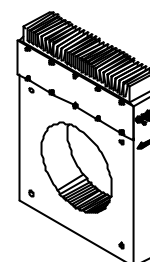


Current Transducer LT 10000-S

$I_{PN} = 10000 \text{ A}$

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	10000	A
I_P	Primary current, measuring range (1 s/mn)	0 .. ± 15000	A
R_M	Measuring resistance	$R_{M \min}$	$R_{M \max}$
	with $\pm 48 \text{ V}$	@ $\pm 10000 \text{ A}_{\max}$	0 8 Ω
		@ $\pm 12000 \text{ A}_{\max}$	0 1 Ω
	with $\pm 60 \text{ V}$	@ $\pm 10000 \text{ A}_{\max}$	0 20 Ω
	@ $\pm 15000 \text{ A}_{\max}$	0 1.5 Ω	
I_{SN}	Secondary nominal r.m.s. current	1	A
K_N	Conversion ratio	1 : 10000	
V_C	Supply voltage ($\pm 5 \%$)	$\pm 48 \dots 60$	V
I_C	Current consumption	$40 (@ \pm 60 \text{ V}) + I_S$	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	$10^{1)}$	kV
		$1^{2)}$	kV

Features

- Closed loop (compensated) current transducer using the Hall effect
- Insulated case.

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 @ $I_{PN}, T_A = 25^\circ\text{C}$	± 0.3	%
e_L	Linearity error	< 0.1	%
I_O	Offset current @ $I_P = 0, T_A = 25^\circ\text{C}$	Typ	Max
I_{OT}	Thermal drift of I_O - $25^\circ\text{C} \dots + 70^\circ\text{C}$	± 0.6	± 1.5 mA
			± 0.8 mA
t_r	Response time ³⁾ @ 90 % of I_{PN}	< 1	μs
di/dt	di/dt accurately followed	> 50	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	- 25 .. + 70	$^\circ\text{C}$
T_S	Ambient storage temperature	- 40 .. + 85	$^\circ\text{C}$
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	35	Ω
m	Mass	17	kg
	Standards	EN 50178(97.10.01)	

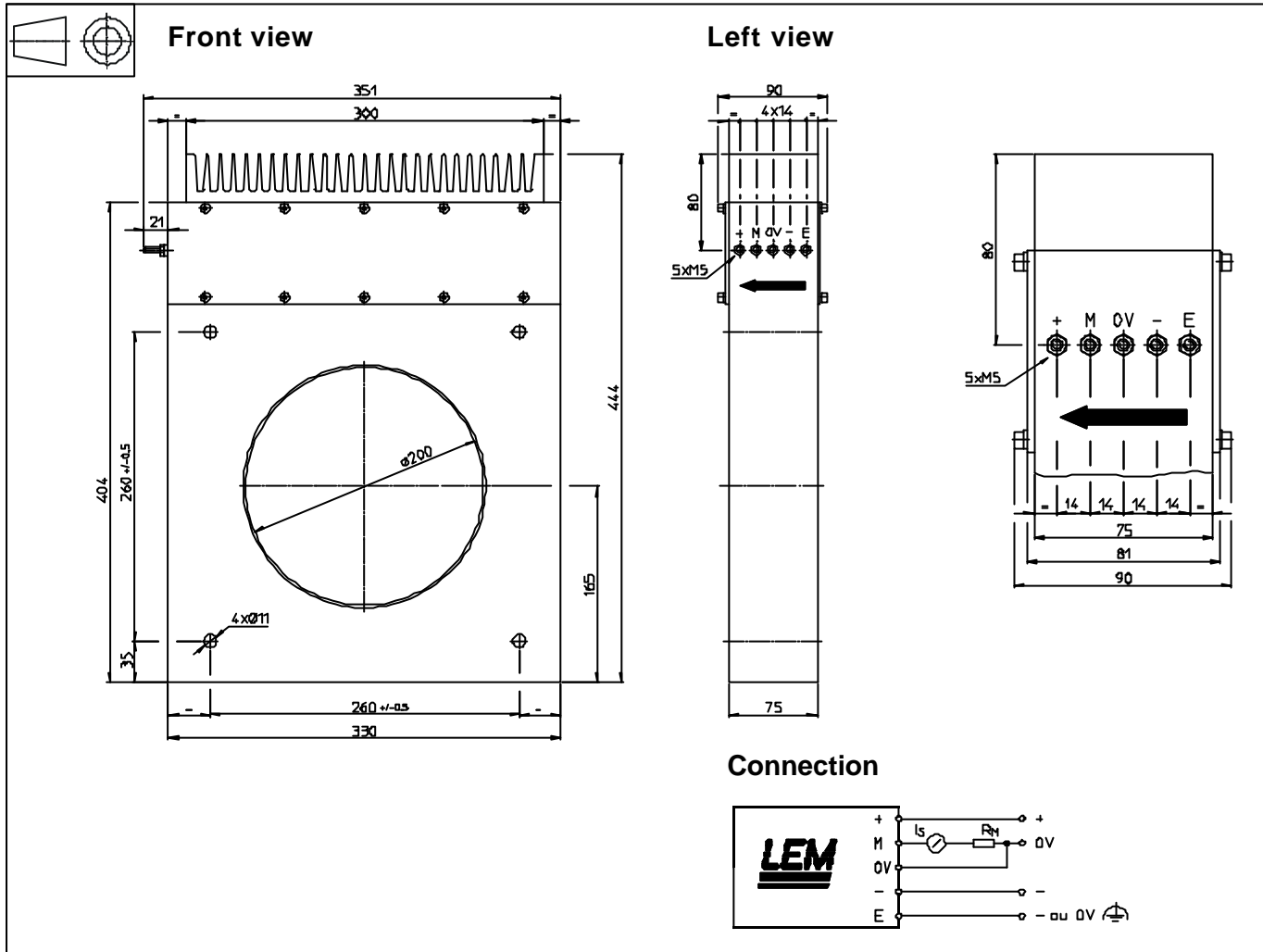
Notes : ¹⁾ Between primary and secondary + shield

²⁾ Between secondary and shield

³⁾ With a di/dt of 100 A/ μs .

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Dimensions LT 1000-S (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- | | |
|------------------------------|---|
| • General tolerance | ± 1 mm |
| • Transducer fastening | 4 holes $\varnothing 11$ mm
4 x M10 steel screws |
| Recommended fastening torque | 11.4 Nm or 8.48 Lb - Ft |
| • Primary through-hole | $\varnothing 200$ mm |
| • Connection of secondary | M5 threaded studs |
| Recommended fastening torque | 2.2 Nm or 1.62 Lb - Ft |

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 primary bar in the center of the through-hole.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.