Current Transducer LA 150-P

I_{PN} = 150 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).

46090

Electrical data

$I_{PN\ DC}$	Primary continuous direct current (nominal)		150	A
I_{PN}	Primary nominal current rms		106	A
I_{PM}	Primary current, measuring range		0 .. ± 200	A
R_M	Measuring resistance	T_A = 70°C	T_A = 85 °C	
		$R_{M\ mini}$ $R_{M\ maxi}$	$R_{M\ mini}$ $R_{M\ maxi}$	
	@ ±15V, ± 200 A_{maxi}	0 30	0 15	Ω
I_S	Secondary current		75	mA
I_{SN}	Secondary nominal current rms		53	mA
K_N	Conversion ratio		1 : 2000	
V_C	Supply voltage (± 5 %)		± 15	V
I_C	Current consumption		16 + I_S	mA
V_d	Rms voltage for AC isolation test, 50 Hz,1min		2.5	kV

Accuracy-Dynamic performance data

X	Accuracy @ $I_{PN\ DC}$, T_A = 25°C, ± 15 V (± 5 %)	< ± 1 % of $I_{PN\ DC}$	
e_L	Linearity error (0 .. ± $I_{PN\ DC}$)	± 0.25% of $I_{PN\ DC}$	
I_{OE}	Electrical offset current @ I_P = 0, T_A = 25°C	< ± 0.2	mA
I_{OM}	Magnetic offset current @ I_P = 0 and specified R_M, after an overload of 1 x $I_{PN\ DC}$	< ± 0.15	mA
I_{OT}	Temperature variation of I_O	< ± 0.005	mA
t_r	Response time to 90% of $I_{PN\ DC}$ step	< 1	µs
di/dt	di/dt accurately followed	> 200	A/µs
BW	Frequency bandwidth (- 1 dB)[1)]	DC .. 150	kHz

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
	Standards	EN 50178: 1997	

Features

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

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

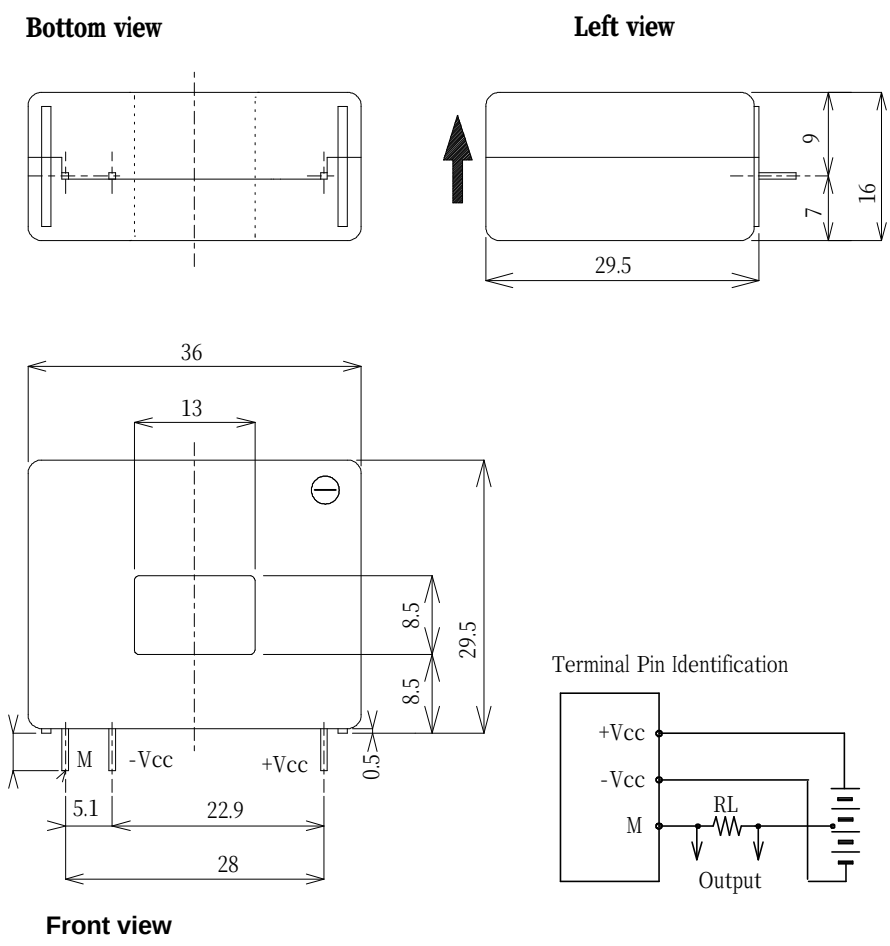
Application Domain

- Industrial

Notes :

[1)] Derating is needed to avoid excessive core heating at high frequency.

Dimensions LA 150-P (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

• 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

Safety

This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the following manufacturer's operating instructions.

Caution, risk of electrical shock

When operating the transducer, certain parts of the module can carry hazardous voltage (eg. primary busbar, power supply). Ignoring this warning can lead to injury and/or cause serious damage.
This transducer is a built-in device, whose conducting parts must be inaccessible after installation.
A protective housing or additional shield could be used.
Main supply must be able to be disconnected.