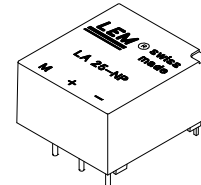


Current Transducer LA 25-NP/SP11

$$I_{PN} = 1 \text{ A}$$

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	1	A
I_P	Primary current, measuring range	0 .. ± 1.5	A
R_M	Measuring resistance with $\pm 15 \text{ V}$	$R_{M \min}$	$R_{M \max}$
		@ $\pm 1.0 \text{ A}_{\max}$	100 320 Ω
		@ $\pm 1.5 \text{ A}_{\max}$	100 190 Ω
I_{SN}	Secondary nominal r.m.s. current	25	mA
K_N	Conversion ratio	25 : 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 basic isolation	600	V
		1700	V

Features

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

Special features

- $I_{PN} = 1 \text{ A}$
- $I_P = 0 .. \pm 1.5 \text{ A}$
- $K_N = 25 : 1000$.

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 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°C .. +25°C	± 0.06 ± 0.25 mA
		+25°C .. +70°C	± 0.10 ± 0.35 mA
t_r	Response time ⁴⁾ @ 90 % of $I_{P \max}$	< 1	μs
f	Frequency bandwidth (-1 dB)	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 capability.

General data

T_A	Ambient operating temperature	0 .. +70	$^\circ\text{C}$
T_S	Ambient storage temperature	-25 .. +85	$^\circ\text{C}$
R_P	Primary coil resistance @ $T_A = 25^\circ\text{C}$	< 51	m Ω
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	110	Ω
L_P	Primary insertion inductance	31	μH
R_{IS}	Isolation resistance @ 500 V, $T_A = 25^\circ\text{C}$	> 1500	M Ω
m	Mass	22	g
	Standards ⁵⁾	EN 50178	

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⁾ Pollution class 2

²⁾ Measurement carried out after 15 mn functioning

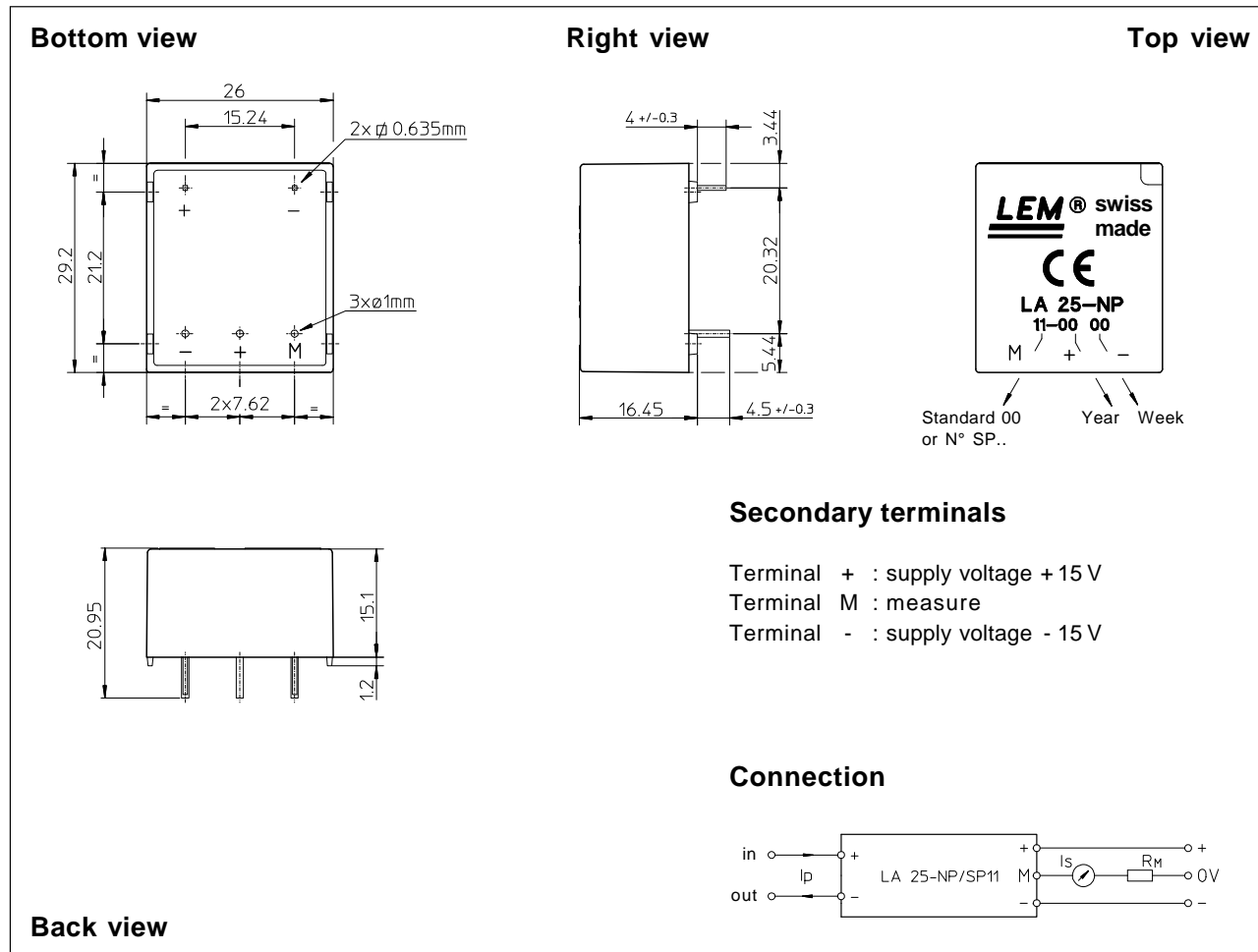
³⁾ The result of the coercive field of the magnetic circuit

⁴⁾ With a di/dt of 100 A/ μs

⁵⁾ A list of corresponding tests is available

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Dimensions LA 25-NP/SP11 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance $\pm 0.2 \text{ mm}$
- Fastening & connection of primary 2 pins
0.635 x 0.635 mm
- Fastening & connection of secondary 3 pins $\varnothing 1 \text{ mm}$
- Recommended PCB hole 1.2 mm

Remark

- I_s is positive when I_p flows from terminal + to terminal -.