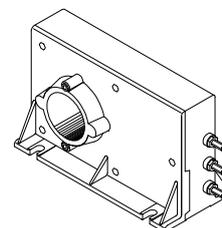


# Current Transducer LT 1000-SI/SP60

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

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 @ $\pm 24 \text{ V}$	$0 \dots \pm 1800$	A			
$R_M$	Measuring resistance	$R_{M \min}$	$R_{M \max}$			
				with $\pm 15 \text{ V}$	@ $\pm 1000 \text{ A}_{\max}$	0
			@ $\pm 1500 \text{ A}_{\max}$	0	3	$\Omega$
		with $\pm 24 \text{ V}$	@ $\pm 1000 \text{ A}_{\max}$	10	65	$\Omega$
	@ $\pm 1800 \text{ A}_{\max}$	10	18	$\Omega$		
$I_{SN}$	Secondary nominal r.m.s. current	200	mA			
$K_N$	Conversion ratio	1 : 5000				
$V_C$	Supply voltage ( $\pm 5 \%$ )	$\pm 15 \dots 24$	V			
$I_C$	Current consumption	$45 + I_s$	mA			
$V_d$	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	6	kV			

## Features

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

## Special features

- $I_p = 0 \dots \pm 1800 \text{ A}$  (@  $\pm 24 \text{ V}$ )
- $V_C = \pm 15 \dots 24$  ( $\pm 5 \%$ ) V
- $T_A = -25^\circ\text{C} \dots +70^\circ\text{C}$
- Hall cell mounted vertically
- Connection to secondary circuit on M5 threaded studs
- Railway equipment.

## Accuracy - Dynamic performance data

$X_G$	Overall accuracy @ $I_{PN}, T_A = 25^\circ\text{C}$	$\pm 0.3$	%
$e_L$	Linearity	$< 0.1$	%
$I_O$	Offset current @ $I_p = 0, T_A = 25^\circ\text{C}$	Typ	Max
$I_{OT}$	Thermal drift of $I_O$ - $25^\circ\text{C} \dots +70^\circ\text{C}$	$\pm 0.2$	$\pm 0.4$ mA
$t_r$	Response time <sup>1)</sup> @ 90 % of $I_{P \max}$	$< 1$	$\mu\text{s}$
$di/dt$	$di/dt$ accurately followed	$> 50$	A/ $\mu\text{s}$
$f$	Frequency bandwidth (-1 dB)	DC .. 100	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

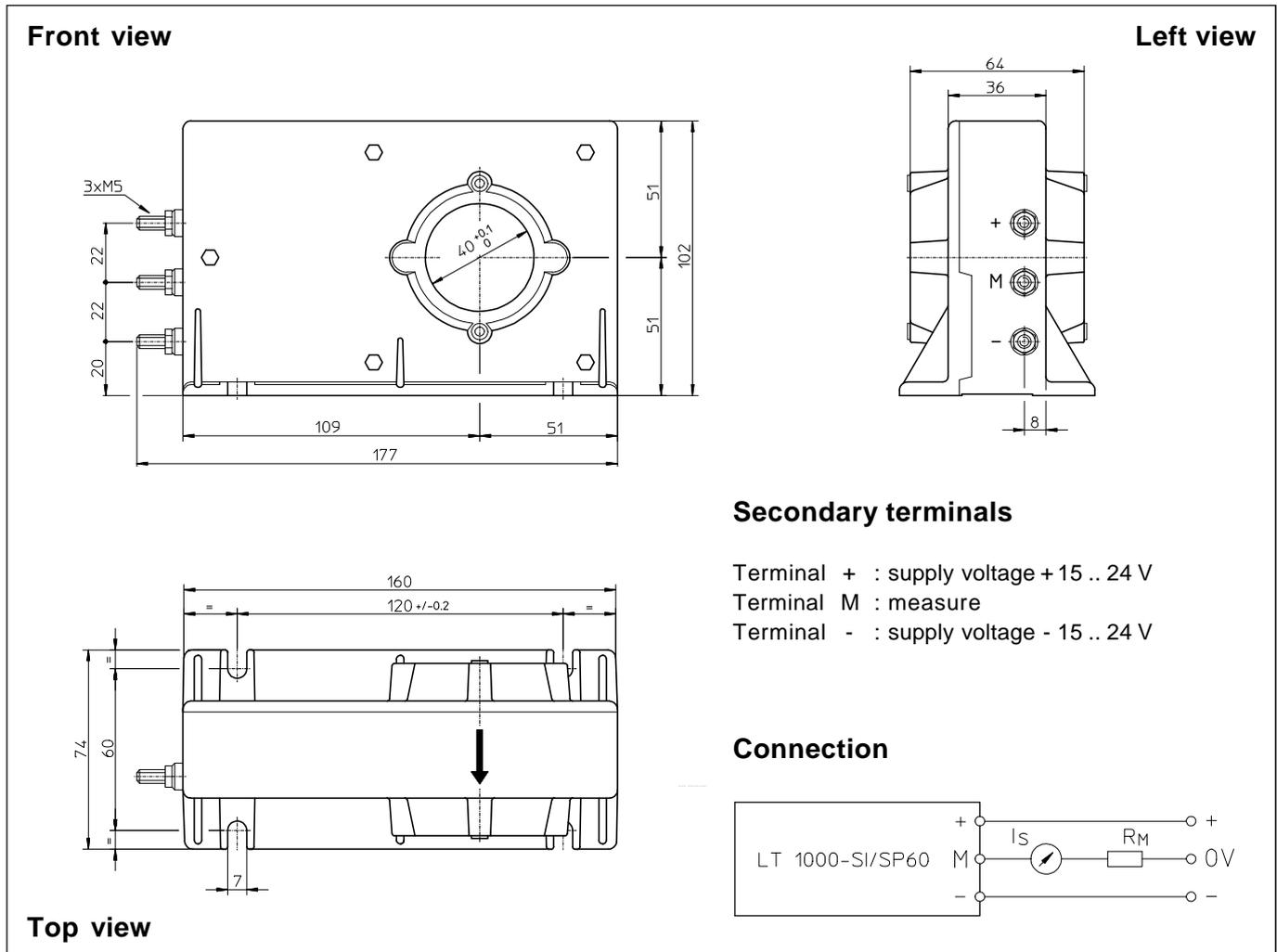
$T_A$	Ambient operating temperature	$-25 \dots +70$	$^\circ\text{C}$
$T_S$	Ambient storage temperature	$-40 \dots +85$	$^\circ\text{C}$
$R_S$	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	40	$\Omega$
$m$	Mass	0.9	kg
	Standards <sup>2)</sup>	EN 50155	

## 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 : <sup>1)</sup> With a  $di/dt$  of 100 A/ $\mu\text{s}$   
<sup>2)</sup> A list of corresponding tests is available

## Dimensions LT 1000-SI/SP60 (in mm. 1 mm = 0.0394 inch)



### Mechanical characteristics

- General tolerance  $\pm 0.5$  mm
- Fastening 4 holes  $\varnothing 7$  mm
- Primary through-hole  $\varnothing 40$  mm
- Connection of secondary M5 threaded studs
- Fastening torque 2.2 Nm or 1.62 Lb - Ft

### 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.