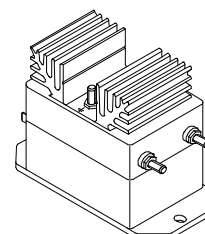


Voltage Transducer LV 100-500

$$V_{PN} = 500 \text{ V}$$

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 | 500 | V | | | |
| V_P | Primary voltage, measuring range | 0 .. ± 750 | V | | | |
| I_{PN} | Primary nominal r.m.s. current | 20 | mA | | | |
| R_M | Measuring resistance | R_{Mmin} | R_{Mmax} | | | |
| | | with $\pm 15 \text{ V}$ | @ $\pm 500 \text{ V}_{max}$ | 0 | 170 | Ω |
| | | | @ $\pm 750 \text{ V}_{max}$ | 0 | 90 | Ω |
| I_{SN} | Secondary nominal r.m.s. current | 50 | mA | | | |
| K_N | Conversion ratio | 500 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.

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 |
| I_{OT} | Thermal drift of I_O | ± 0.2 | ± 0.3 |
| t_r | Response time @ 90 % of V_{PN} | 90 | μs |

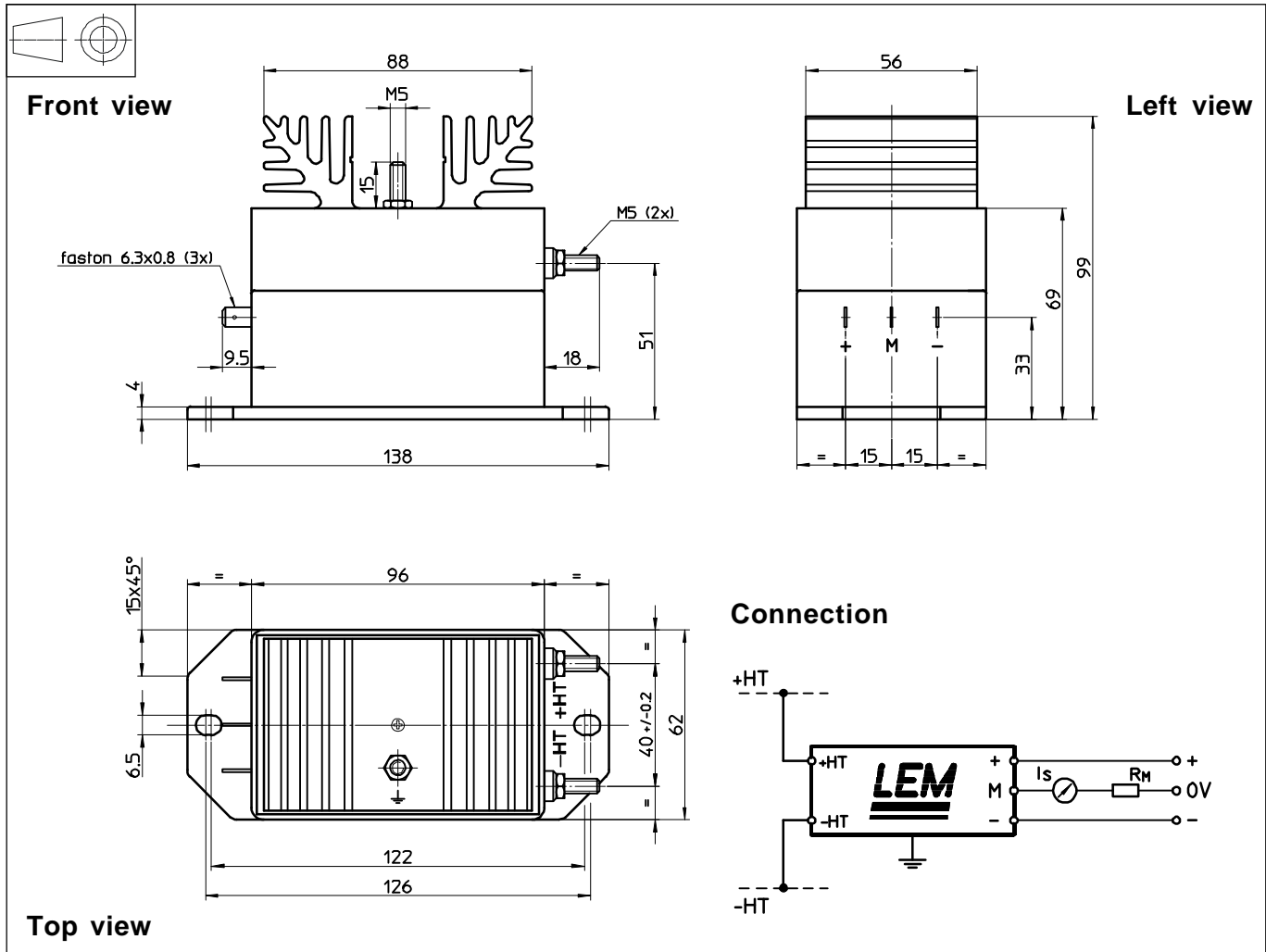
Applications

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

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 | 5000 : 2000 | |
| P | Total primary power loss | 10 | W |
| R_1 | Primary resistance @ $T_A = 25^\circ\text{C}$ | 25 | k Ω |
| R_S | Secondary coil resistance @ $T_A = 70^\circ\text{C}$ | 60 | Ω |
| m | Mass | 850 | g |
| | Standards | EN 50178 | |

Dimensions LV 100-500 (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.