

# Current Transducer LT 1005-S/SP30

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

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 .. $\pm 2200$	A				
$R_M$	Measuring resistance @	$T_A = 70^\circ\text{C}$		$T_A = 85^\circ\text{C}$			
			$R_{M \min}$	$R_{M \max}$	$R_{M \min}$	$R_{M \max}$	
		with $\pm 15 \text{ V}$	@ $\pm 1100 \text{ A}_{\max}$	0	16	0	14 $\Omega$
			@ $\pm 1200 \text{ A}_{\max}$	0	12	0	10 $\Omega$
			@ $\pm 1300 \text{ A}_{\max}$	0	8	0	6 $\Omega$
		with $\pm 24 \text{ V}$	@ $\pm 2000 \text{ A}_{\max}$	0	12.5	3	10.5 $\Omega$
@ $\pm 2100 \text{ A}_{\max}$	0		10	3	8 $\Omega$		
@ $\pm 2200 \text{ A}_{\max}$	0		7	3	5 $\Omega$		
$I_{SN}$	Secondary nominal r.m.s. current	200	mA				
$K_N$	Conversion ratio	1 : 5000					
$V_C$	Supply voltage ( $\pm 5 \%$ )	$\pm 15 \dots 24$	V				
$I_C$	Current consumption	$30 (@ \pm 24 \text{ V}) + I_S$	mA				
$V_d$	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	6 <sup>1)</sup>	kV				
		1.5 <sup>2)</sup>	kV				
$V_e$	R.m.s. voltage for partial discharge extinction @ 10pC	4.1	kV				

## Accuracy - Dynamic performance data

$X_G$	Overall accuracy @ $I_{PN}, T_A = 25^\circ\text{C}$	$\pm 0.5$	%
$e_L$	Linearity	$< 0.1$	%
$I_O$	Offset current @ $I_P = 0, T_A = 25^\circ\text{C}$	Typ	Max
$I_{OT}$	Thermal drift of $I_O$	$-40^\circ\text{C} \dots +85^\circ\text{C}$	$\pm 0.25$ mA
			$\pm 0.1$ $\pm 0.50$ mA
$t_r$	Response time <sup>3)</sup> @ 90 % of $I_{PN}$	$< 1$	$\mu\text{s}$
$di/dt$	di/dt accurately followed	$> 50$	A/ $\mu\text{s}$
$f$	Frequency bandwidth (-1 dB)	DC .. 150	kHz

## General data

$T_A$	Ambient operating temperature	$-40 \dots +85$	$^\circ\text{C}$
$T_S$	Ambient storage temperature	$-50 \dots +85$	$^\circ\text{C}$
$R_S$	Secondary coil resistance @	$T_A = 70^\circ\text{C}$	40 $\Omega$
		$T_A = 85^\circ\text{C}$	42 $\Omega$
$m$	Mass Standards <sup>4)</sup>	700	g
		EN 50155	

**Notes :** <sup>1)</sup> Between primary and secondary + internal shield + screened cable

<sup>2)</sup> Between secondary and internal shield + screened cable

<sup>3)</sup> With a di/dt of 100 A/ $\mu\text{s}$

<sup>4)</sup> A list of corresponding tests is available.

## Features

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

## Special features

- $I_P = 0 \dots \pm 2200 \text{ A}$
- $V_C = \pm 15 \dots 24 (\pm 5 \%) \text{ V}$
- $T_A = -40^\circ\text{C} \dots +85^\circ\text{C}$
- Secondary connection on cable and Phoenix 4 poles MSTB 2.5/4-STZ-5.08 connector
- Shield between primary and secondary connected to the cable screening and 4 pin of connector
- Railway equipment
- Mounting plate
- Customer marking.

