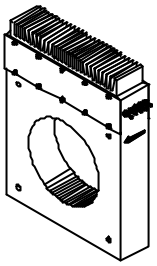
Current Transducer LT 10000-S

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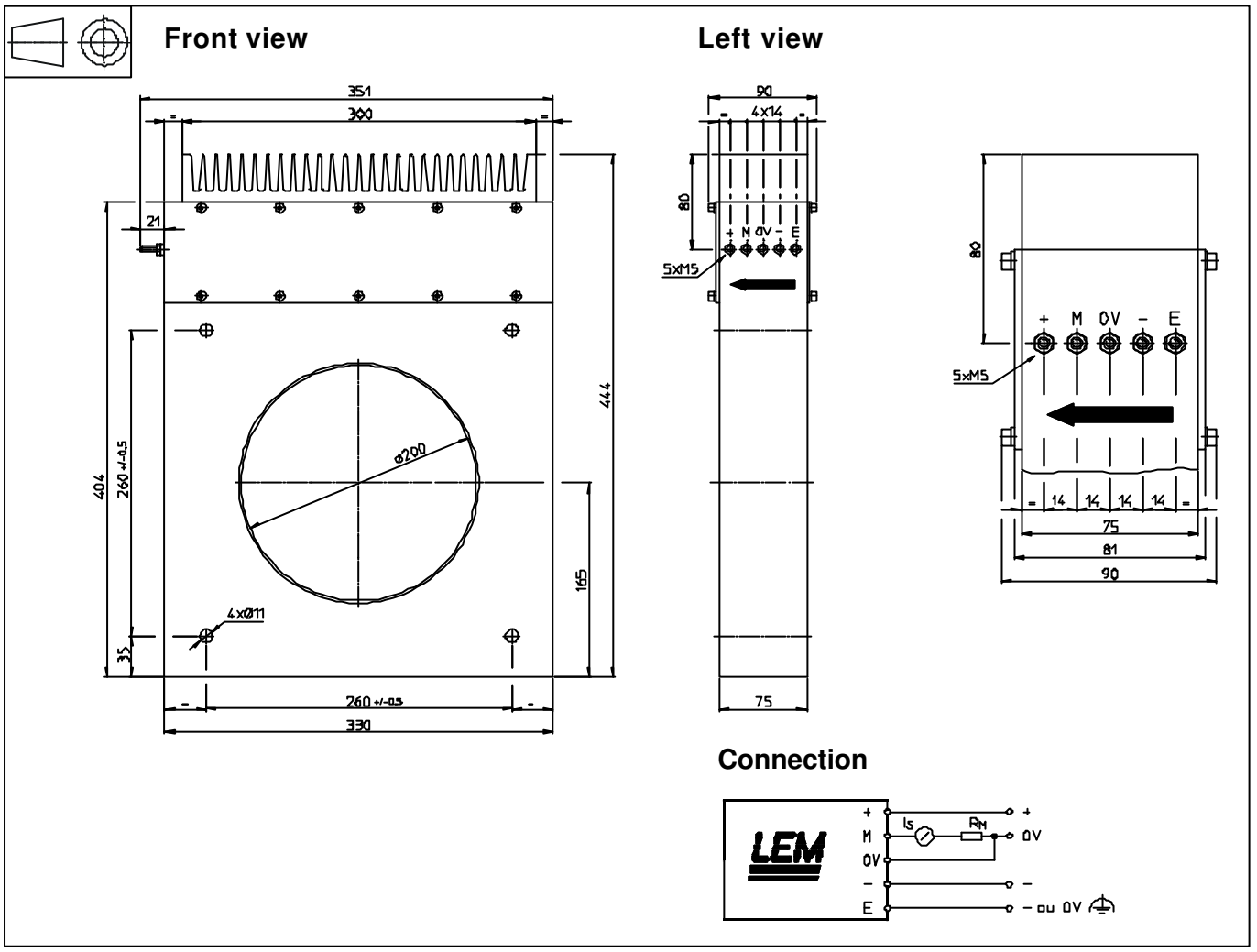
Dimensions LT 10000-S (in mm. 1 mm = 0.0394 inch)



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.