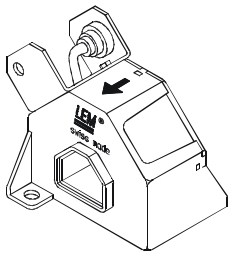
Current Transducer LA 205-S/SP11

I_{PN} = 200 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		200		A
I_P	Primary current, measuring range		0 .. ± 300		A
R_M	Measuring resistance		$R_{M\ min}$	$R_{M\ max}$	
	with ± 24 V	@ ± 200 A_{max}	85	200	Ω
		@ ± 300 A_{max}	85	110	Ω
I_{SN}	Secondary nominal r.m.s. current		66.6		mA
K_N	Conversion ratio		1 : 3000		
V_C	Supply voltage (± 20 %)		± 24		V
I_C	Current consumption		35 + I_S		mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn		6		kV
V_b	R.m.s rated voltage [1], safe separation		1625		V
		basic isolation	3250		V

Accuracy - Dynamic performance data

X_G	Overall accuracy @ I_{PN} , T_A = 25°C		± 0.8		%
ε_L	Linearity		< 0.1		%
			Typ	Max	
I_O	Offset current @ I_P = 0, T_A = 25°C			± 0.15	mA
I_{OM}	Residual current [2] @ I_P = 0, after an overload of 3 x I_{PN}			± 0.40	mA
I_{OT}	Thermal drift of I_O	- 25°C .. + 70°C	± 0.15	± 0.35	mA
t_{ra}	Reaction time @ 10 % of I_{PN}		< 500		ns
t_r	Response time [3] @ 90 % of I_{PN}		< 1		µs
di/dt	di/dt accurately followed		> 100		A/µs
f	Frequency bandwidth (- 3 dB)		DC .. 100		kHz

General data

T_A	Ambient operating temperature		- 30 .. + 70	°C
T_S	Ambient storage temperature		- 40 .. + 85	°C
R_S	Secondary coil resistance @ T_A = 70°C		70	Ω
m	Mass		170	g
	Standards [4]		EN 50178	

Notes : [1] Pollution class nr 2. With a non insulated primary bar which fills the through-hole
[2] The result of the coercive field of the magnetic circuit
[3] With a di/dt of 100 A/µs
[4] A list of corresponding tests is available.

Features

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

Special features

- K_N = 1 : 3000
- V_C = ± 24 (± 20 %) V
- T_A = - 30°C .. + 70°C
- Potted
- Connection to secondary circuit on LEMO EGJ.1B.304.CYC
- 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.

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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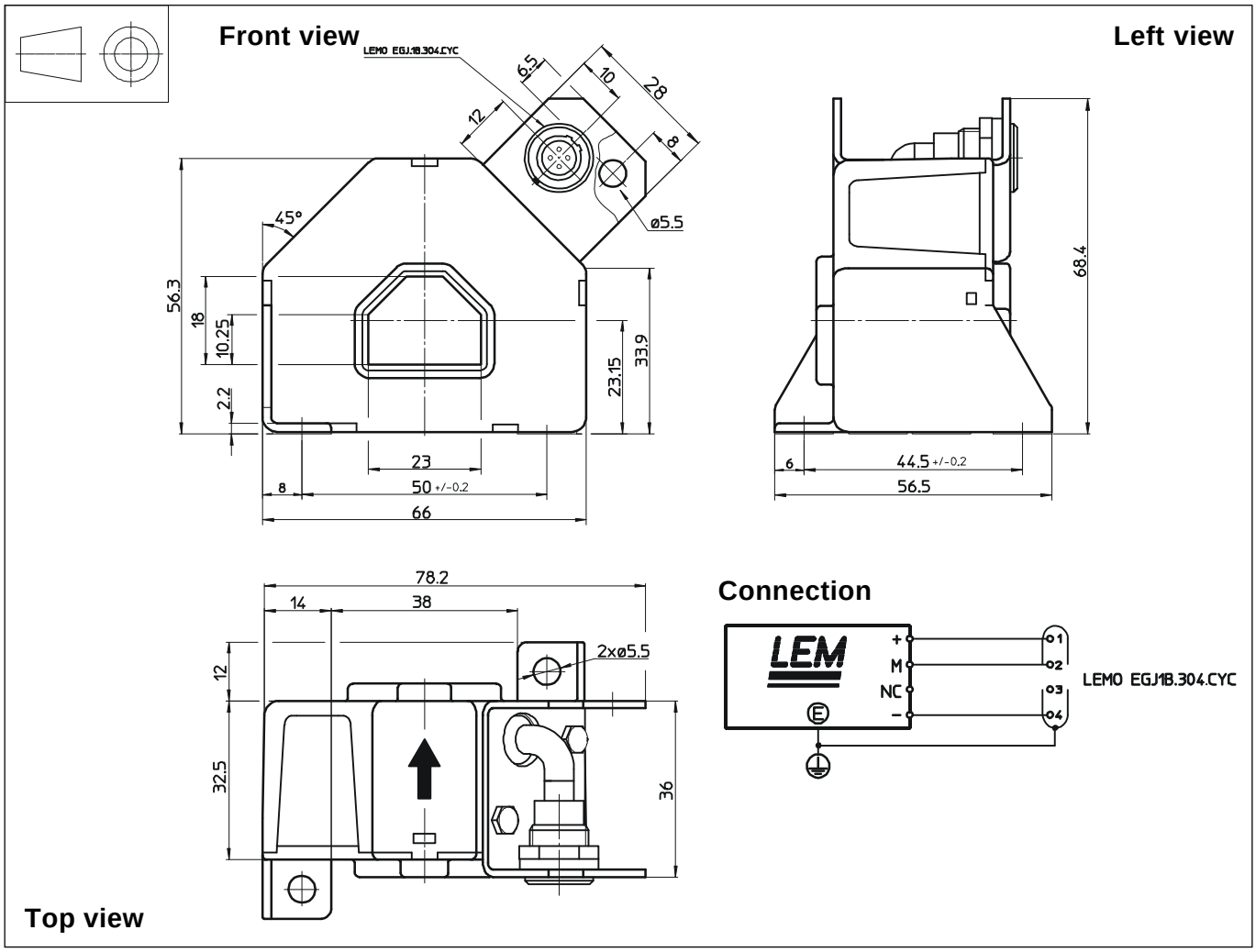
Dimensions LA 205-S/SP11 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

• General tolerance	± 0.5 mm
• Transducer fastening	2 holes ∅ 5.5 mm
	2 M5 steel screws
Fastening torque	4 Nm or 2.95 Lb. - Ft.
• Primary through-hole	23 x 18 mm
• Connection of secondary	LEMO EGJ.1B.304.CYC

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.
- Dynamic performances (di/dt and response time) are best with a single bar completely filling the primary hole.