

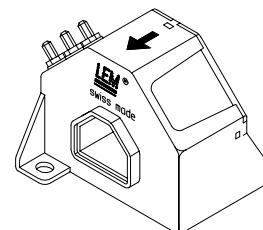
# Current Transducer LA 205-S/SP8

$$I_{PN} = 200 \text{ A}$$

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).



16342



## Electrical data

$I_{PN}$	Primary nominal r.m.s. current	200	A
$I_P$	Primary current, measuring range	0 .. $\pm 300$	A
$R_M$	Measuring resistance with $\pm 24 \text{ V}$	$R_{M \text{ min}}$	$R_{M \text{ max}}$
		@ $\pm 200 \text{ A}_{\text{max}}$	85    200 $\Omega$
		@ $\pm 300 \text{ A}_{\text{max}}$	85    110 $\Omega$
$I_{SN}$	Secondary nominal r.m.s. current	66.6	mA
$K_N$	Conversion ratio	1 : 3000	
$V_C$	Supply voltage ( $\pm 20 \%$ )	$\pm 24$	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 <sup>1)</sup> , safe separation basic isolation	1625	V
		3250	V

## Accuracy - Dynamic performance data

$X_G$	Overall accuracy @ $I_{PN}$ , $T_A = 25^\circ\text{C}$	$\pm 0.8$	%
$\epsilon_L$	Linearity	$< 0.1$	%
$I_O$	Offset current @ $I_P = 0$ , $T_A = 25^\circ\text{C}$	Typ	Max
			$\pm 0.15$ mA
$I_{OM}$	Residual current <sup>2)</sup> @ $I_P = 0$ , after an overload of $3 \times I_{PN}$		$\pm 0.50$ mA
$I_{OT}$	Thermal drift of $I_O$	- $40^\circ\text{C} \dots - 25^\circ\text{C}$	$\pm 0.45$ mA
		- $25^\circ\text{C} \dots + 70^\circ\text{C}$	$\pm 0.10 \pm 0.25$ mA
$t_{ra}$	Reaction time @ 10 % of $I_{PN}$	$< 500$	ns
$t_r$	Response time <sup>3)</sup> @ 90 % of $I_{PN}$	$< 1$	$\mu\text{s}$
$di/dt$	di/dt accurately followed	$> 100$	A/ $\mu\text{s}$
$f$	Frequency bandwidth (- 3 dB)	DC .. 100	kHz

## General data

$T_A$	Ambient operating temperature	- 40 .. + 70	$^\circ\text{C}$
$T_S$	Ambient storage temperature	- 45 .. + 85	$^\circ\text{C}$
$R_S$	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	74	$\Omega$
$m$	Mass Standards	160	g
		EN 50155	

## Features

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

## Special features

- $K_N = 1 : 3000$
- $V_C = \pm 24 (\pm 20 \%) \text{ V}$
- $T_A = - 40^\circ\text{C} \dots + 70^\circ\text{C}$
- Potted
- Connection to secondary circuit on M4 threaded studs
- 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.

