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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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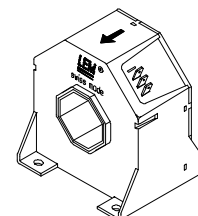
# Current Transducer LT 1005-S

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

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).



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## Electrical data

$I_{PN}$	Primary nominal r.m.s. current	1000	A				
$I_P$	Primary current, measuring range	0 .. $\pm 2000$	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 $\pm 15 \text{ V}$	@ $\pm 1000 \text{ A}_{\max}$	0	22.5	0	18.5
			@ $\pm 1200 \text{ A}_{\max}$	0	11	0	8
		with $\pm 24 \text{ V}$	@ $\pm 1000 \text{ A}_{\max}$	0	65	0	62
			@ $\pm 2000 \text{ A}_{\max}$	0	10	0	7
$I_{SN}$	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	kV				
$V_b$	R.m.s. rated voltage <sup>1)</sup> , safe separation	1750	V				
		basic isolation	3500	V			

## Accuracy - Dynamic performance data

$X_G$	Overall accuracy @ $I_{PN}$ , $T_A = 25^\circ\text{C}$	$\pm 0.4$	%	
$\epsilon_L$	Linearity	$< 0.1$	%	
$I_O$	Offset current @ $I_P = 0$ , $T_A = 25^\circ\text{C}$	Typ	Max	
			$\pm 0.4$	mA
$I_{OT}$	Thermal drift of $I_O$	$-10^\circ\text{C} \dots +85^\circ\text{C}$	$\pm 0.3$	mA
$t_r$	Response time <sup>2)</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	-10 .. +85	$^\circ\text{C}$	
$T_S$	Ambient storage temperature	-25 .. +100	$^\circ\text{C}$	
$R_S$	Secondary coil resistance @	$T_A = 70^\circ\text{C}$	43	$\Omega$
		$T_A = 85^\circ\text{C}$	46	$\Omega$
$m$	Mass		550	g
		Standards	EN 50178: 1997	

## Features

- Closed loop (compensated) current transducer using the Hall effect
- Isolated 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

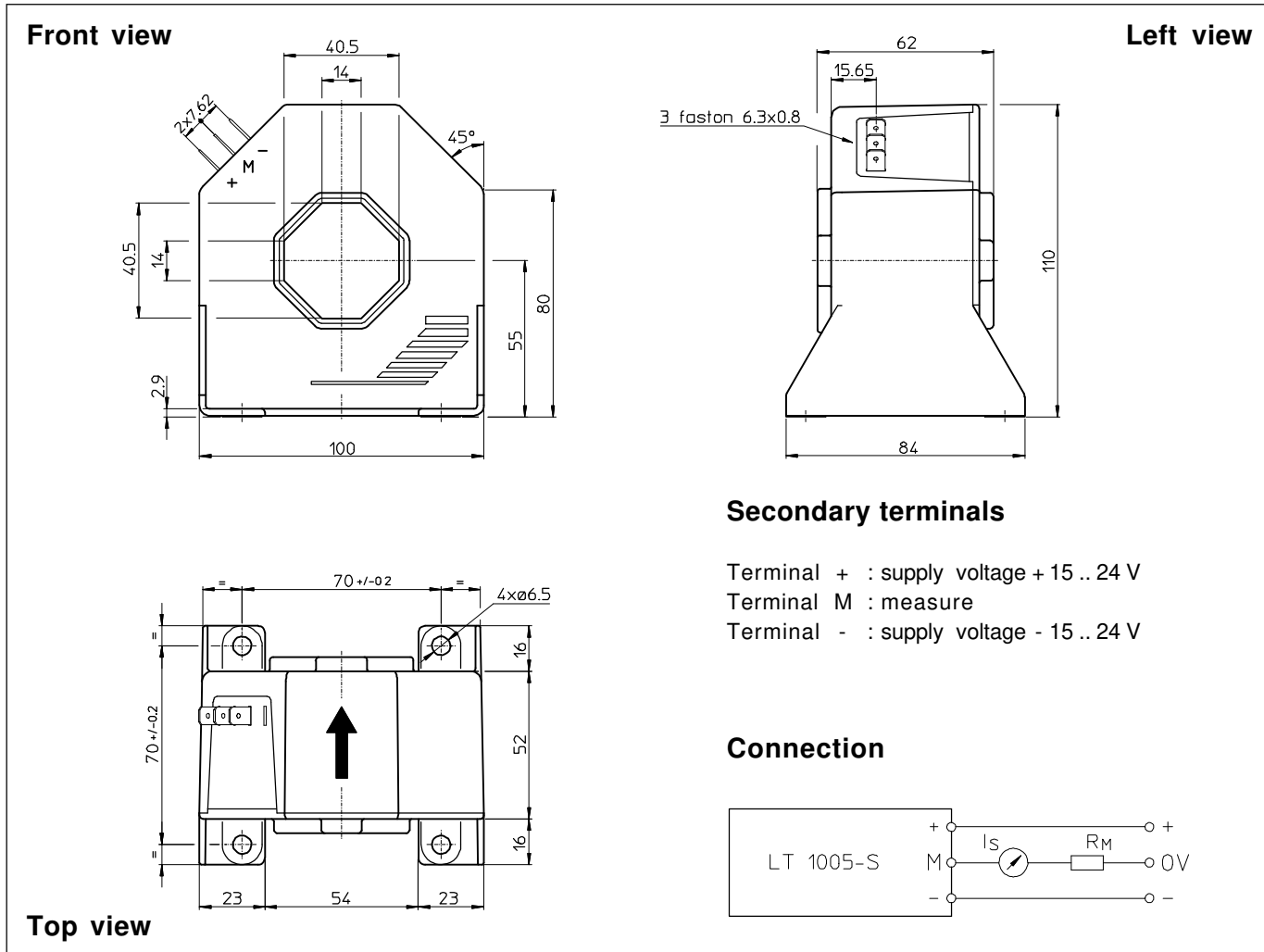
- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

Notes: <sup>1)</sup> Pollution class 2. With a non insulated primary bar which fills the through-hole.

<sup>2)</sup> With a di/dt of 100 A/ $\mu\text{s}$ .

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## Dimensions LT 1005-S (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 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.