

Current Transducer LA 150-P

For the electronic measurement of currents: DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).

$$I_{PN} = 150 \text{ A}$$

Preliminary



Electrical data

I_{PN}	Primary nominal current	150	A									
I_p	Primary current, measuring range	0 .. ± 200	A									
R_M	Measuring resistance	<table border="0"> <tr> <td></td> <td>$T_A = 70^\circ\text{C}$</td> <td>$T_A = 85^\circ\text{C}$</td> </tr> <tr> <td></td> <td>$R_{M \min}$ $R_{M \max}$</td> <td>$R_{M \min}$ $R_{M \max}$</td> </tr> <tr> <td></td> <td>0 30</td> <td>0 15</td> </tr> </table>			$T_A = 70^\circ\text{C}$	$T_A = 85^\circ\text{C}$		$R_{M \min}$ $R_{M \max}$	$R_{M \min}$ $R_{M \max}$		0 30	0 15
	$T_A = 70^\circ\text{C}$	$T_A = 85^\circ\text{C}$										
	$R_{M \min}$ $R_{M \max}$	$R_{M \min}$ $R_{M \max}$										
	0 30	0 15										
	with ±15V @ ± 200 A _{max}											
I_{SN}	Secondary nominal current	75	mA									
K_N	Conversion ratio	1 : 2000										
V_C	Supply voltage (± 5 %)	± 15	V									
I_C	Current consumption	app 16 + I_{SN}	mA									
V_d	R.m.s. voltage for AC isolation test, 50/60Hz, 1mn	2.5	kV									

Features

- Closed loop (compensation) current transducer using the Hall effect
- Printed circuit board mounting

Accuracy-Dynamic performance data

X	Accuracy @ $I_{PN}, T_A = 25^\circ\text{C}$ @ ± 15V (± 5 %)	< ± 1	% of I_{PN}
ϵ_L	Linearity (0 .. ± I_{PN})	± 0.25	% of I_{PN}
I_O	Electrical offset current @ $I_p = 0, @ T_A = 25^\circ\text{C}$	Max. ± 0.2	mA
I_{om}	Residual current @ $I_p = 0$, after an excursion at 1x I_{PN}	Max. ± 0.15	mA
I_{OT}	Thermal drift of I_O	± 0.005	mA/K
t_r	Response time @ 90% of I_p	< 1	µs
di/dt	di/dt accurately followed	> 200	A/µs

Advantages

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capacity

Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications

General data

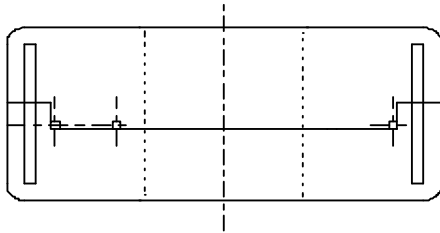
T_A	Ambient operating temperature	- 10 .. + 80	°C
T_S	Ambient storage temperature	- 15 .. + 85	°C
R_S	Secondary coil resistance	80	Ω
m	Mass	25	g

Notes : EN 50178 approval pending

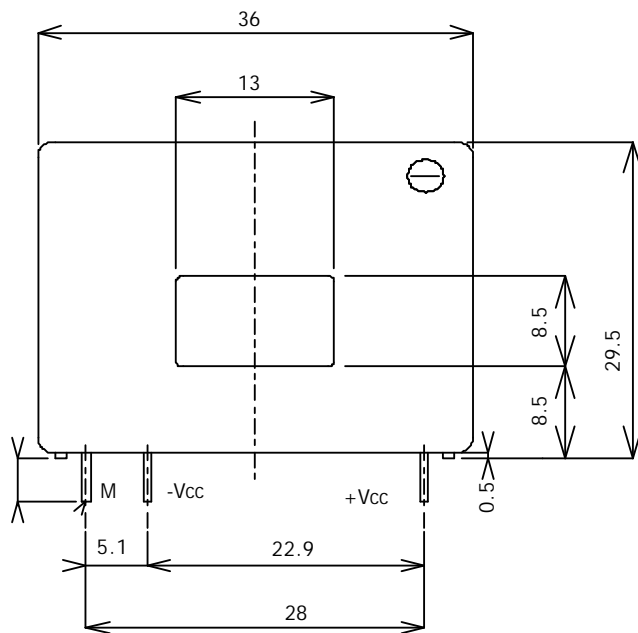
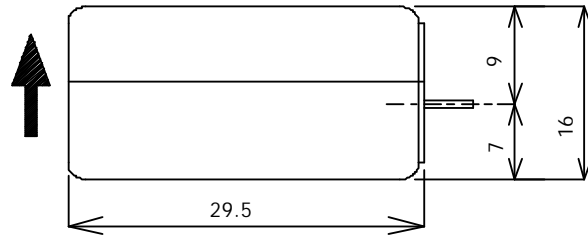
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LA 150-P

Bottom view

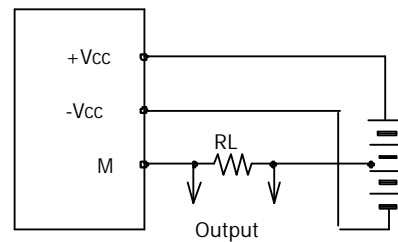


Left view



Front view

Terminal Pin Identification



General tolerance	+/- 0.2 mm
Primary through-hole	13 x 8.5 mm
Fastening & connection of secondary	3 pins
	0.7 x 0.7 mm
Recommended PCB hole	1.0 mm

LEM reserves the right to carry out modifications on its transducers, in order to improve them, without previous notice.