



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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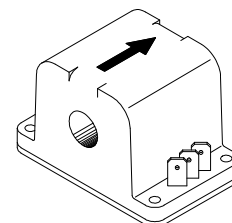
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Current Transducer LT 100-S/SP30

$$I_{PN} = 100 \text{ A}$$

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	100	A		
I_p	Primary current, measuring range	0 .. ± 200	A		
R_M	Measuring resistance	R_{Mmin}	R_{Mmax}		
				with $\pm 12 \text{ V}$	@ $\pm 100 \text{ A}_{max}$
		@ $\pm 200 \text{ A}_{max}$	0	25	Ω
	with $\pm 18 \text{ V}$	@ $\pm 100 \text{ A}_{max}$	30	135	Ω
	@ $\pm 200 \text{ A}_{max}$	30	55	Ω	
I_{SN}	Secondary nominal r.m.s. current	100	mA		
K_N	Conversion ratio	1 : 1000			
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	5	kV		

Features

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

Special features

- $T_A = -40^\circ\text{C} \dots +70^\circ\text{C}$
- Potted.

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.

Accuracy - Dynamic performance data

X_G	Overall accuracy @ $I_{PN}, T_A = 25^\circ\text{C}$	± 0.5	%		
ϵ_L	Linearity error	< 0.1	%		
I_o	Offset current @ $I_p = 0, T_A = 25^\circ\text{C}$	Typ	Max		
			± 0.4	mA	
I_{OT}	Thermal drift of I_o	- $25^\circ\text{C} \dots +70^\circ\text{C}$	± 0.3	± 0.6	mA
		- $40^\circ\text{C} \dots -25^\circ\text{C}$	± 0.4	± 1.0	mA
t_r	Response time ¹⁾ @ 90 % of I_{PN}	< 1	μs		
di/dt	di/dt accurately followed	> 50	A/ μs		
f	Frequency bandwidth (-1 dB)	DC .. 150	kHz		

Applications

- Single or three phases inverter
- Propulsion and braking chopper
- Propulsion converter
- Auxiliary converter
- Battery charger.

General data

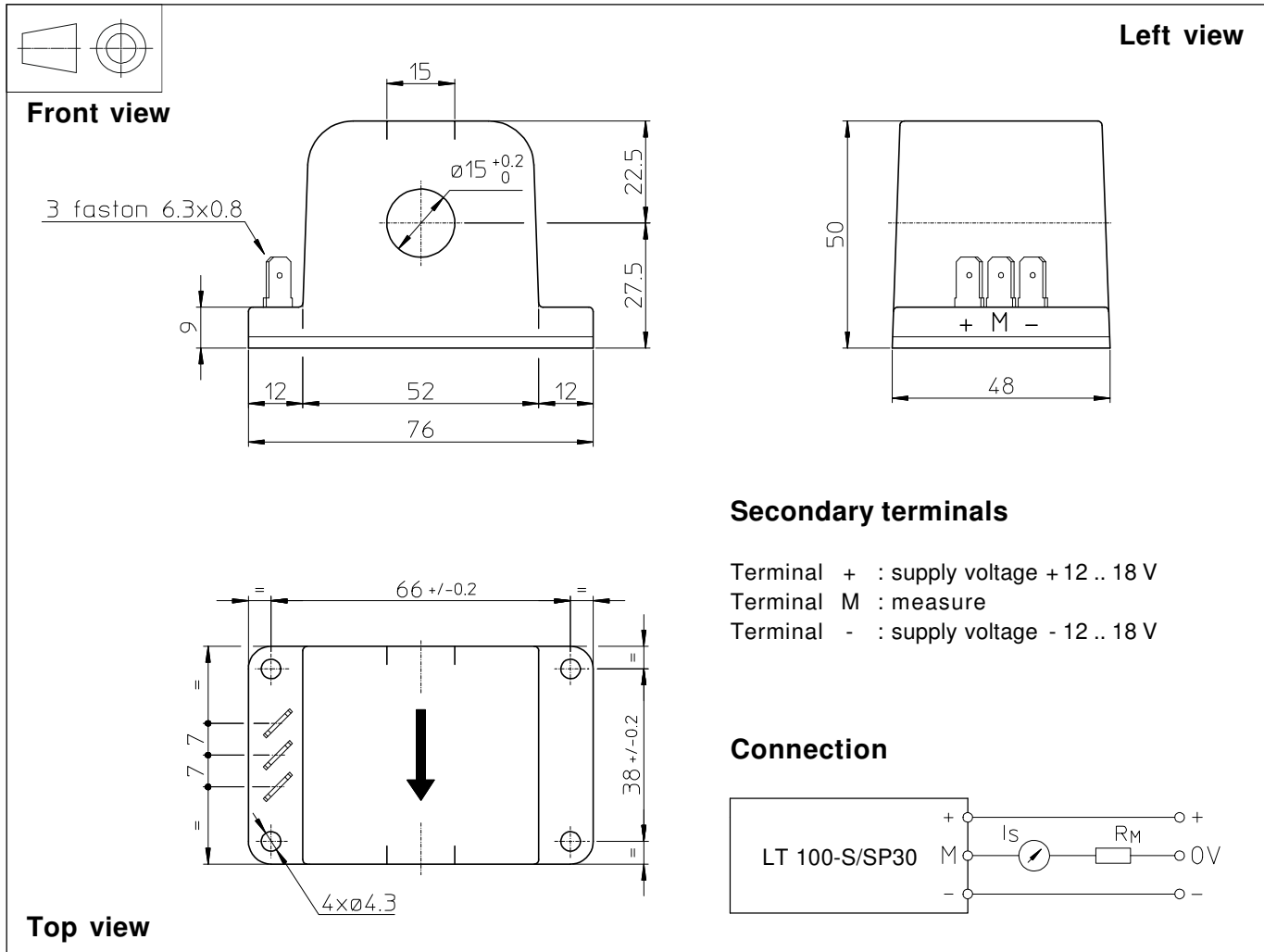
T_A	Ambient operating temperature	-40 .. +70	$^\circ\text{C}$
T_S	Ambient storage temperature	-50 .. +85	$^\circ\text{C}$
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	25	Ω
m	Mass	184	g
	Standards	EN 50155	

Application domain

- Traction.

Note : ¹⁾ With a di/dt of 100 A/ μs .

Dimensions LT 100-S/SP30 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 0.5 mm
- Transducer fastening
 - 4 holes $\varnothing 4.3$ mm
 - 4 M4 steel screws
 - Recommended fastening torque 3.2 Nm or 2.36 Lb.-Ft.
- Connection of primary $\varnothing 15$ 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.

Safety



This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.



Caution, risk of electrical shock

When operating the transducer, certain parts of the module can carry hazardous voltage (eg. primary busbar, power supply). Ignoring this warning can lead to injury and/or cause serious damage.

This transducer is a built-in device, whose conducting parts must be inaccessible after installation.

A protective housing or additional shield could be used.

Main supply must be able to be disconnected.

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