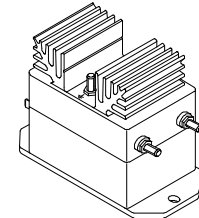


Voltage Transducer LV 100-1000

$$V_{PN} = 1000 \text{ V}$$

For the electronic measurement of voltages : DC, AC, pulsed..., with a galvanic isolation between the primary circuit (high voltage) and the secondary circuit (electronic circuit).



Electrical data

| | | | |
|----------|--|-----------------------|----------|
| V_{PN} | Primary nominal r.m.s. voltage | 1000 | V |
| V_P | Primary voltage, measuring range | 0 .. ± 1500 | V |
| I_{PN} | Primary nominal r.m.s. current | 10 | mA |
| R_M | Measuring resistance | R_{Mmin} R_{Mmax} | |
| | with $\pm 15 \text{ V}$ | 0 170 | Ω |
| | @ $\pm 1000 \text{ V}_{max}$ @ $\pm 1500 \text{ V}_{max}$ | 0 90 | Ω |
| I_{SN} | Secondary nominal r.m.s. current | 50 | mA |
| K_N | Conversion ratio | 1000 V / 50 mA | |
| 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 | 6 | kV |

Features

- Closed loop (compensated) voltage transducer using the Hall effect
- Insulated plastic case recognized according to UL 94-V0
- Primary resistor R_1 incorporated into the housing.

Advantages

- Excellent accuracy
- Very good linearity
- Low thermal drift
- High immunity to external interference.

Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Uninterruptible Power Supplies (UPS)
- Power supplies for welding applications.

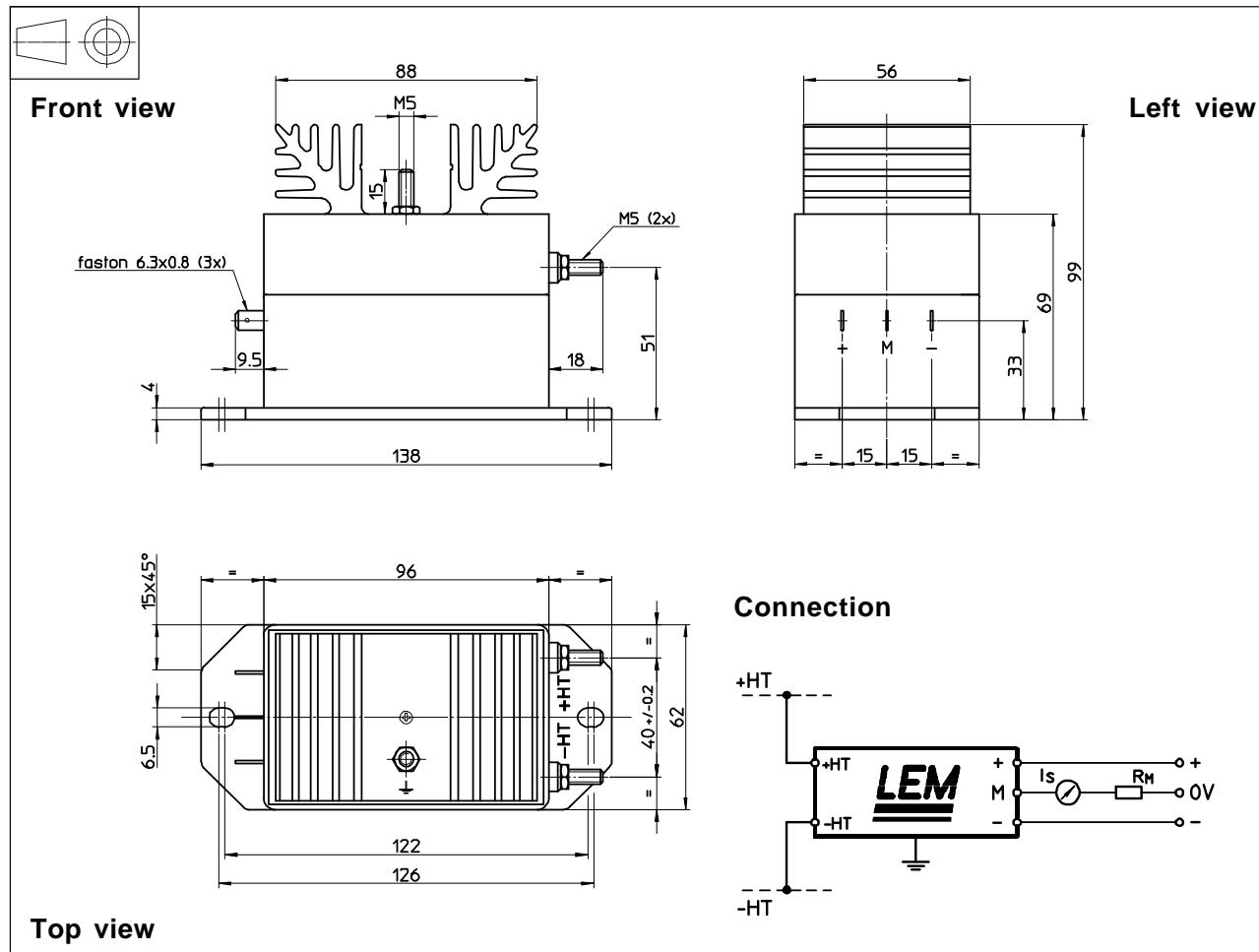
Accuracy - Dynamic performance data

| | | | |
|----------|--|------------------------|---------------|
| X_G | Overall Accuracy @ $V_{PN}, T_A = 25^\circ\text{C}$ | ± 0.7 | % |
| e_L | Linearity | < 0.1 | % |
| I_O | Offset current @ $I_P = 0, T_A = 25^\circ\text{C}$ | Typ Max ± 0.2 | mA |
| I_{OT} | Thermal drift of I_O $0^\circ\text{C} \dots +70^\circ\text{C}$ | ± 0.2 ± 0.3 | mA |
| t_r | Response time @ 90 % of V_{PN} | 110 | μs |

General data

| | | | |
|-------|--|--------------|------------------|
| T_A | Ambient operating temperature | 0 .. +70 | $^\circ\text{C}$ |
| T_S | Ambient storage temperature | -25 .. +85 | $^\circ\text{C}$ |
| N | Turns ratio | 10000 : 2000 | |
| P | Total primary power loss | 10 | W |
| R_1 | Primary resistance @ $T_A = 25^\circ\text{C}$ | 100 | k Ω |
| R_S | Secondary coil resistance @ $T_A = 70^\circ\text{C}$ | 60 | Ω |
| m | Mass | 850 | g |
| | Standards | EN 50178 | |

Dimensions LV 100-1000 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- | | |
|----------------------------|-------------------------------------|
| • General tolerance | ± 0.3 mm |
| • Transducer fastening | 2 holes Ø 6.5 mm M6 steel screws |
| Fastening torque max | 5 Nm or 3.69 Lb - Ft. |
| • Connection of primary | M5 threaded studs |
| • Connection of secondary | Faston 6.3 x 0.8 mm |
| • Connection to the ground | M5 threaded stud |
| • Fastening torque max | 2.2 Nm or 1.62 Lb. -Ft. |

Remarks

- I_s is positive when V_p is applied on terminal +HT.
- The primary circuit of the transducer must be linked to the connections where the voltage has to be measured.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.

LEM reserves the right to carry out modifications on its transducers, in order to improve them, without previous notice.