

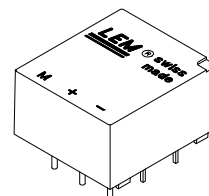
Current Transducer LA 35-NP

$I_{PN} = 7-8-11-17-35 \text{ A}$

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).



16136



Electrical data

I_{PN}	Primary nominal r.m.s. current	35 ¹⁾	At
I_P	Primary current, measuring range	0 .. ± 70	At
R_M	Measuring resistance with $\pm 15 \text{ V}$	R_{Mmin}	R_{Mmax}
		@ $\pm 35 \text{ At}_{max}$	60 150 Ω
		@ $\pm 70 \text{ At}_{max}$	60 85 Ω
I_{SN}	Secondary nominal r.m.s. current	35	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 ²⁾ , safe separation basic isolation	600	V
		1700	V

Accuracy - Dynamic performance data

X	Typical accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$	± 0.5	%
e_L	Linearity	< 0.2	%
I_O	Offset current ³⁾ @ $I_P = 0$, $T_A = 25^\circ\text{C}$	Typ	Max
		± 0.10	± 0.20 mA
I_{OM}	Residual current ⁴⁾ @ $I_P = 0$, after an overload of $3 \times I_{PN}$	± 0.05	± 0.15 mA
I_{OT}	Thermal drift of I_O - $25^\circ\text{C} \dots + 70^\circ\text{C}$	± 0.15	± 0.50 mA
t_r	Response time ⁵⁾ @ 90 % of I_{PN}	< 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	- 25 .. + 70	$^\circ\text{C}$
T_S	Ambient storage temperature	- 40 .. + 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 @ $T_A = 70^\circ\text{C}$	80	Ω
R_{IS}	Isolation resistance @ 500 V, $T_A = 25^\circ\text{C}$	> 1500	M Ω
m	Mass	22	g
	Standards	EN 50178 : 1997	

Features

- Closed loop (compensated) multi-range current transducer using the Hall effect
- Printed circuit board mounting
- 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.

Notes : ¹⁾ In order to avoid over-heating, it is necessary that the recommended primary connections be followed (see table page 2).

²⁾ Pollution class 2

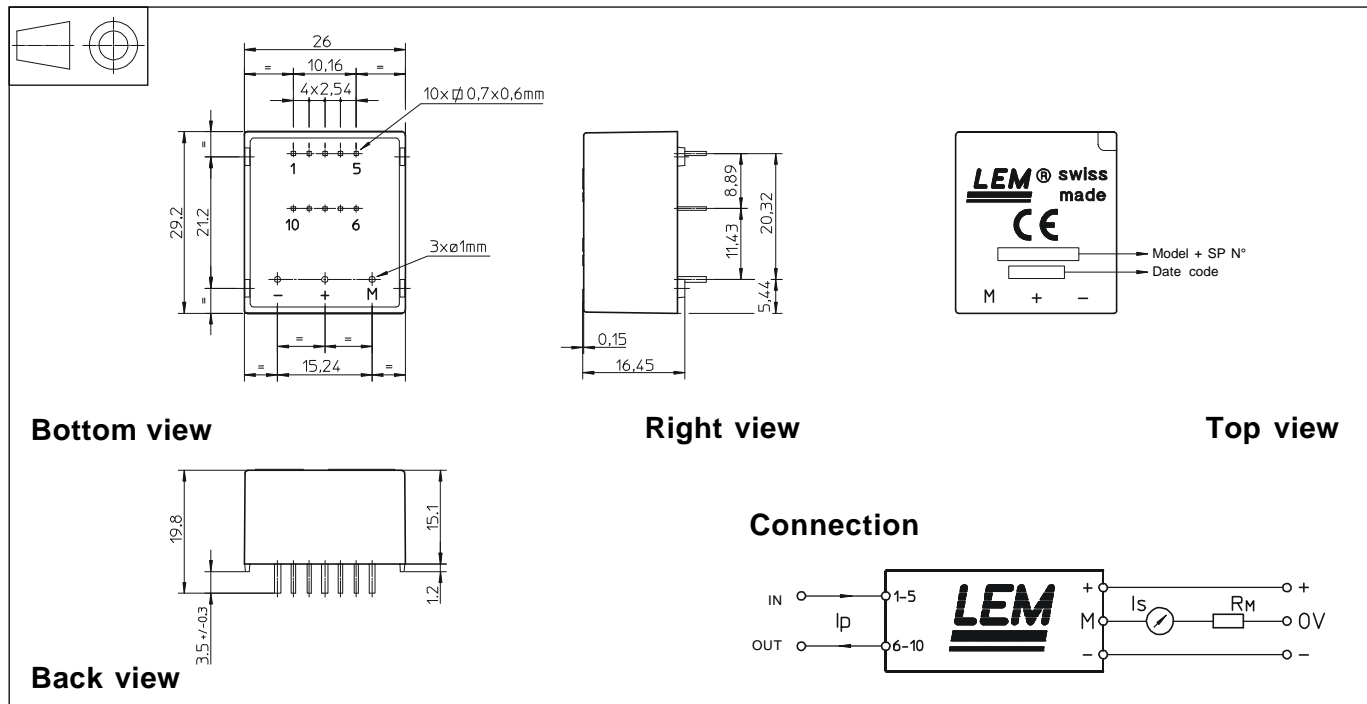
³⁾ Measurement carried out after 15 mn functioning

⁴⁾ The result of the coercive field of the magnetic circuit

⁵⁾ With a di/dt of 100 A/ μs .

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Dimensions LA 35-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	35	70	35	1/1000	0.3	0.023	5 4 3 2 1 IN ○—○—○—○ OUT 6 7 8 9 10
2	17	34	34	2/1000	1.1	0.09	5 4 3 2 1 IN ○—○—○—○ OUT 6 7 8 9 10
3	11	22	33	3/1000	2.5	0.21	5 4 3 2 1 IN ○—○—○—○ OUT 6 7 8 9 10
4	8	16	32	4/1000	4.4	0.37	5 4 3 2 1 IN ○—○—○—○ OUT 6 7 8 9 10
5	7	14	35	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.