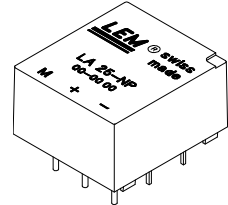


Current Transducer LA 25-NP

$I_{PN} = 5-6-8-12-25 \text{ A}$

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).



Electrical data

I_{PN}	Primary nominal r.m.s. current	25	At
I_P	Primary current, measuring range	$0 \dots \pm 36$	At
R_M	Measuring resistance	R_{Mmin} R_{Mmax}	
	with $\pm 15 \text{ V}$		
	@ $\pm 25 \text{ At}_{max}$	100 320	Ω
	@ $\pm 36 \text{ At}_{max}$	100 190	Ω
I_{SN}	Secondary nominal r.m.s. current	25	mA
K_N	Conversion ratio	1-2-3-4-5 : 1000	
V_C	Supply voltage ($\pm 5 \%$)	± 15	V
I_C	Current consumption	$10 + I_s$	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	2.5	kV
V_b	R.m.s. rated voltage ¹⁾ , safe separation	600	V
	basic isolation	1700	V

Accuracy - Dynamic performance data

X	Accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$	± 0.5	%
e_L	Linearity	< 0.2	%
I_O	Offset current ²⁾ @ $I_P = 0$, $T_A = 25^\circ\text{C}$	Typ Max	
		± 0.05 ± 0.15	mA
I_{OM}	Residual current ³⁾ @ $I_P = 0$, after an overload of $3 \times I_{PN}$	± 0.05 ± 0.15	mA
I_{OT}	Thermal drift of I_O	± 0.06 ± 0.25	mA
	$0^\circ\text{C} \dots + 25^\circ\text{C}$		
	$+ 25^\circ\text{C} \dots + 70^\circ\text{C}$	± 0.10 ± 0.35	mA
t_r	Response time ⁴⁾ @ 90 % of I_{Pmax}	< 1	μs
di/dt	di/dt accurately followed	> 50	A/ μs
f	Frequency bandwidth (-1 dB)	DC .. 150	kHz

General data

T_A	Ambient operating temperature	$0 \dots + 70$	$^\circ\text{C}$
T_S	Ambient storage temperature	$- 25 \dots + 85$	$^\circ\text{C}$
R_P	Primary resistance per turn @ $T_A = 25^\circ\text{C}$	< 1.25	m Ω
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	110	Ω
R_{IS}	Isolation resistance @ 500 V, $T_A = 25^\circ\text{C}$	> 1500	M Ω
m	Mass	22	g
	Standards ⁵⁾	EN 50178	

Notes : ¹⁾ Pollution class 2

²⁾ Measurement carried out after 15 mn functioning

³⁾ The result of the coercive field of the magnetic circuit

⁴⁾ With a di/dt of 100 A/ μs

⁵⁾ A list of corresponding tests is available

Features

- Closed loop (compensated) multi-range current transducer using the Hall effect
- Insulated plastic case recognized according to UL 94-V0.

Advantages

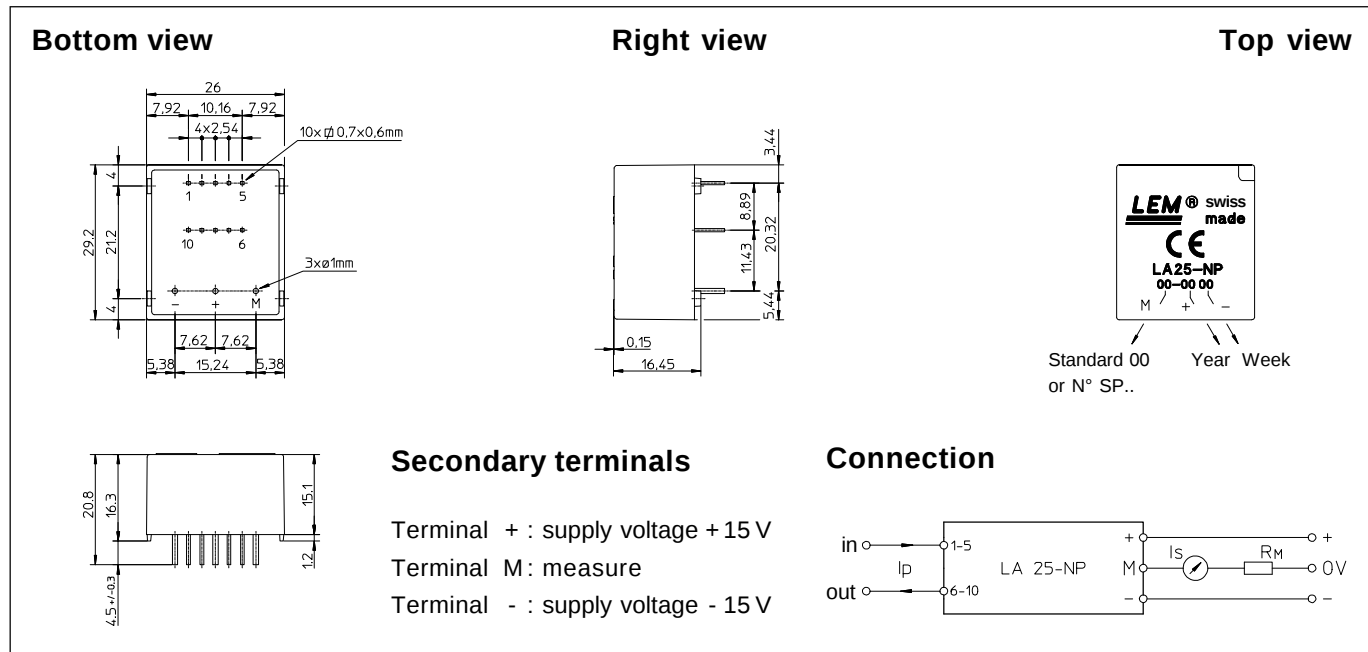
- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

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.

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Dimensions LA 25-NP (in mm. 1 mm = 0.0394 inch)



Number of primary turns	Primary current		Nominal output current I_{SN} [mA]	Turns ratio K_N	Primary resistance R_p [mΩ]	Primary insertion inductance L_p [μH]	Recommended connections
	nominal I_{PN} [A]	maximum I_p [A]					
1	25	36	25	1/1000	0.3	0.023	5 4 3 2 1 IN OUT 6 7 8 9 10
2	12	18	24	2/1000	1.1	0.09	5 4 3 2 1 IN OUT 6 7 8 9 10
3	8	12	24	3/1000	2.5	0.21	5 4 3 2 1 IN OUT 6 7 8 9 10
4	6	9	24	4/1000	4.4	0.37	5 4 3 2 1 IN OUT 6 7 8 9 10
5	5	7	25	5/1000	6.3	0.58	5 4 3 2 1 IN OUT 6 7 8 9 10

Mechanical characteristics

- General tolerance ± 0.2 mm
- Fastening & connection of primary 10 pins 0.7 x 0.6 mm
- Fastening & connection of secondary 3 pins $\varnothing 1$ mm
- Recommended PCB hole 1.2 mm

Remarks

- I_s is positive when I_p flows from terminals 1, 2, 3, 4, 5 to terminals 10, 9, 8, 7, 6
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.