

280-008

LEM HEME

PIONEERING POWER ELECTRONICS

LEM CURRENT TRANSDUCERS

Module LTA 50PR
(Instantaneous and True RMS Outputs).

Definition - Principle

The LEM type LTA50PR is a transducer employing the Hall Effect to measure D.C. and complex waveform A.C. currents in a non invasive manner. Galvanic isolation is provided between the primary (measured) and the analogue output (control) signal.

A feature of the LTA50PR is the provision of the instantaneous voltage output and the true RMS voltage output simultaneously.

As an alternative, it is also possible to use the instantaneous current output by itself.

Electrical Data

Nominal current I_N	: 50 Amps rms.
Output Modes	
(1) Current Output (Instantaneous)	: 1mA/Amp
Measuring Range	: 0 to $\pm 160A$. (Supply voltage $\pm 15V$; R meas = 50 Ohms).
Overall Accuracy at 25°C	: $\pm 0.5\%$ of I_N
Linearity	: $\pm 0.1\%$ of I_N
Turns Ratio	: 1: 1000
Internal Resistance	: 25 Ohms
Zero Drift (between 0°C and 70°C)	: Max. $\pm 0.6mA$
Response Time	: < 1 microsecond
di/dt Accurately followed	: > 50 Amps per microsecond
Frequency Range	: DC to 100 KHz
(2) Voltage Output (Instantaneous)	: 20mV/Amp
Measuring Range	: 0 to $\pm 50 A$
Overall Accuracy at 25°C	: $\pm 1\%$ of I_N
Linearity	: $\pm 0.1\%$ of I_N
Zero Drift (between 0°C and 70°C)	: Max. $\pm 12mV$
Response Time	: < 1 microsecond
di/dt Accurately followed	: > 50 Amps per microsecond
Frequency Range	: DC to 100 KHz
(3) Voltage Output (True RMS)	: 20mV/Amp
Measuring Range	: $\pm 50 A$
Overall Accuracy at 25°C	: $\pm 1\%$ of I_N
Linearity	: $\pm 0.2\%$ of I_N
Zero Drift (between 0°C and 70°C)	: Max. $\pm 10mV$
Averaging Time Constant	: 100 milliseconds
Frequency Range	: 15 Hz to 100 KHz
Crest Factor	: 3 for stated accuracy
Output Resistance	: < 1 Ohm

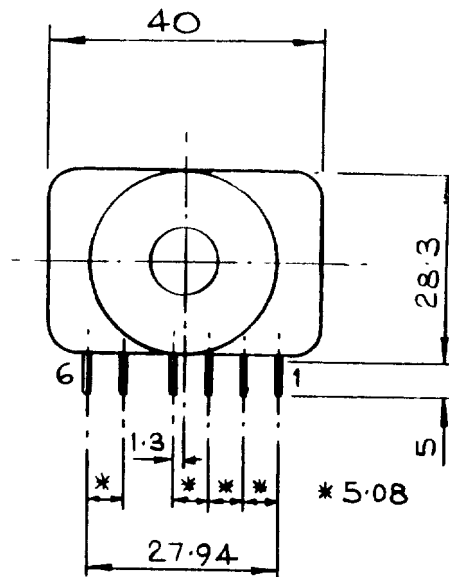
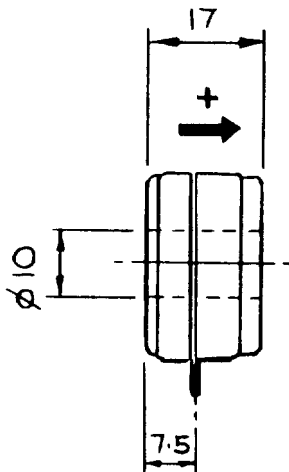
General Data

Operating Temperature	: 0°C to +70°C.
Storage Temperature	: -25°C to +85°C.
Current Drain	: 15 ma + I_m (measuring current)
Dielectric Strength	: 3kV RMS/50Hz/1 min.
Connections	: On 6 pins 0.63 x 0.56 mm
Case Material	: Flame retardent Noryl Grade V0-150
Weight	: 20 grams

Output Provisions

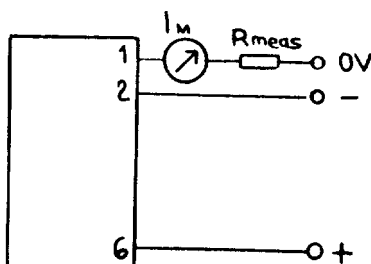
Current Output	: On pin 1
Voltage Output (Instantaneous)	: On pin 4 (pins 1 and 4 must be linked)
Voltage Output (True RMS)	: On pin 3 (pins 1 and 4 must be linked)

Dimensions LTA50PR

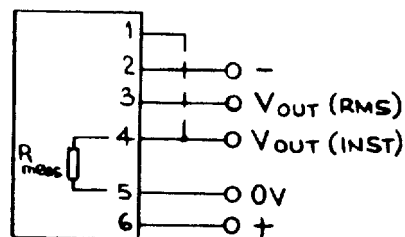


Electrical Connections

Current Output



Instantaneous and True RMS Voltage Output



The Company policy is one of continual product improvement and the company reserves the right to revise the above specification without notice.