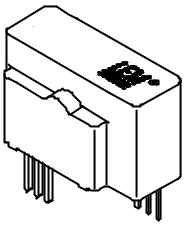
Current Transducer LAH 100-P/SP3

I_{PN} = 100 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 [1]		0 .. ± 200		A
R_M	Measuring resistance		$R_{M\ min}$	$R_{M\ max}$	
	with ± 15 V	@ ± 100 A $_{max}$	10	120	Ω
		@ ± 200 A $_{max}$	10	15	Ω
I_{SN}	Secondary nominal r.m.s. current		66.6		mA
K_N	Conversion ratio		1 : 1500		
V_C	Supply voltage (± 5 %)		± 15		V
I_C	Current consumption		10 + I_S		mA
V_d	R.m.s. voltage for AC isolation test, 50/60 Hz, 1 mn		5		kV
V_e	R.m.s. voltage for partial discharge extinction @ 10 pC		> 2		kV
$\hat{V}_w$	Impulse withstand voltage 1.2/50 µs		> 12		kV

Accuracy - Dynamic performance data

X	Accuracy [2] @ I_{PN}, T_A = 25°C		± 0.25		%
ε_L	Linearity		< 0.15		%
			Typ	Max	
I_O	Offset current @ T_A = 25°C			± 0.2	mA
I_{OM}	Residual current @ I_P = 0, after an overload of 5 x I_{PN}		± 0.10	± 0.2	mA
I_{OT}	Thermal drift of I_O	- 25°C .. + 70°C	± 0.15	± 0.5	mA
t_{ra}	Reaction time @ 10 % of I_{PN}		< 200		ns
t_r	Response time [3] @ 90 % of I_{PN}		< 500		ns
di/dt	di/dt accurately followed		> 200		A/µs
f	Frequency bandwidth (- 1 dB)		DC .. 200		kHz

General data

T_A	Ambient operating temperature	- 25 .. + 70	°C
T_S	Ambient storage temperature	- 40 .. + 90	°C
R_S	Secondary coil resistance @ T_A = 70°C	70	Ω
	Insulating material group	I	
m	Mass	24	g
	Standards [4]	EN 50178	

Notes : [1] For 10 s, with $R_M \leq 15\ \Omega$ (V_C = ± 15 V)
[2] Without I_O & I_{OM}
[3] With a di/dt of 100 A/µs
[4] A list of corresponding tests is available.

Features

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

Special features

- I_P = 0 .. ± 200 A
- K_N = 1 : 1500
- V_C = ± 15 (± 5 %) V
- T_A = - 25°C .. + 70°C.

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

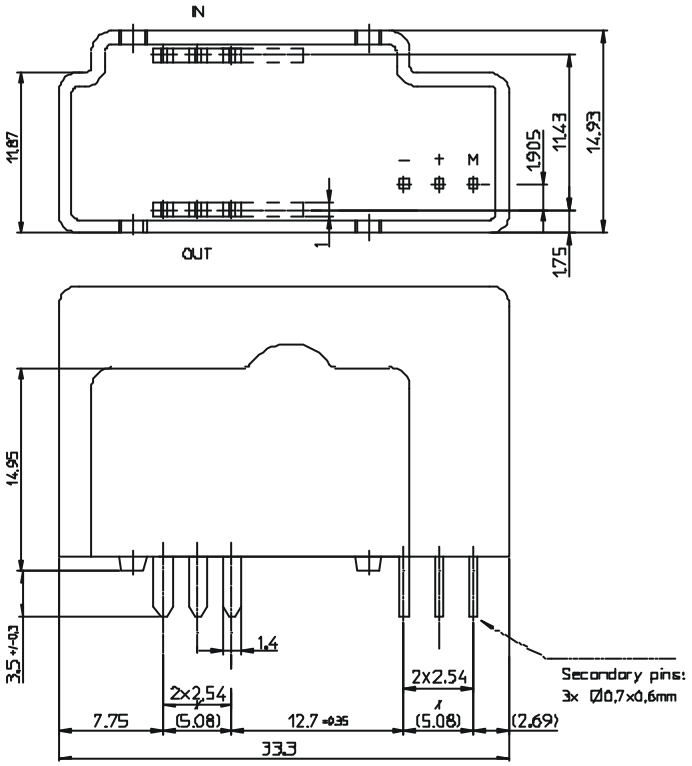
- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

021202/4

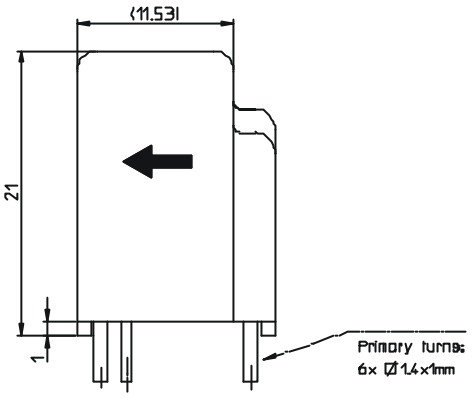
Dimensions LAH 100-P/SP3 (in mm. 1 mm = 0.0394 inch)

Connection

Bottom view



Left view



Front view

Number of primary turns	Primary current		Nominal output current	Turns ratio	Primary resistance	Primary insertion inductance
	Nominal	Maximum				
	I_{PN} [A]	I_P [A]	I_{SN} [mA]	K_N	R_P [mΩ]	L_P [µH]
1	100	200	66.6	1:1500	0.08	0.007

Mechanical characteristics

- General tolerance ± 0.2 mm
- Fastening & connection of primary 6 pins 1.4 x 1 mm
  Recommended PCB hole 2 mm
- Fastening & connection of secondary 3 pins 0.7 x 0.6 mm
  Recommended PCB hole 1.2 mm

Remarks

- I_S is positive when I_P flows from terminals "IN" to terminals "OUT".
- The jumper temperature and PCB should not exceed 100°C.