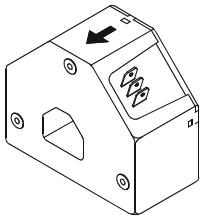
Current Transducer LA 205-S/SP29

I_{PN} = 300 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).

16117



Electrical data

I_{PN}	Primary nominal r.m.s. current				300		A
I_P	Primary current, measuring range				0 .. ± 500		A
$\hat{I}_{P\ max}$	Measuring overload [1]				600		A
R_M	Measuring resistance @		T_A = 70°C		T_A = 85°C		
			$R_{M\ min}$	$R_{M\ max}$	$R_{M\ min}$	$R_{M\ max}$	
	with ± 12 V	@ ± 300 A_{max}	0	33	0	31	Ω
		@ ± 500 A_{max}	0	6	0	4	Ω
	with ± 15 V	@ ± 300 A_{max}	5	52	5	50	Ω
		@ ± 500 A_{max}	5	17	5	15	Ω
I_{SN}	Secondary nominal r.m.s. current				150		mA
K_N	Conversion ratio				1 : 2000		
V_C	Supply voltage (± 5 %)				± 12 .. 15		V
I_C	Current consumption				20 (@ ± 15 V) + I_S		mA
V_b	R.m.s. rated voltage [2],	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 [3] @ I_P = 0, after an overload of 3 x I_{PN}			± 0.50	mA
I_{OT}	Thermal drift of I_O	- 10°C .. + 85°C	± 0.15	± 0.30	mA
t_{ra}	Reaction time @ 10 % of I_{PN}		< 500		ns
t_r	Response time [4] @ 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		- 10 .. + 85	°C
T_S	Ambient storage temperature		- 40 .. + 90	°C
R_S	Secondary coil resistance @	T_A = 70°C	35	Ω
		T_A = 85°C	37	Ω
m	Mass		110	g
	Standards [5]		EN 50178	

Notes : [1] 3 mn/hour @ V_C = ± 15 V, R_M = 5 Ω

[2] Pollution class 2. With a non insulated primary bar which fills the through-hole

[3] The result of the coercive field of the magnetic circuit

[4] With a di/dt of 100 A/µs

[5] 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.

Special features

- I_{PN} = 300 A
- I_P = 0 .. ± 500 A
- Negative output polarity
- Connection to secondary circuit on Faston 6.3 x 0.8 mm.

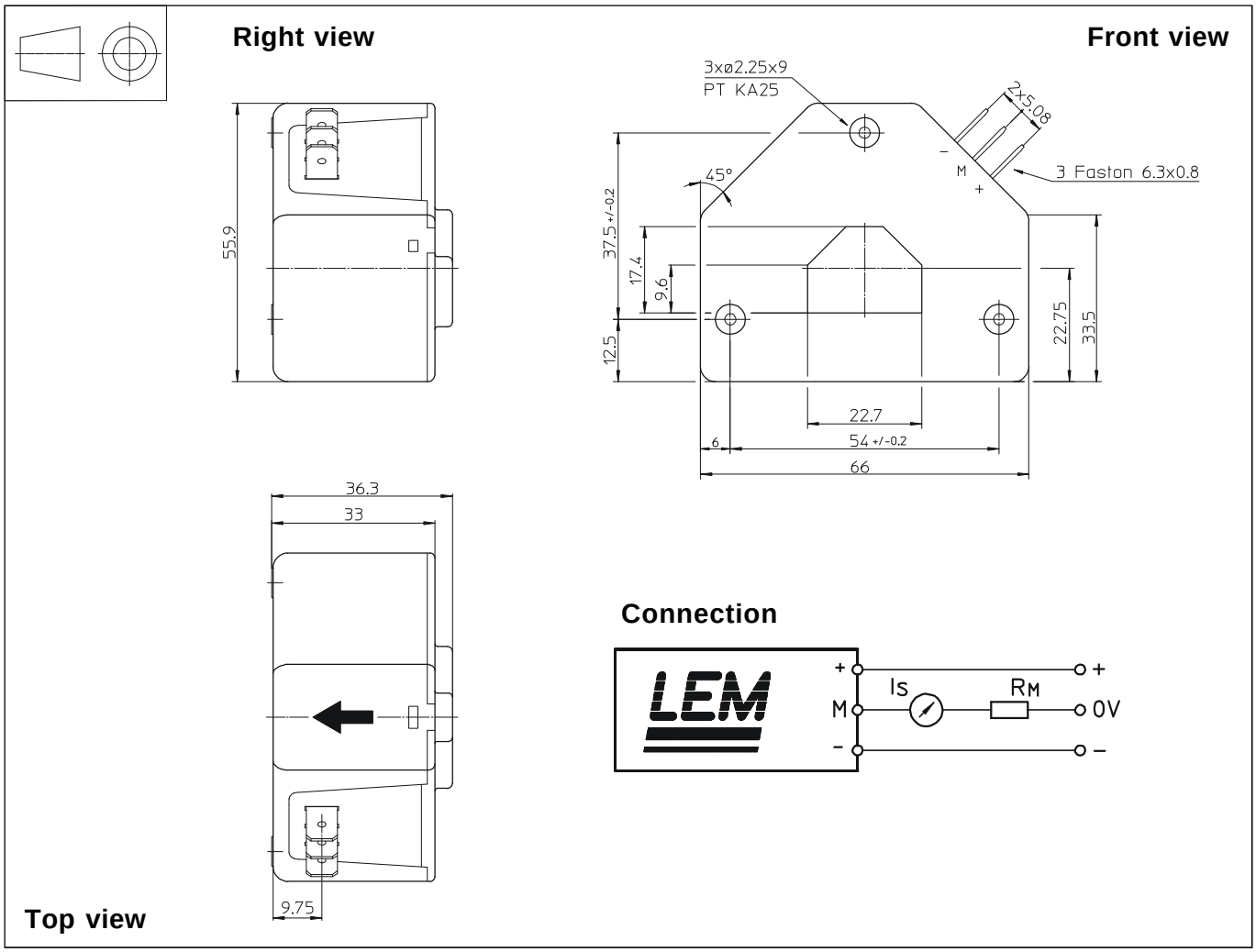
Advantages

- 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.

Dimensions LA 205-S/SP29 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

• General tolerance	± 0.5 mm
• Transducer fastening	3 holes ∅ 2.25 mm 3 PT KA 25 screews
Fastening torque max	0.8 Nm
• Primary through-hole	22.7 x 17.4 mm
• Connection of secondary	Faston 6.3 x 0.8 mm

Remarks

- $\mathbf{I}_S$ is negative 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.