

Current Transducer LTC 600-T

$$I_{PN} = 500 \text{ A}$$

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	500	A
I_P	Primary current, measuring range @ 24 V	0 .. ± 1500	A
I_P	Max overload not measurable	10 / 10	kA/ms
R_M	Measuring resistance	$R_{M \min}$ $R_{M \max}$	
	with $\pm 15 \text{ V}$	@ $\pm 500 \text{ A}_{\max}$	0 70 Ω
		@ $\pm 1200 \text{ A}_{\max}$	0 5 Ω
	with $\pm 24 \text{ V}$	@ $\pm 500 \text{ A}_{\max}$	0 150 Ω
	@ $\pm 1500 \text{ A}_{\max}$	0 20 Ω	
I_{SN}	Secondary nominal r.m.s. current	100	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	13.4 ¹⁾	kV
		1.5 ²⁾	kV
V_e	R.m.s. voltage for partial discharge extinction	> 2.8	kV

Features

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

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.

Accuracy - Dynamic performance data

X_G	Overall accuracy @ $I_{PN}, T_A = 25^\circ\text{C}$ @ $I_{PN}, T_A = -40^\circ\text{C} \dots +85^\circ\text{C}$	$< \pm 0.7$	%
		$< \pm 1.6$	%
e_L	Linearity error	< 0.1	%
		Max	
I_O	Offset current @ $I_P = 0, T_A = 25^\circ\text{C}$	± 0.5	mA
I_{OT}	Thermal drift of I_O $-40^\circ\text{C} \dots +85^\circ\text{C}$	± 1	mA
t_r	Response time ³⁾ @ 90 % of I_{PN}	< 1	μs
di/dt	di/dt accurately followed	> 100	A/ μs
f	Frequency bandwidth (-1 dB)	DC .. 100	kHz

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.

General data

T_A	Ambient operating temperature	$-40 \dots +85$	$^\circ\text{C}$
T_S	Ambient storage temperature	$-45 \dots +90$	$^\circ\text{C}$
R_S	Secondary coil resistance @ $T_A = 85^\circ\text{C}$	44	Ω
m	Mass	1270	g
	Standards	EN50155 (01.12.20)	

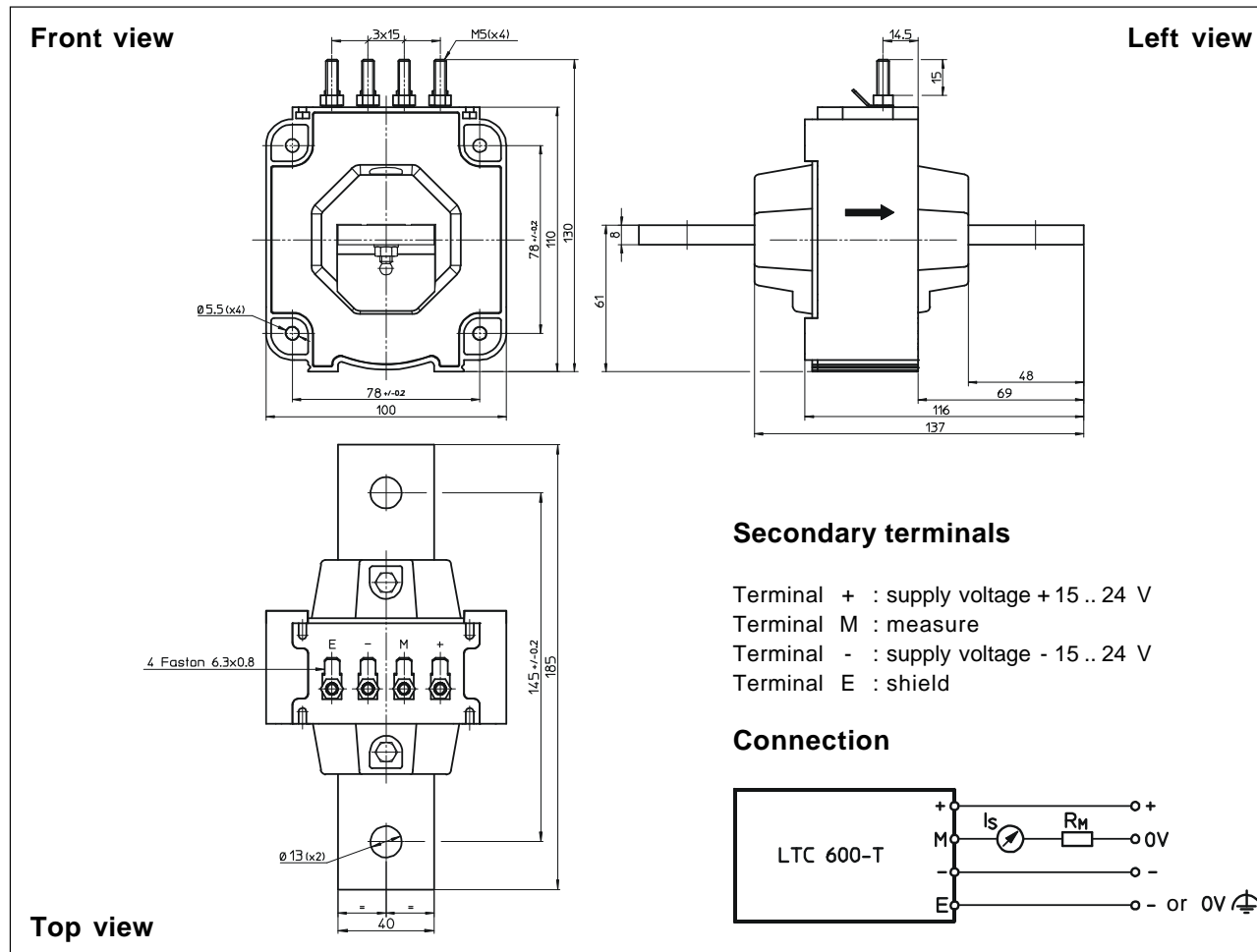
Notes : ¹⁾ Between primary and secondary + shield

²⁾ Between secondary and shield

³⁾ With a di/dt of 100 A/ μs .

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Dimensions LTC 600-T (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 1 mm
- Fixing the transducer
 - 2 holes $\varnothing 13$ mm
 - or by the primary bar
 - 2 steel screws M12
- Recommended fastening torque 24.5 Nm
- Connection of secondary
 - M5 threaded studs
 - Recommended fastening torque 2.2 Nm or 1.62 Lb.-Ft.
 - 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.
- 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.