

# Current Transducer LA 150-P

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

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).

**Preliminary**



## Electrical data

$I_{PN}$	Primary nominal current		150	A
$I_P$	Primary current, measuring range		0 .. ± 200	A
$R_M$	Measuring resistance	$T_A = 70^\circ\text{C}$	$R_{M \min}$	0
			$R_{M \max}$	30
	with ±15V @ ± 200 A <sub>max</sub>	$T_A = 85^\circ\text{C}$	$R_{M \min}$	0
			$R_{M \max}$	15
				Ω
$I_{SN}$	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 $I_{PN}$
$\epsilon_L$	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
$f$	Frequency bandwidth (- 1dB) <sup>1)</sup>	DC .. 150	kHz

## 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

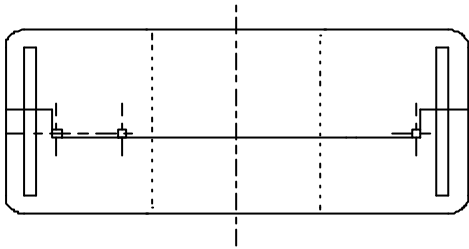
$T_A$	Ambient operating temperature	- 10 .. + 80	°C
$T_S$	Ambient storage temperature	- 15 .. + 85	°C
$R_S$	Secondary coil resistance	80	Ω
$m$	Mass	25	g

Notes : EN 50178 approval pending

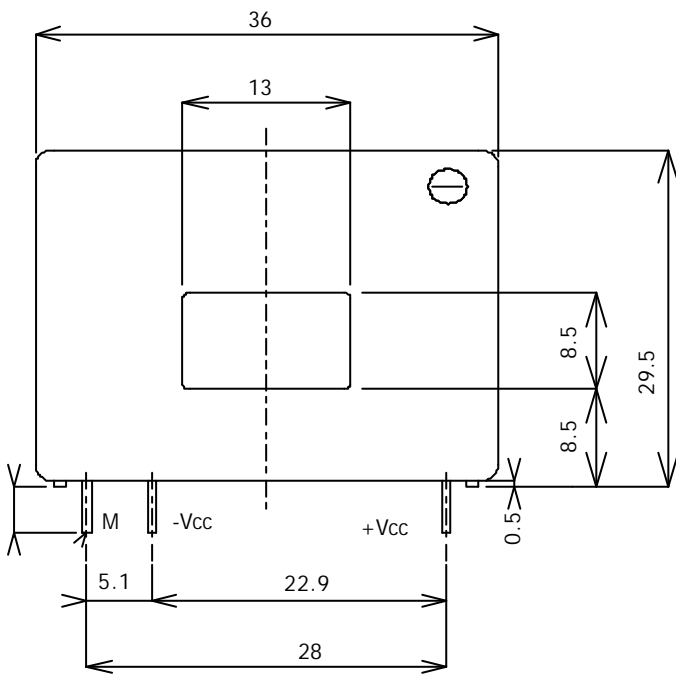
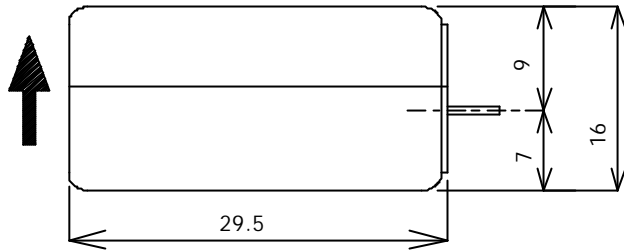
<sup>1)</sup> Derating is needed to avoid excessive core heating at high frequency.

# LA 150-P

Bottom view

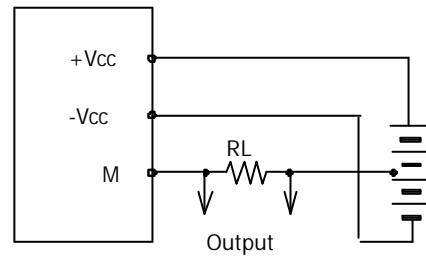


Left view



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