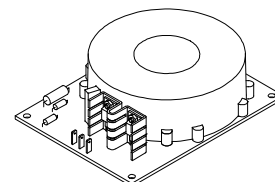


Current Transducer LC 1000-S

$I_{PN} = 1000 \text{ A}$

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	1000	A
I_P	Primary current, measuring range	0 .. ± 1500	A
R_M	Measuring resistance with $\pm 15 \text{ V}$	R_{Mmin}	R_{Mmax}
		@ $\pm 1000 \text{ A}_{max}$	0 25 Ω
		@ $\pm 1500 \text{ A}_{max}$	0 5 Ω
I_{SN}	Secondary nominal r.m.s. current	200	mA
K_N	Conversion ratio	1 : 5000	
V_C	Supply voltage ($\pm 5 \%$)	± 15	V
I_C	Current consumption	$25 + I_s$	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	3	kV

Features

- Closed loop (compensated) current transducer using the Hall effect
- Open construction on 130 x 100 mm PC board
- Patent pending.

Advantages

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Short response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capacity.

Accuracy - Dynamic performance data

X_G	Overall accuracy @ $I_{PN}, T_A = 25^\circ\text{C}$	± 0.2	%
e_L	Linearity	< 0.1	%
I_O	Offset current @ $I_P = 0, T_A = 25^\circ\text{C}$	Typ	Max
I_{OT}	Thermal drift of I_O	± 0.2	± 0.3
t_r	Response time ¹⁾ @ 90 % of I_{Pmax}	< 1	μs
di/dt	di/dt accurately followed	> 50	A/ μs
f	Frequency bandwidth (-1 dB)	DC .. 100	kHz

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.

General data

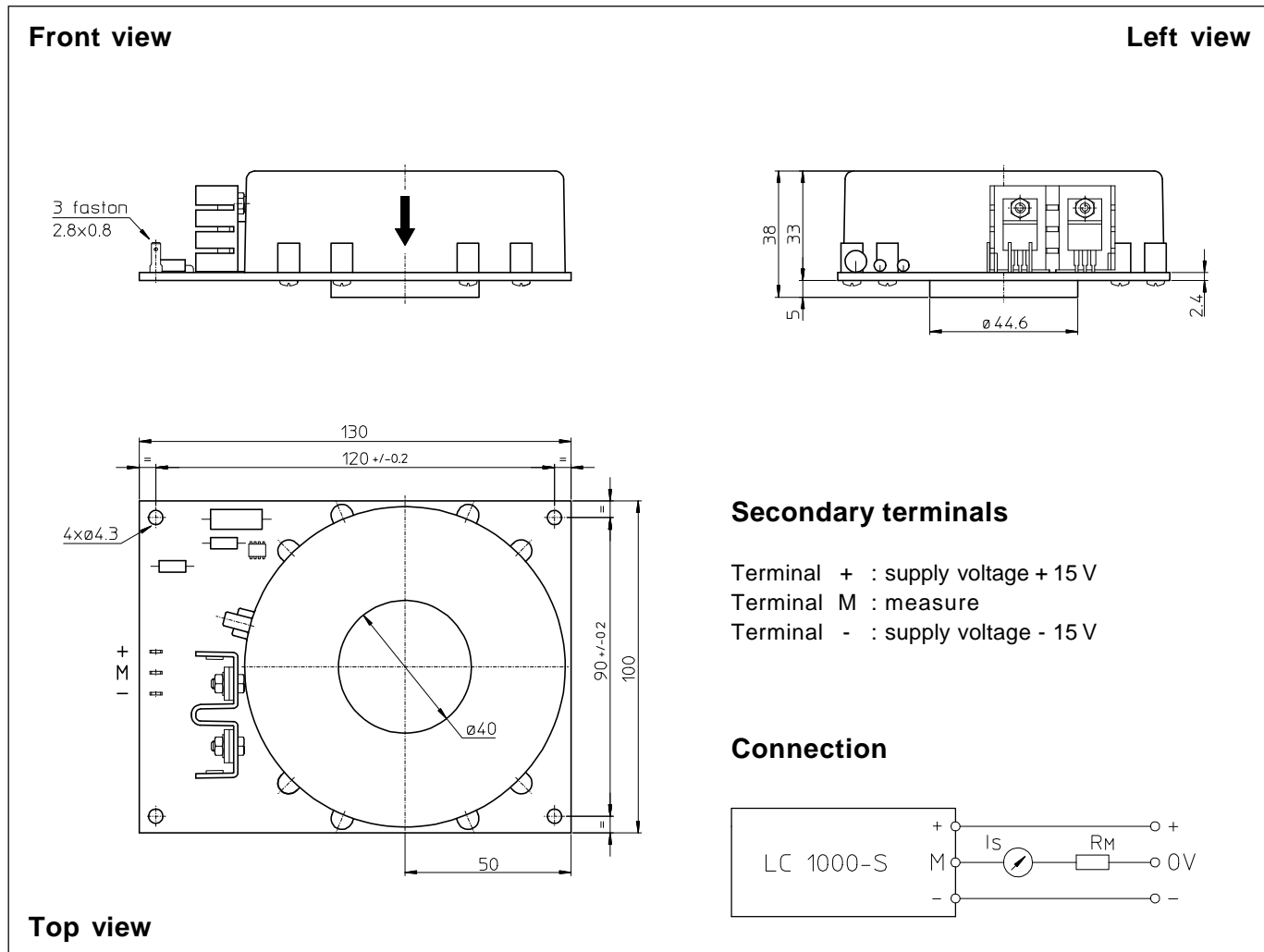
T_A	Ambient operating temperature	0 .. +70	$^\circ\text{C}$
T_S	Ambient storage temperature	-25 .. +85	$^\circ\text{C}$
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	40	Ω
m	Mass	620	g
	Standards ²⁾	EN 50178	

Notes : ¹⁾ With a di/dt of 100 A/ μs

²⁾ A list of corresponding tests is available

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Dimensions LC 1000-S (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 0.5 mm
- Fastening 4 holes $\varnothing 4.3$ mm
- Primary through-hole $\varnothing 40$ mm
- Connection of secondary Faston 2.8 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.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.