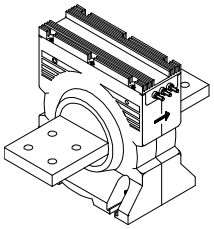
Current Transducer LT 4000-T

I_{PN} = 4000 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 .. ± 6000		A
R_M	Measuring resistance		$R_{M\,min}$	$R_{M\,max}$	
	with ± 24 V	@ ± 4000 A_{max}	0	10	Ω
		@ ± 6000 A_{max}	0	2	Ω
I_{SN}	Secondary nominal r.m.s. current		800		mA
K_N	Conversion ratio		1 : 5000		
V_C	Supply voltage (± 5 %)		± 24		V
I_C	Current consumption		35 (@ ± 24 V) + I_S		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°C		± 0.5		%
ε_L	Linearity		< 0.1		%
			Typ	Max	
I_O	Offset current @ I_P = 0, T_A = 25°C			± 0.8	mA
I_{OT}	Thermal drift of I_O	- 25°C .. + 70°C	± 0.6	± 0.8	mA
t_r	Response time [1] @ 90 % of $I_{P\,max}$		< 1		µs
di/dt	di/dt accurately followed		> 50		A/µs
f	Frequency bandwidth (- 1 dB)		DC .. 100		kHz

General data

T_A	Ambient operating temperature		- 25 .. + 70	°C
T_S	Ambient storage temperature		- 40 .. + 85	°C
R_S	Secondary coil resistance @ T_A = 70°C		15	Ω
m	Mass		12.1	kg
	Standards [2]		EN 50178	

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.

Notes : [1] With a di/dt of 100 A/µs

[2] A list of corresponding tests is available

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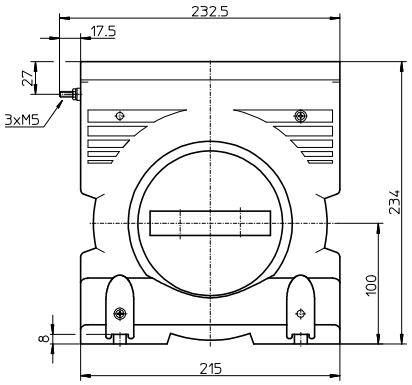
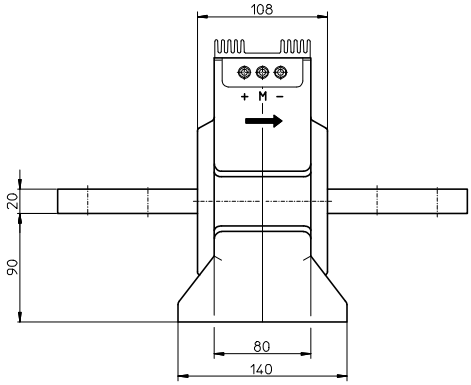
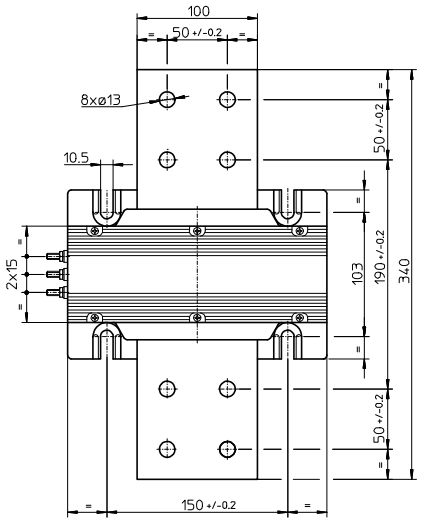
Dimensions LT 4000-T (in mm. 1 mm = 0.0394 inch)

Front view



Left view



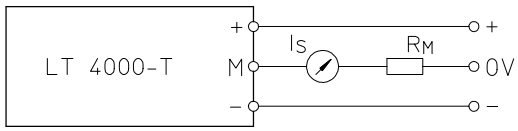


Top view

Secondary terminals

Terminal + : supply voltage + 24 V
Terminal M : measure
Terminal - : supply voltage - 24 V

Connection



Mechanical characteristics

• General tolerance	± 1 mm
• Fastening	4 holes ∅ 10.5 mm or by the primary bar
• Connection of primary	8 holes ∅ 13 mm
• Connection of secondary	M5 threaded studs
Fastening torque	2.2 Nm or 1.62 Lb - Ft

Remarks

- $\mathbf{I}_S$ is positive when $\mathbf{I}_P$ flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 100°C.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.

LEM reserves the right to carry out modifications on its transducers, in order to improve them, without previous notice.