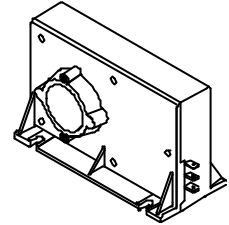


Current Transducer LT 1000-SI

$$I_{PN} = 1000 \text{ A}$$

For the electronic measurement of currents : DC, AC, pulsed..., 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 | 1000 | A |
| I_p | Primary current, measuring range | 0 .. ± 1500 | A |
| R_M | Measuring resistance | $R_{M \min}$ $R_{M \max}$ | |
| | with $\pm 15 \text{ V}$ | @ $\pm 1000 \text{ A}_{\max}$ | 0 25 Ω |
| | | @ $\pm 1500 \text{ A}_{\max}$ | 0 5 Ω |
| I_{SN} | Secondary nominal r.m.s. current | 200 | mA |
| K_N | Conversion ratio | 1 : 5000 | |
| V_C | Supply voltage ($\pm 5 \%$) | ± 15 | V |
| I_C | Current consumption | 25 + | mA |
| V_d | R.m.s. voltage for AC isolation test, 50 Hz, 1 mn | 6 | kV |

Accuracy - Dynamic performance data

| | | | |
|----------|--|-----------|------------------|
| X_G | Overall accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$ | ± 0.3 | % |
| e_L | Linearity error | < 0.1 | % |
| I_O | Offset current @ $I_p = 0$, $T_A = 25^\circ\text{C}$ | Typ | Max |
| | | | ± 0.4 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 ¹⁾ @ 90 % $C_{I_{PN}}$ | < 1 | μs |
| di/dt | di/dt accurately followed | > 50 | A/ μs |
| f | Frequency bandwidth (-1 dB) | DC .. 100 | kHz |

General data

| | | | |
|-------|--|---------------------|------------------|
| T_A | Ambient operating temperature | 0 .. +70 | $^\circ\text{C}$ |
| T_S | Ambient storage temperature | -25 .. +85 | $^\circ\text{C}$ |
| R_S | Secondary coil resistance @ $T_A = 70^\circ\text{C}$ | 40 | Ω |
| m | Mass | 700 | g |
| | Standards | EN 50178 (97.10.01) | |

Features

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

Advantages

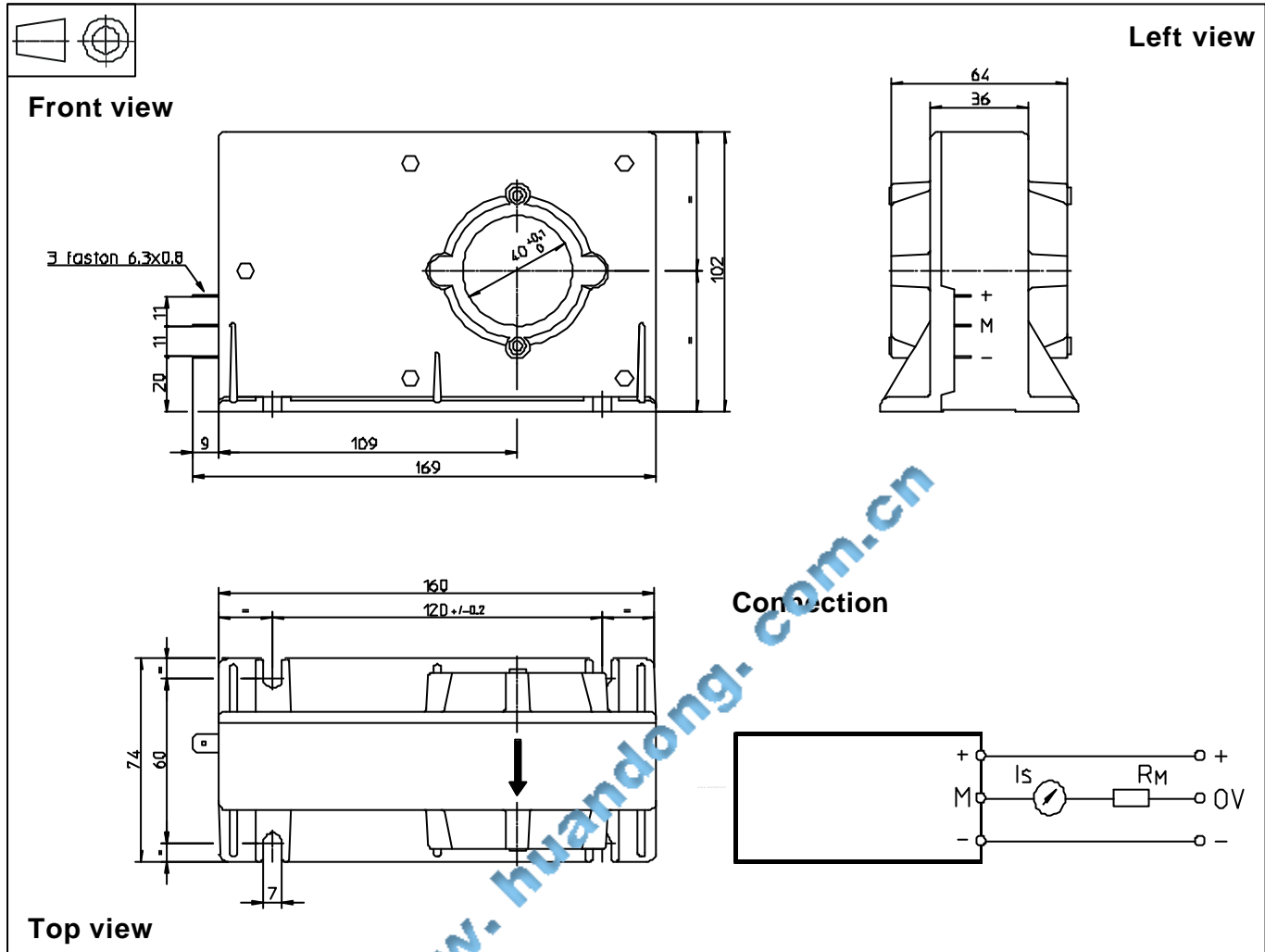
- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

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.

Note : ¹⁾ With a di/dt of 100 A/ μs .

Dimensions LT 1000-SI (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 0.5 mm
- Transducer fastening 4 slots $\varnothing 7$ mm
4 M6 steel screws
Recommended fastening torque 4.7 Nm or 3.47 Lb- Ft
- Primary through-hole $\varnothing 40$ mm
- Connection of secondary Faston 6.3 x 0.8 mm

Remarks

- I_s is positive when I_p flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 100°C.
- Dynamic performances (di/dt and response time) are best with a single bar completely filling the primary hole.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.