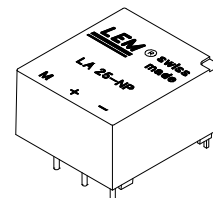


Current Transducer LA 25-NP/SP7

$$I_{PN} = 2.5 \text{ A}$$

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	2.5	A
I_p	Primary current, measuring range	0 .. ± 3.6	A
R_M	Measuring resistance with ± 15 V	$R_{M \min}$	$R_{M \max}$
		@ ± 2.5 A _{max}	100 320 Ω
		@ ± 3.6 A _{max}	100 190 Ω
I_{SN}	Secondary nominal r.m.s. current	25	mA
K_N	Conversion ratio	10 : 1000	
V_C	Supply voltage (± 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

- $I_{PN} = 2.5 \text{ A}$
- $I_p = 0 .. \pm 3.6 \text{ A}$
- $K_N = 10 : 1000$.

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 x 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	°C
T_S	Ambient storage temperature	- 25 .. + 85	°C
R_P	Primary coil resistance @ $T_A = 25^\circ\text{C}$	< 8.5	mΩ
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	110	Ω
L_P	Primary insertion inductance	5.5	µH
R_{IS}	Isolation resistance @ 500 V, $T_A = 25^\circ\text{C}$	> 1500	MΩ
m	Mass	22	g
	Standards ⁵⁾	EN 50178	

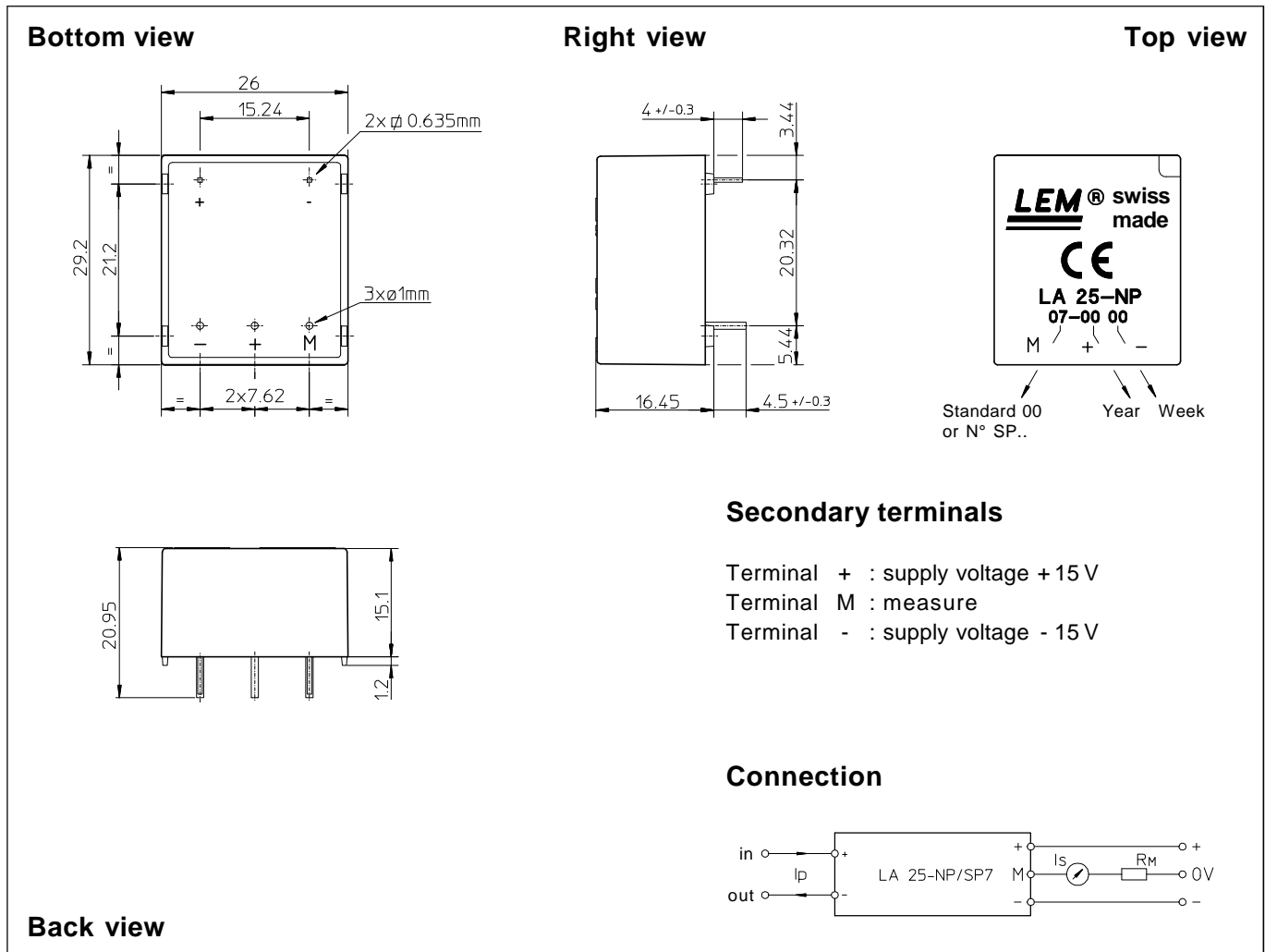
Applications

- 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/SP7 (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 -.