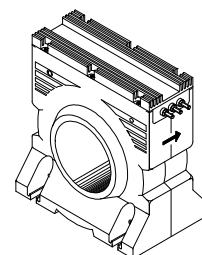


# Current Transducer LT 4000-S

$I_{PN} = 4000 \text{ A}$

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	4000	A
$I_p$	Primary current, measuring range	0 .. $\pm 6000$	A
$R_M$	Measuring resistance with $\pm 24 \text{ V}$	$R_{Mmin}$	$R_{Mmax}$
		@ $\pm 4000 \text{ A}_{max}$	0    10 $\Omega$
		@ $\pm 6000 \text{ A}_{max}$	0    2 $\Omega$
$I_{SN}$	Secondary nominal r.m.s. current	800	mA
$K_N$	Conversion ratio	1 : 5000	
$V_C$	Supply voltage ( $\pm 5\%$ )	$\pm 24$	V
$I_C$	Current consumption	35 (@ $\pm 24 \text{ V}$ ) + $I_S$	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.

## 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.

## 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 $I_O$ - $25^\circ\text{C} \dots + 70^\circ\text{C}$	$\pm 0.6$	$\pm 0.8$ mA
$t_r$	Response time <sup>1)</sup> @ 90 % of $I_{Pmax}$	$< 1$	$\mu\text{s}$
$di/dt$	di/dt accurately followed	$> 50$	A/ $\mu\text{s}$
$f$	Frequency bandwidth (- 1 dB)	DC .. 100	kHz

## General data

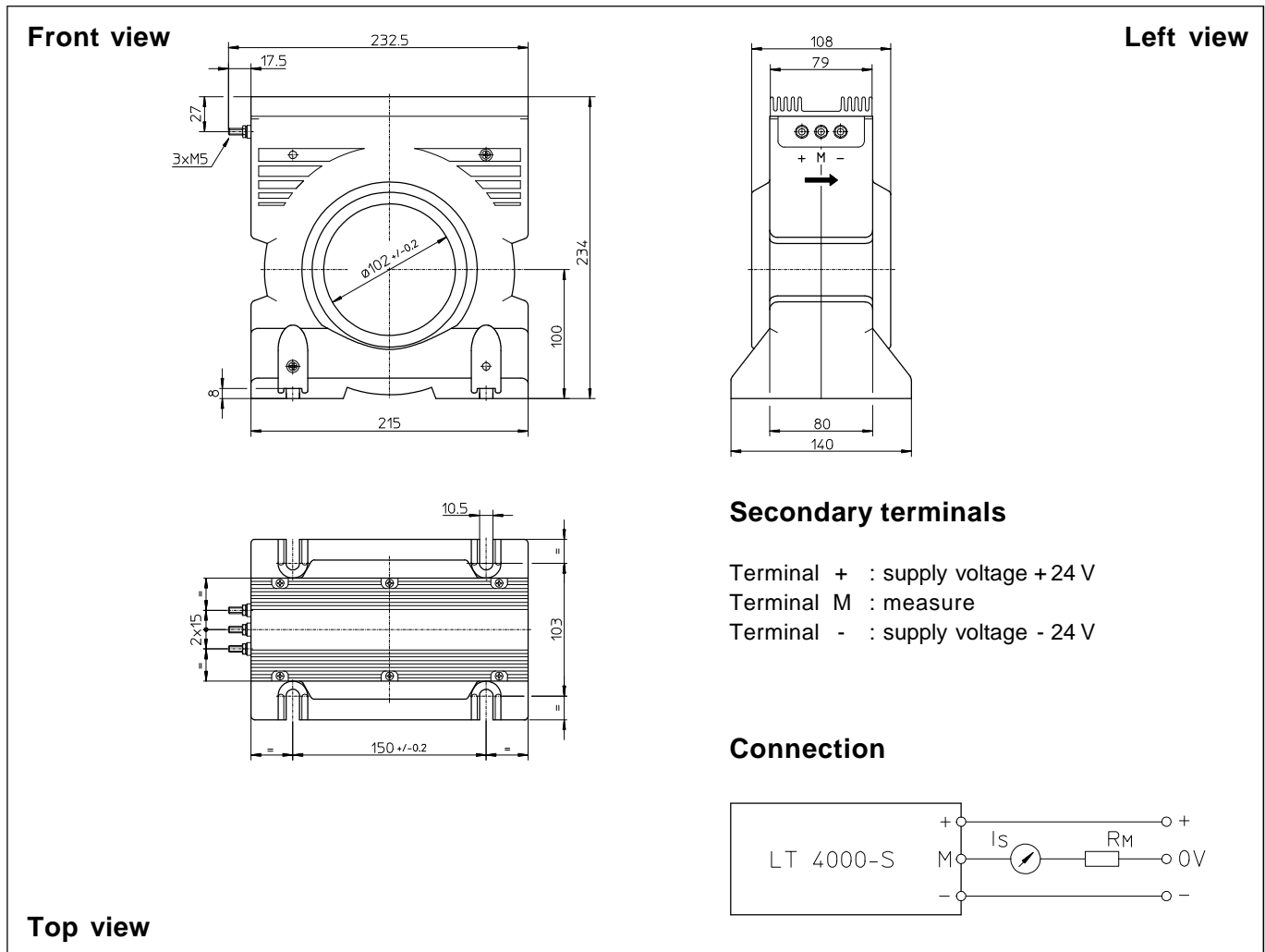
$T_A$	Ambient operating temperature	- 25 .. + 70	$^\circ\text{C}$
$T_S$	Ambient storage temperature	- 40 .. + 85	$^\circ\text{C}$
$R_S$	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	15	$\Omega$
$m$	Mass	6	kg
	Standards <sup>2)</sup>	EN 50178	

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

<sup>2)</sup> A list of corresponding tests is available

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## Dimensions LT 4000-S (in mm. 1 mm = 0.0394 inch)



### Mechanical characteristics

- General tolerance  $\pm 1.0$  mm
- Fastening 4 holes  $\phi 10.5$  mm
- Primary through-hole  $\phi 102$  mm
- Connection of secondary fastening torque M5 threaded studs 2.2 Nm

### 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.

This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.