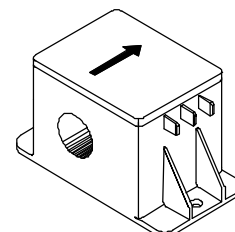


Current Transducer LT 200-S/SP3

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

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).



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 $\pm 12 \text{ V}$	@ $\pm 200 \text{ A}_{\max}$	0 65 Ω
		@ $\pm 300 \text{ A}_{\max}$	0 30 Ω
	with $\pm 18 \text{ V}$	@ $\pm 200 \text{ A}_{\max}$	50 120 Ω
		@ $\pm 300 \text{ A}_{\max}$	50 65 Ω
I_{SN}	Secondary nominal r.m.s. current	100	mA
K_N	Conversion ratio	1 : 2000	
V_C	Supply voltage ($\pm 5\%$)	$\pm 12 \dots 18$	V
I_C	Current consumption	28 (@ $\pm 18 \text{ V}$) + I_S	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	6	kV

Features

- Closed loop (compensated) current transducer using the Hall effect
- Transducer with insulated plastic case recognized according to UL 94-V0.

Special features

- $T_A = -25^\circ\text{C} \dots +70^\circ\text{C}$
- Potted
- Railway equipment.

Accuracy - Dynamic performance data

X_G	Overall accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$	± 0.5	%
e_L	Linearity error	< 0.1	%
I_O	Offset current @ $I_P = 0$, $T_A = 25^\circ\text{C}$	Typ Max	
I_{OT}	Thermal drift of I_O $-25^\circ\text{C} \dots +70^\circ\text{C}$	± 0.3 ± 0.5	mA
t_r	Response time ¹⁾ @ 90 % of I_{PN}	< 1	μs
di/dt	di/dt accurately followed	> 50	A/ μs
f	Frequency bandwidth (-1dB)	DC .. 150	kHz

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.

General data

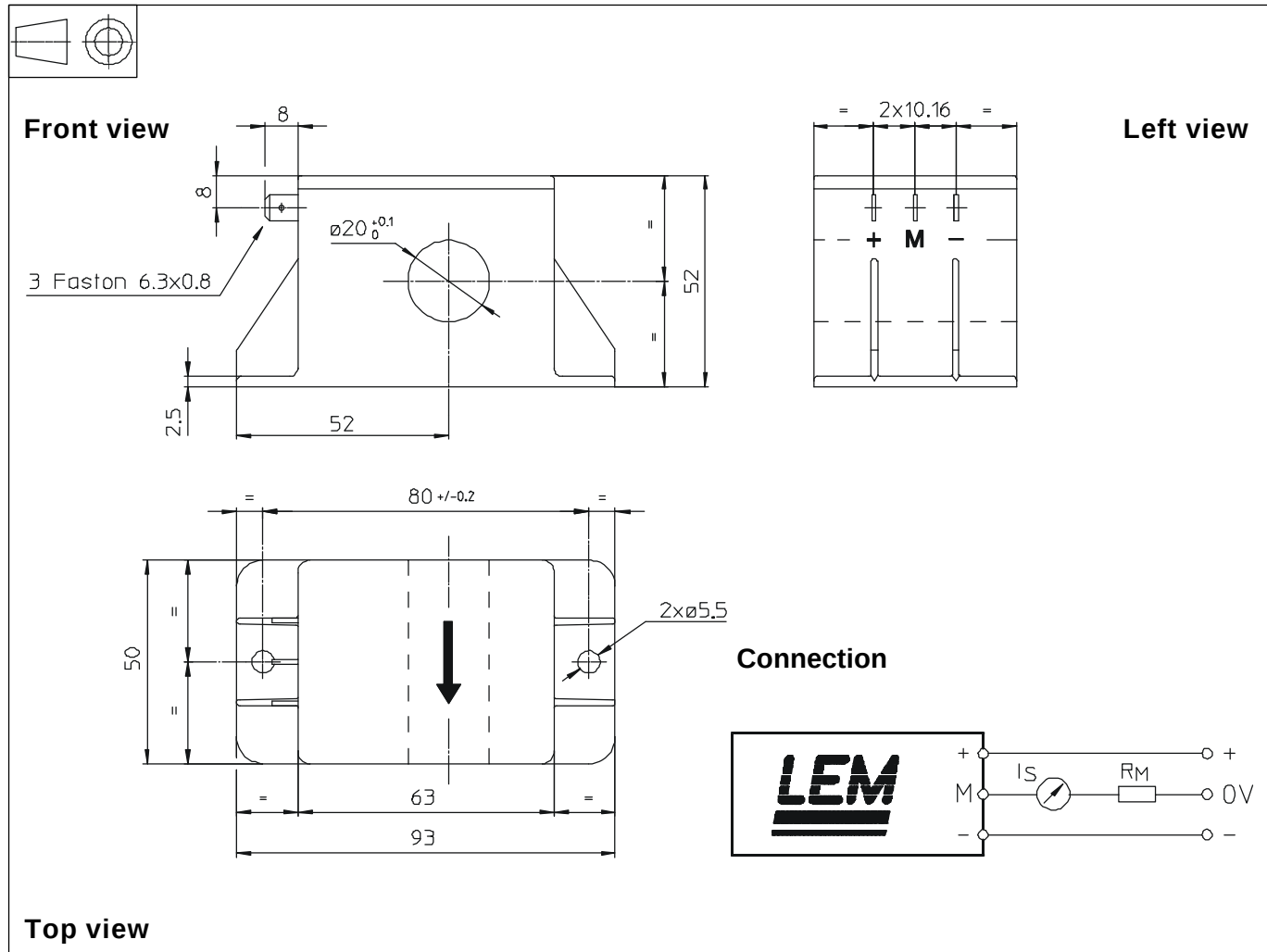
T_A	Ambient operating temperature	$-25 \dots +70$	$^\circ\text{C}$
T_S	Ambient storage temperature	$-40 \dots +85$	$^\circ\text{C}$
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	35	Ω
m	Mass	200	g
	Standards	EN 50155	

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.

Note : ¹⁾ With di/dt at 100 A/ μs .

Dimensions LT 200-S/SP3 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 0.3 mm
- Transducer fastening 2 holes $\varnothing 5.5$ mm
- Fastening torque max 2 M5 steel screws 3.8 Nm or 2.8 Lb.-Ft.
- Primary through-hole $\varnothing 20$ mm
- Connection of secondary Faston 6.3 x 0.8 mm

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.

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