Current Transducer LA 200-P

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).

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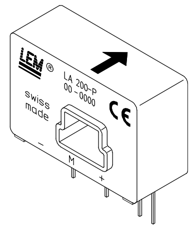


Electrical data

I_{PN}	Primary nominal r.m.s. current	200	A
I_P	Primary current, measuring range	0 .. ± 300	A

R_M Measuring resistance @

		$T_A = 70°C$		$T_A = 85°C$		
		$R_{M\,min}$	$R_{M\,max}$	$R_{M\,min}$	$R_{M\,max}$	
with ± 12 V	@ ± 200 A $_{max}$	0	30	0	26	Ω
	@ ± 250 A $_{max}$	0	8	0	4	Ω
with ± 15 V	@ ± 200 A $_{max}$	0	60	0	56	Ω
	@ ± 300 A $_{max}$	0	12	0	8	Ω

I_{SN}	Secondary nominal r.m.s. current		100	mA
K_N	Conversion ratio		1 : 2000	
V_C	Supply voltage (± 5 %)		± 12 .. 15	V
I_C	Current consumption		16 (@ ± 15 V) + I_S	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn		3	kV
V_b	R.m.s. rated voltage, [1]	safe separation	900	V
		basic isolation	450	V
V_e	R.m.s. voltage for partial discharge extinction		> 1.8	kV
$\hat{V}_W$	Impulse withstand voltage 1.2/50 µs		> 8	kV

Accuracy - Dynamic performance data

X	Accuracy @ I_{PN}, T_A = 25°C	@ ± 15 V (± 5 %)	± 0.40		%
		@ ± 12 .. 15 V (± 5 %)	± 0.65		%
e_L	Linearity error		< 0.15		%
			Typ	Max	
I_O	Offset current @ I_P = 0, T_A = 25°C			± 0.20	mA
I_{OM}	Residual current [2] @ I_P = 0, after an overload of 3 x I_{PN}			± 0.25	mA
I_{OT}	Thermal drift of I_O	0°C .. + 70°C	± 0.10	± 0.25	mA
		- 40°C .. + 85°C	± 0.15	± 0.55	mA
t_{ra}	Reaction time @ 10 % of $I_{P\,max}$		< 500		ns
t_r	Response time [3) 4)] @ 90 % of $I_{P\,max}$		< 1		µs
di/dt	di/dt accurately followed [4]		> 200		A/µs
f	Frequency bandwidth [4] (- 1 dB)		DC .. 100		kHz

General data

T_A	Ambient operating temperature		- 40 .. + 85	°C
T_S	Ambient storage temperature		- 40 .. + 90	°C
R_S	Secondary coil resistance @	T_A = 70°C	76	Ω
		T_A = 85°C	80	Ω
m	Mass		40	g
	Standards		EN 50178 : 1997	

Notes : [1] Pollution class 2 [2] The result of the coercive field of the magnetic circuit
[3] With a di/dt of 100 A/µs [4] The primary conductor is best filling the through-hole and/or the return of the primary conductor is above the top of the transducer.

Features

- Closed loop (compensated) current transducer using the Hall effect
- Printed circuit board mounting
- Insulated plastic case recognized according to UL 94-V0.

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.

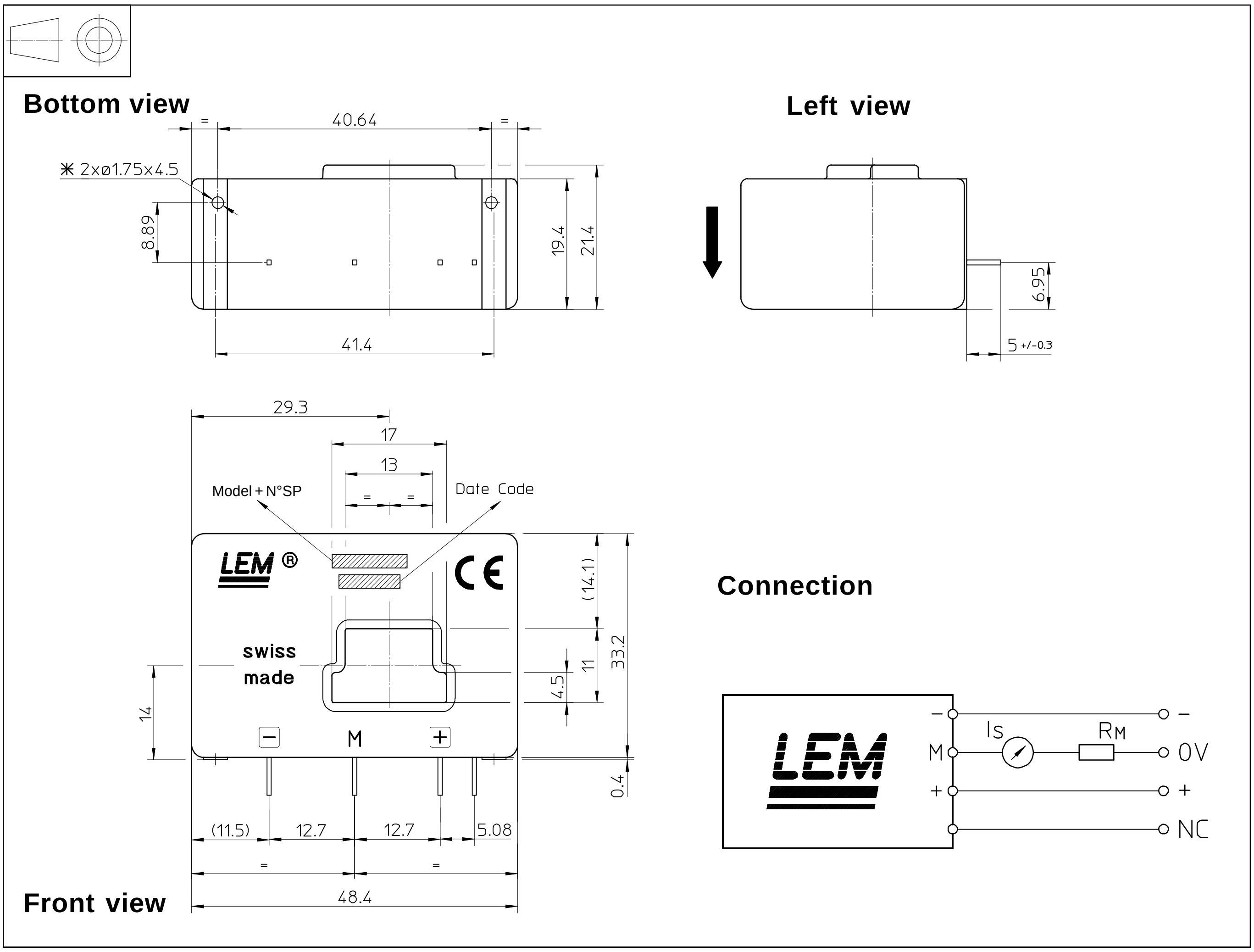
Applications

- 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.

Application Domain

- Industrial.

Dimensions LA 200-P (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

• General tolerance	± 0.2 mm
• Primary through-hole	17 x 11 mm
• Fastening & connection of primary	4 pins 0.63 x 0.56 mm
Recommended PCB hole	0.9 mm
• Supplementary fastening	2 holes ∅ 1.75 mm
Recommended PCB hole	2.4 mm
Recommended screws	PT KA 22 x 6

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 90°C.
- Dynamic performances (di/dt and response time) are best with a primary bar in low position in the through-hole.
- In order to achieve the best magnetic coupling, the primary windings have to be wound over the top edge of the device.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.