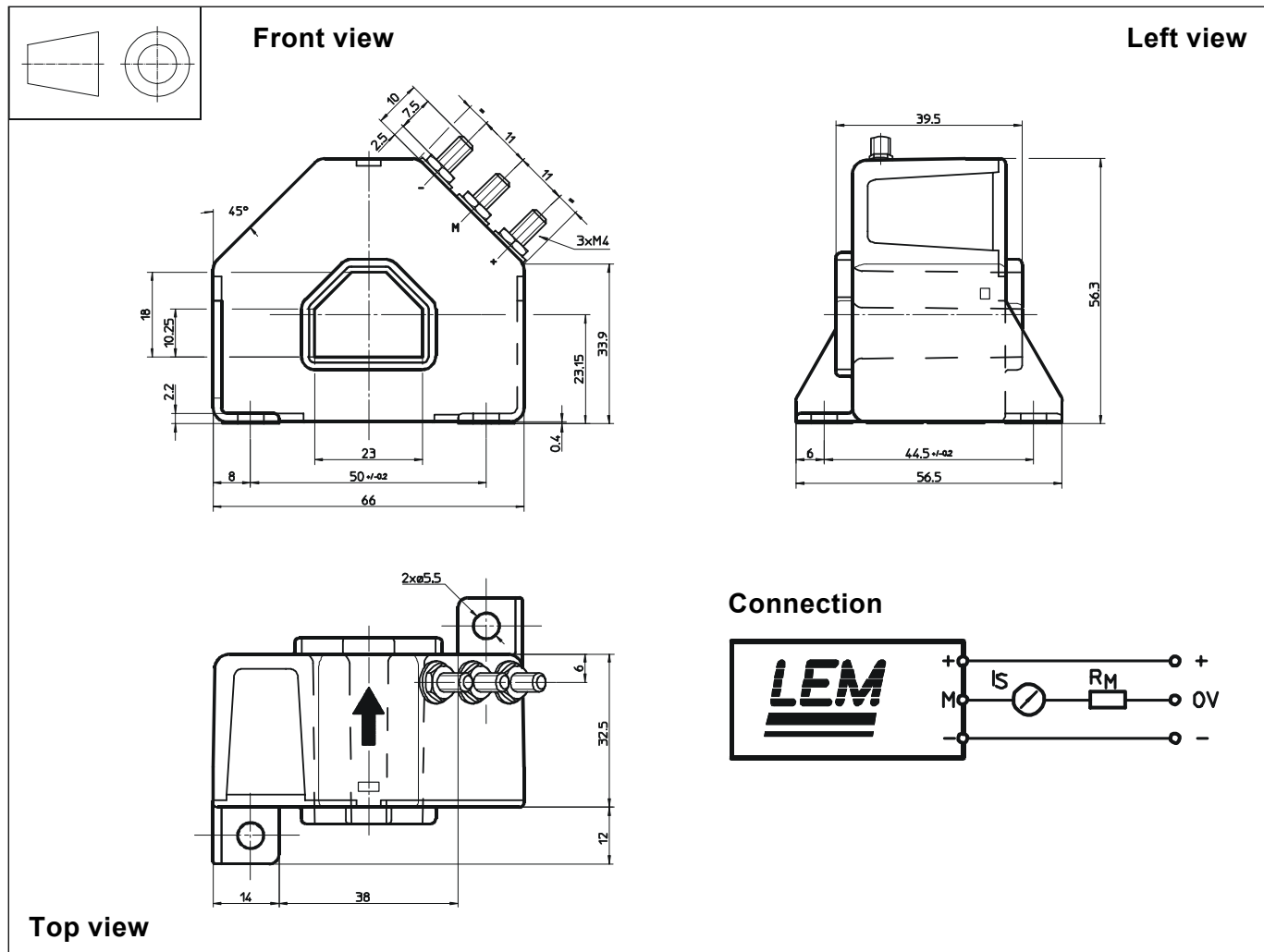
**Notes :** <sup>1)</sup> Pollution class nr 2. With a non insulated primary bar which fills the through-hole

<sup>2)</sup> The result of the coercive field of the magnetic circuit

<sup>3)</sup> With a di/dt of 100 A/ $\mu\text{s}$ .

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## Dimensions LA 205-S/SP8 (in mm. 1 mm = 0.0394 inch)



### Mechanical characteristics

- |                           |                                                   |
|---------------------------|---------------------------------------------------|
| • General tolerance       | $\pm 0.5$ mm                                      |
| • Transducer fastening    | 2 holes $\varnothing 5.5$ mm<br>2 M5 steel screws |
| Fastening torque max.     | 4 Nm or 2.95 Lb. - Ft.                            |
| • Primary through-hole    | 23 x 18 mm                                        |
| • Connection of secondary | M4 threaded studs                                 |
| Fastening torque          | 1.2 Nm or .88 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 single bar completely filling the primary hole.