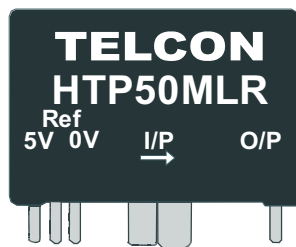




Speciality Magnetic Components
QUALIFIED to ISO 9001:2008

Hall Effect Current Transformer : HTP50MLR



The HTP50MLR is a closed loop Hall Effect Current Transformer suitable for measuring currents up to 50A and operating from a single +5V power supply. The product provides both an output voltage proportional to the current in the galvanically isolated primary conductor, centred on 2.5V and a voltage reference output of 2.5V. This enables measurement of bi-polar currents.

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

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	50A (see Note 1)
Scale Factor	20mV/A (see Note 1)
Power Supply Voltage	5V \pm 5%
Power Supply Current	20mA min., 70mA max.
Output Load	4.7k Ω min.
Voltage Reference Output	2.5V nominal
Operating Temperature Range	0 to +70°C
Storage Temperature Range	-40°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 μ V/°C average over 0 to 70°C
Zero Offset Voltage (Relative to Reference)	\pm 12.5mV
Zero Offset Drift (Relative to Reference)	<100 μ V/°C average over 0 to 70°C
Primary Conductor Resistance	60 μ Ω max.
Linearity Limit	\pm 100A min.
Linearity Error	0.2% max. of Nominal Primary Current
1dB Bandwidth	dc to 25kHz
Response Time	0.8 μ s max. at 50% pulse height
Output Rise Time	<1.2 μ s max 10 to 90%
Slew Rate (di/dt) Referenced to Input	>50A/ μ 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 Filled UL94V0
Primary conductor material	Copper Tin Plated
Signal Sense	A positive voltage is obtained by a current in the direction of the arrow.

Note 1: Variants of this product are also available with the following scale factors: - 40mV/A, 60mV/A, 80mV/A, and 100mV/A as the HTP25MLR, HTP18MLR, HTP12MLR and HTP10MLR respectively.

DIMENSIONS