## Advantages

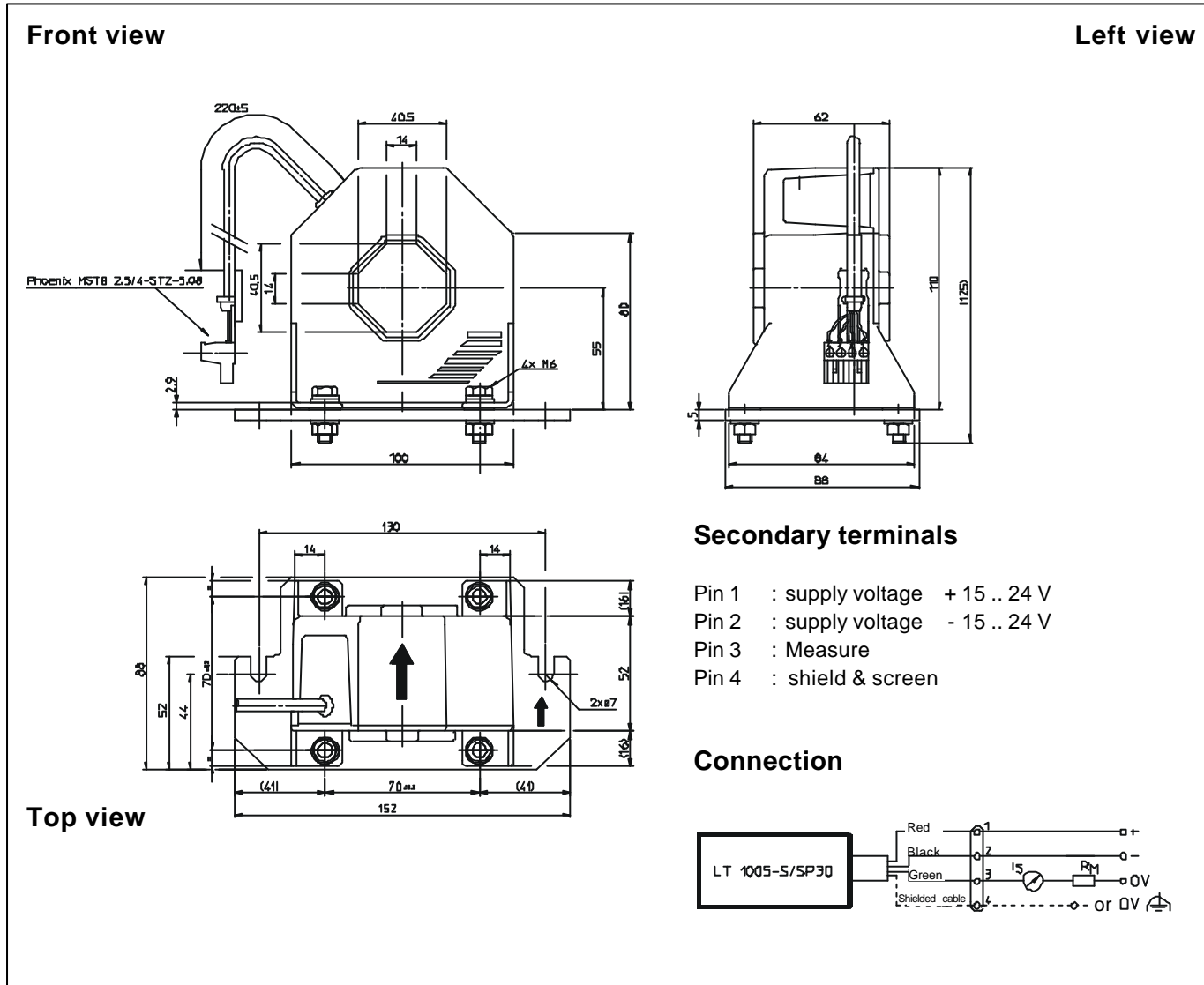
- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

## 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.

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## Dimensions LT 1005-S/SP30 (in mm. 1 mm = 0.0394 inch)



### Mechanical characteristics

- General tolerance  $\pm 0.5$  mm
- Fastening 4 holes  $\varnothing 6.5$  mm
- Primary through-hole 40.5 x 40.5 mm
- Connection of secondary Phoenix 4 poles MSTB 2.5/4-STZ-5.08 connector

### 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.

单击下面可查看定价，库存，交付和生命周期等信息

[>>LEM\(莱姆\)](#)