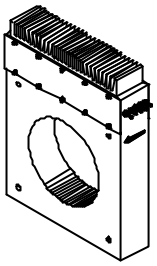
Current Transducer LT 10000-S

I_{PN} = 10000 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 ± 48 V	@ ± 10000 A $_{max}$	0	8	Ω
		@ ± 12000 A $_{max}$	0	1	Ω
	with ± 60 V	@ ± 10000 A $_{max}$	0	20	Ω
		@ ± 15000 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 (± 5 %)		± 48 .. 60		V
I_C	Current consumption		40 (@ ± 60 V) + I_S		mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn		10 [1]		kV
			1 [2]		kV

Accuracy - Dynamic performance data

X_G	Overall accuracy @ I_{PN}, T_A = 25°C		± 0.3		%
ε_L	Linearity error		< 0.1		%
			Typ	Max	
I_O	Offset current @ I_P = 0, T_A = 25°C			± 1.5	mA
I_{OT}	Thermal drift of I_O	- 25°C .. + 70°C	± 0.6	± 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

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	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.

Features

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

Advantages

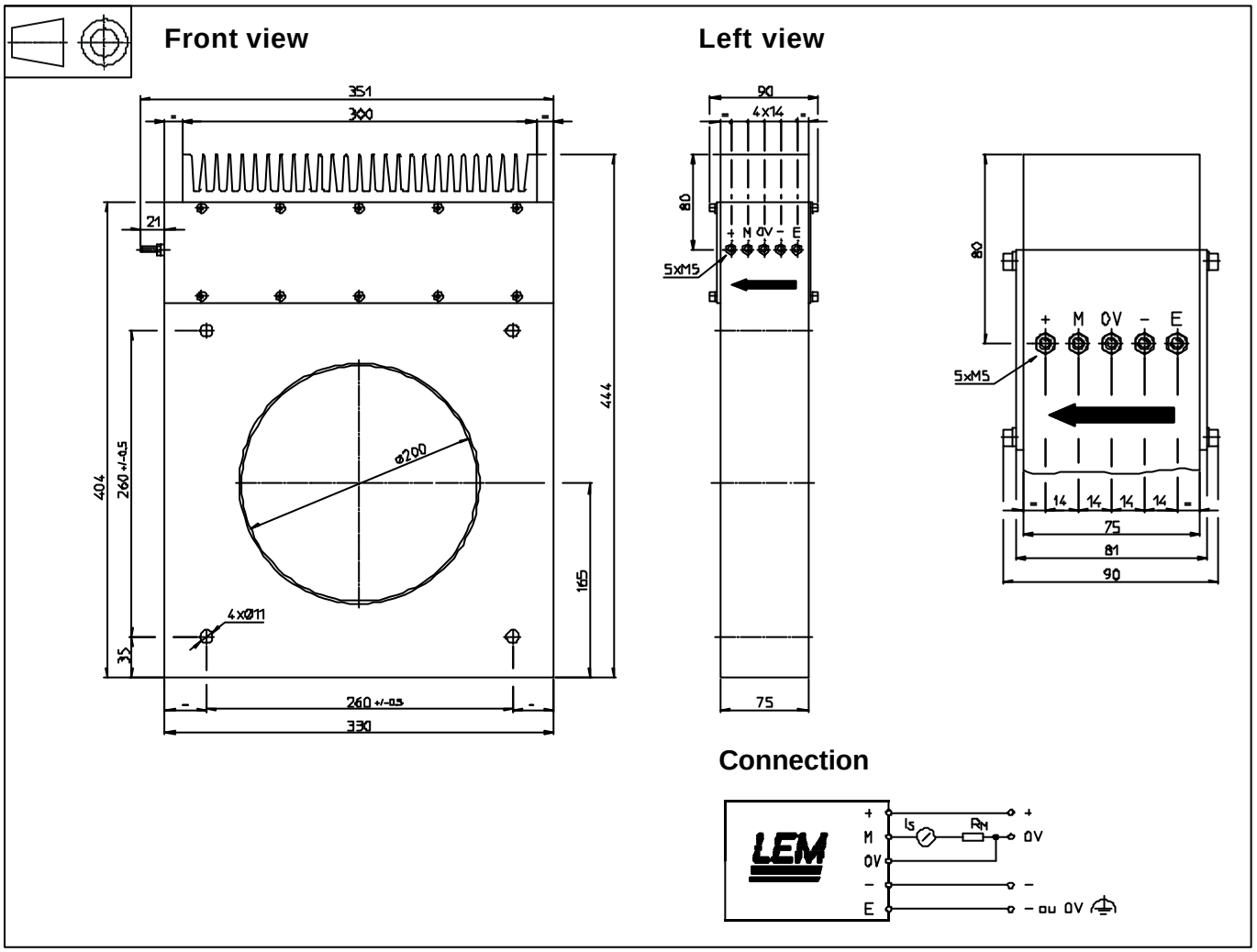
- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

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.

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Dimensions LT 10000-S (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

• General tolerance	± 1 mm
• Transducer fastening	4 holes ∅ 11 mm
	4 x M10 steel screws
Recommended fastening torque	11.4 Nm or 8.48 Lb - Ft
• Primary through-hole	∅ 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.

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