



LA 50-P

Definition

The «LA 50-P» is a current transducer for the electronic measurement of currents : DC, AC, IMPL., etc., with galvanic isolation between the primary (high power) and the secondary (electronic) circuits.

Electrical data

Nominal current I_N	: 50 A rms
Measuring range	: 0 to ± 70 A
Measuring resistance	: R_M min. R_M max.
with ± 15 V at ± 50 A max.	: 50 ohm 100 ohm
at ± 70 A max.	: 50 ohm 70 ohm
Nominal analog output current	: 50 mA
Turns ratio	: 1 : 1000
Overall accuracy at $+25^\circ\text{C}$: ± 0.8 % of I_N
Supply voltage	: + and - 15 V (± 5 %)
Isolation	: between primary and secondary : 2 kV rms/50 Hz/1 min.

Accuracy - Dynamic performance

Zero offset current at $+25^\circ\text{C}$: max. ± 0.3 mA
Thermal drift of offset current	: typical ± 0.3 mA
(between 0°C and $+70^\circ\text{C}$)	max. ± 0.6 mA
Linearity	: better than 0.1 %
Response time	: better than 1 μs
di/dt accurately followed	: better than 50 A/ μs
Bandwidth	: 0 to 150 kHz (-1dB)

General data

Operating temperature	: 0°C to $+70^\circ\text{C}$
Storage temperature	: -25°C to $+85^\circ\text{C}$
Current consumption	: 10 mA + output current
Secondary internal resistance	: 90 ohm (at $+70^\circ\text{C}$)
Package	: insulated plastic case
Weight	: 20 g.
Fastening	: for mounting on printed circuit by 3 pins 0.63 x 0.56 mm, recommended hole size 0.9 mm dia.
Connection to primary circuit	: through-hole 12.7 x 6.4 mm
secondary circuit	: on 3 pins 0.63 x 0.56 mm
Polarity markings	: a positive measuring current is obtained on terminal M, when the primary current flows in the direction of the arrow.

Notes : - The temperature of the primary conductor should not exceed 100°C .
- This is a standard model; for different versions (e.g. supply voltages, turns ratio, unidirectional measurements, etc.), please contact us.

Remarks : - To measure nominal currents of less than 50 A, the optimum accuracy is obtained by having several primary turns (nom. current x number of turns = 50 At.).

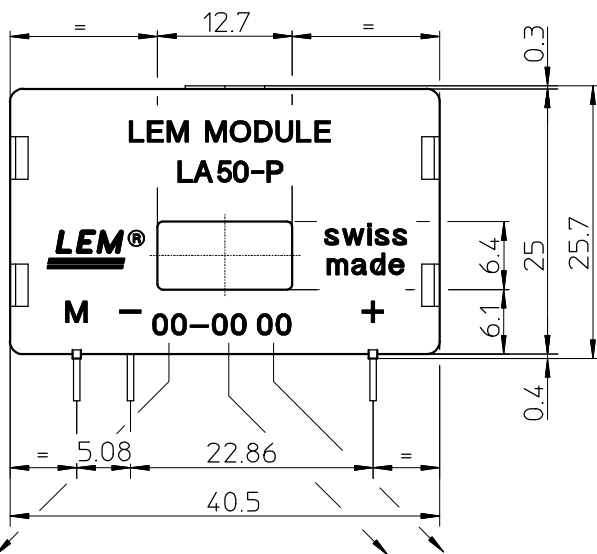
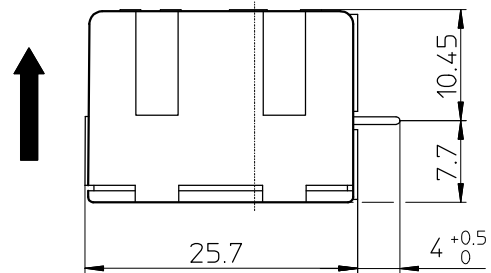
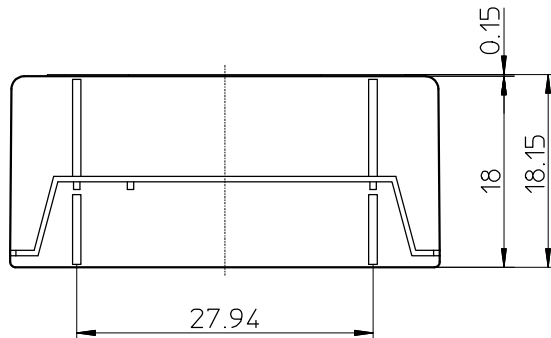
Example : measuring 5 A with 1 primary turn,
accuracy equals $\pm 0.205 \text{ A} = \pm 4.1 \%$ at $+25^\circ\text{C}$,
measuring 5 A with 10 primary turns,
accuracy equals $\pm 0.025 \text{ A} = \pm 0.5 \%$ at $+25^\circ\text{C}$

(in this case, the measuring current is 25 mA for 5 A primary current)

- Dynamic performance (di/dt and response time) is best with a single bar completely filling the primary hole.
- In order to achieve the best magnetic coupling, the primary windings have to pass over the top side of the device.

Dimensions LA 50-P

General tolerance $\pm 0.2 \text{ mm}$
Recommended hole size $\varnothing 0.9 \text{ mm}$



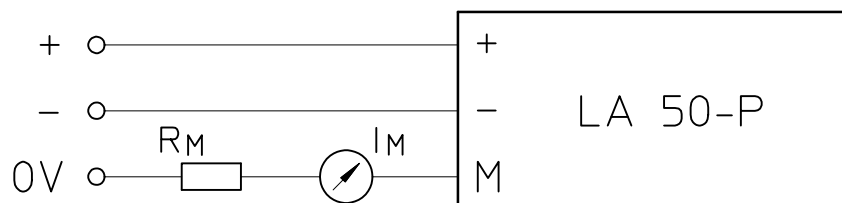
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Secondary terminals :

- Terminal + : supply voltage + 15 V
- Terminal - : supply voltage - 15 V
- Terminal M : measure

Connection :



«This data sheet is a translation of the French version which is deemed authentic.»

We reserve the right to carry out modifications on our transducers, in order to improve them, without previous notice.