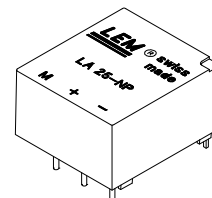


Current Transducer LA 25-NP/SP11

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

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 ± 15 V | | |
| | | @ ± 1.0 A _{max} | R_{Mmin} R_{Mmax} |
| | | @ ± 1.5 A _{max} | 100 320 Ω 100 190 Ω |
| I_{SN} | Secondary nominal r.m.s. current | 25 | mA |
| K_N | Conversion ratio | 25 : 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

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

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 | |
| I_{OM} | Residual current ³⁾ @ $I_P = 0$, after an overload of 3 x I_{PN} | ± 0.05 | ± 0.15 | |
| I_{OT} | Thermal drift of I_O | 0°C .. + 25°C | ± 0.06 | ± 0.25 |
| | | + 25°C .. + 70°C | ± 0.10 | ± 0.35 |
| t_r | Response time ⁴⁾ @ 90 % of I_{Pmax} | < 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 @ $T_A = 25^\circ\text{C}$ | < 51 | mΩ |
| 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 | 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

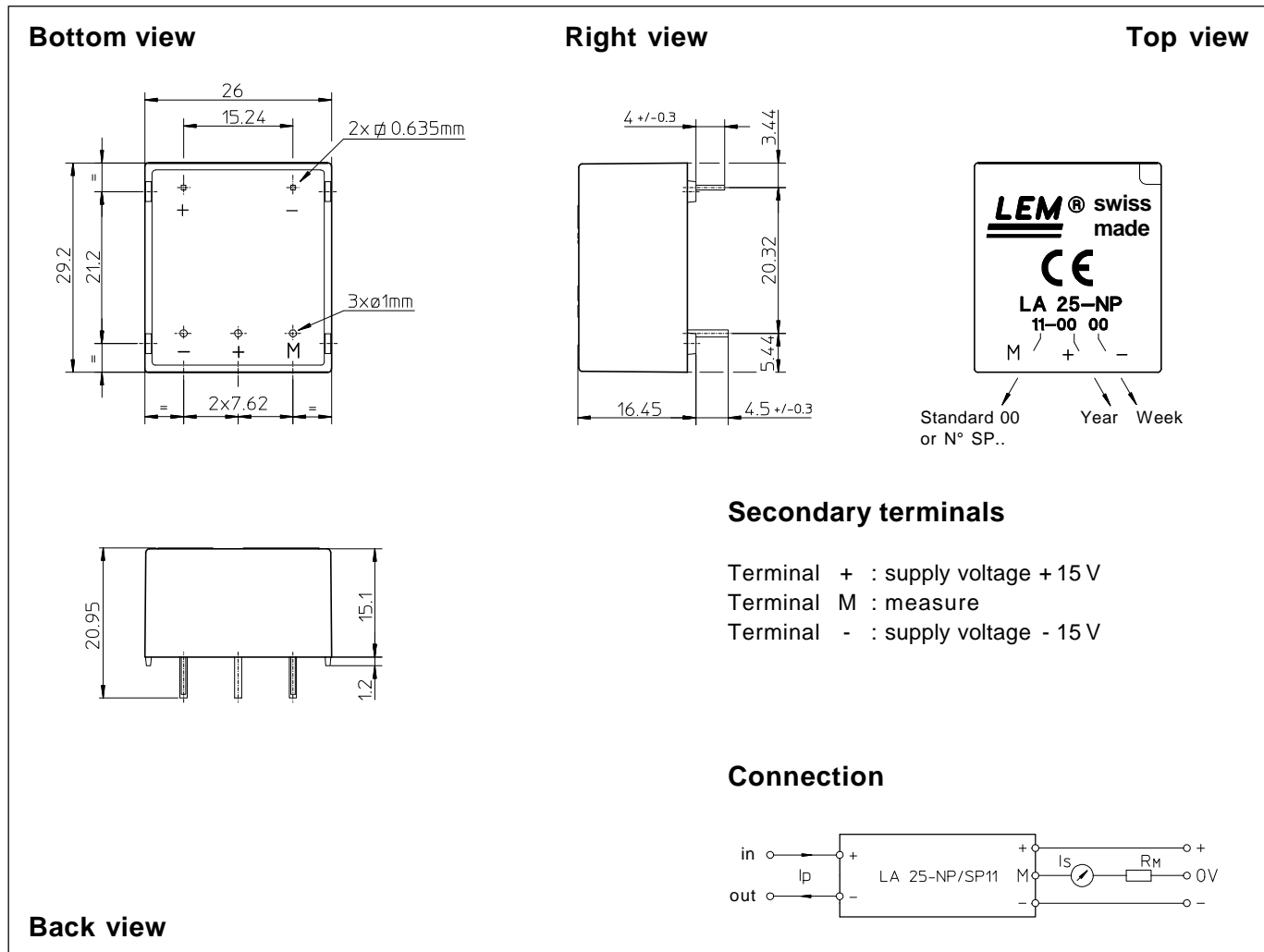
³⁾ The result of the coercive field of the magnetic circuit

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/SP11 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

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

Remark

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

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.