average over 0 to 70°C
Zero Offset Voltage (Relative to Reference)	$\pm$ 12.5mV
Zero Offset Drift (Relative to Reference)	<100 $\mu$ V/°C average over 0 to 70°C
Primary Conductor Resistance	700 $\mu$ $\Omega$ max.
Linearity Limit	$\pm$ 50A min.
Linearity Error	0.2% max. of Nominal Primary Current
1dB Bandwidth	dc to 25kHz
Output Rise Time	0.8 $\mu$ s max. at 50% pulse height
Slew Rate (di/dt) Referenced to Input	>50A/ $\mu$ s
Shock and Vibration Test	15g min.
Isolation Proof Stress Voltage	3.25kV a.c., rms, 50Hz for 1 minute
Creepage Distance	4.3 mm min
Clearance Distance	4.3 mm min

## GENERAL DATA

Weight	15g
Housing Material	Polyester 15% Glass Fibre Filled Flammability rating V0, CTI rating >140
Primary conductor material	Triple PTFE insulated tinned copper wire
Signal Sense	A positive voltage is obtained when current flows in the direction of the arrow from +I/P to -I/P

## DIMENSIONS

