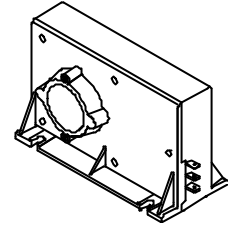


# Current Transducer LT 1000-SI

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

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 .. $\pm 1500$	A
$R_M$	Measuring resistance	$R_{M \min}$ $R_{M \max}$	
	with $\pm 15 \text{ V}$	@ $\pm 1000 \text{ A}_{\max}$	0   25 $\Omega$
		@ $\pm 1500 \text{ A}_{\max}$	0   5 $\Omega$
$I_{SN}$	Secondary nominal r.m.s. current	200	mA
$K_N$	Conversion ratio	1 : 5000	
$V_C$	Supply voltage ( $\pm 5 \%$ )	$\pm 15$	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 @ $I_{PN}$ , $T_A = 25^\circ\text{C}$	$\pm 0.3$	%
$e_L$	Linearity error	$< 0.1$	%
$I_O$	Offset current @ $I_p = 0$ , $T_A = 25^\circ\text{C}$	Typ	Max
			$\pm 0.4$ mA
$I_{OT}$	Thermal drift of $I_O$ $0^\circ\text{C} \dots +70^\circ\text{C}$	$\pm 0.2$	$\pm 0.3$ mA
$t_r$	Response time <sup>1)</sup> @ 90 % $C_{I_{PN}}$	$< 1$	$\mu\text{s}$
$di/dt$	di/dt accurately followed	$> 50$	A/ $\mu\text{s}$
$f$	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	$\Omega$
$m$	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

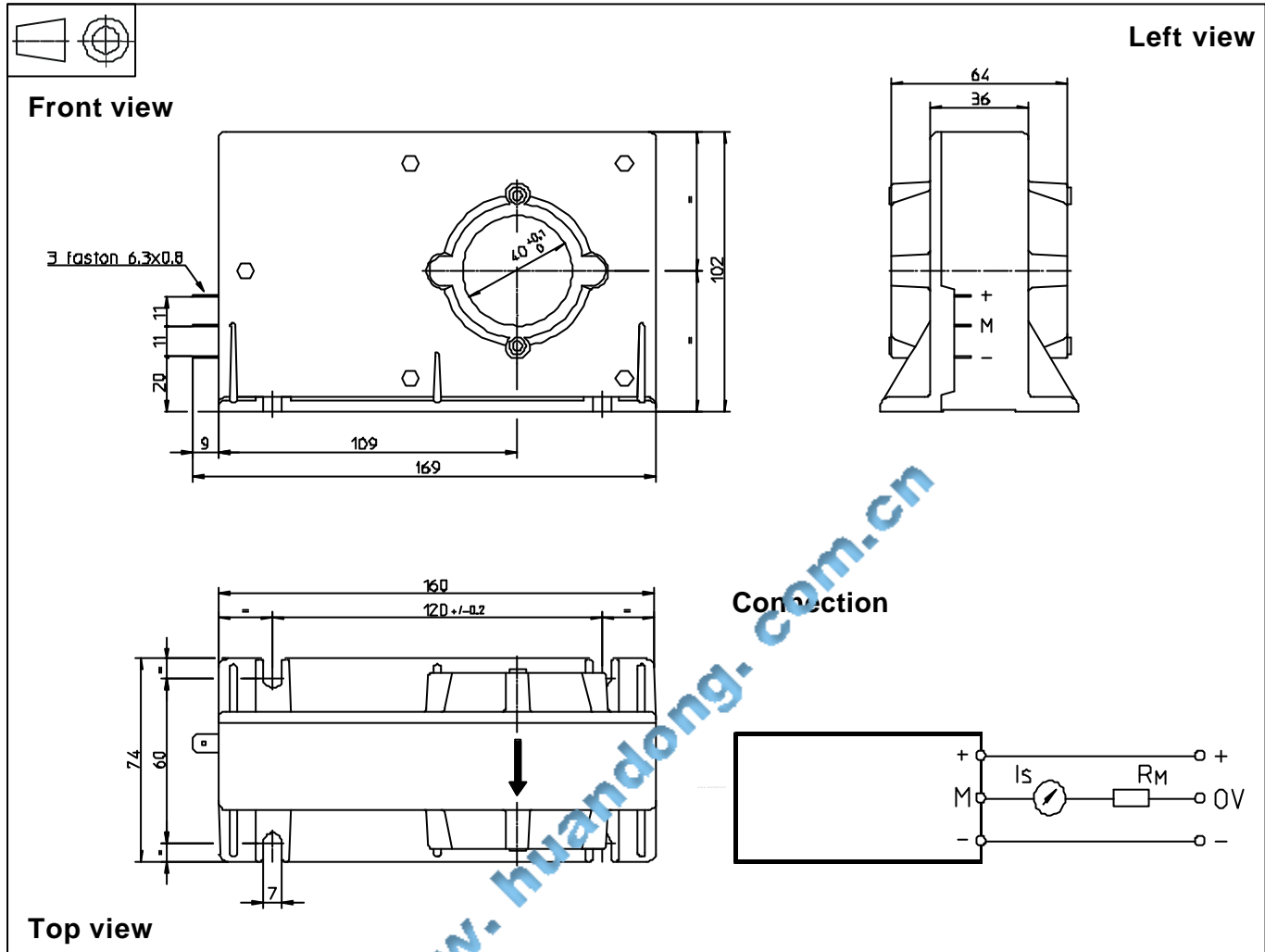
- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

## 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 : <sup>1)</sup> With a di/dt of 100 A/ $\mu\text{s}$ .

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



### Mechanical characteristics

- General tolerance  $\pm 0.5$  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.