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!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Current Transducer LA 03 .. 20-PB

I_{PN} = 3 .. 20 A

For the electronic measurement of currents: DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).

Preliminary

Electrical data

Primary nominal current (A)	Primary nominal r.m.s. current I_{PN} (A)	Primary current measuring range I_P (A)	Primary Conductor Diameter (mm)	Type
3	3	± 4.5	0.5	**LA 03-PB**
5	3	± 7.5	0.5	**LA 05-PB**
10	5	± 15	0.65	**LA 10-PB**
15	7.5	± 22.5	0.8	**LA 15-PB**
20	10	± 30	1.0	**LA 20-PB**

V_C	Supply voltage (± 5 %)	± 15	V
I_C	Current consumption	app. 20mA+ I_{PN}/1200	mA
V_d	R.m.s. voltage for AC isolation test, 50/60Hz,1mn	2.5	kV
R_{IS}	Isolation resistance @ 500 VDC	> 500	MΩ
V_{OUT}	Output voltage @ ± I_{PN}, R_L = 10 kΩ, T_A = 25°C	± 4	V
R_L	Load resistance	> 10	kΩ

Accuracy-Dynamic performance data

X	Accuracy @ I_{PN}, T_A = 25°C (without offset)		< ± 1.5	% of I_{PN}
ε_L	Linearity (0 .. ± I_{PN})		< ± 1	% of I_{PN}
V_{OE}	Electrical offset voltage, T_A = 25°C		< ± 30	mV
V_{OH}	Hysteresis offset voltage @ I_P = 0; after an excursion of 1 x I_{PN}		< ± 15	mV
V_{OT}	Thermal drift of V_{OE}	max.	± 1	mV/K
$TC\varepsilon_G$	Thermal drift(% of reading)		< 0.04	%/K
t_r	Response time @ 90% of I_P		< 3	µs
f	Frequency bandwidth (- 1dB)[2]		DC .. 150	kHz

General data

T_A	Ambient operating temperature	- 10 .. + 80	°C
T_S	Ambient storage temperature	- 15 .. + 85	°C
m	Mass	< 12	g

Notes : EN 50178 approval pending

[1] Calibration for 4V output is carried out at the primary norminal current.

[2] Derating is needed to avoid excessive core heating at high frequency.

Features

- Closed loop (compensation) current transducer using the Hall effect
- Voltage output
- Printed circuit board mounting

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 capacity

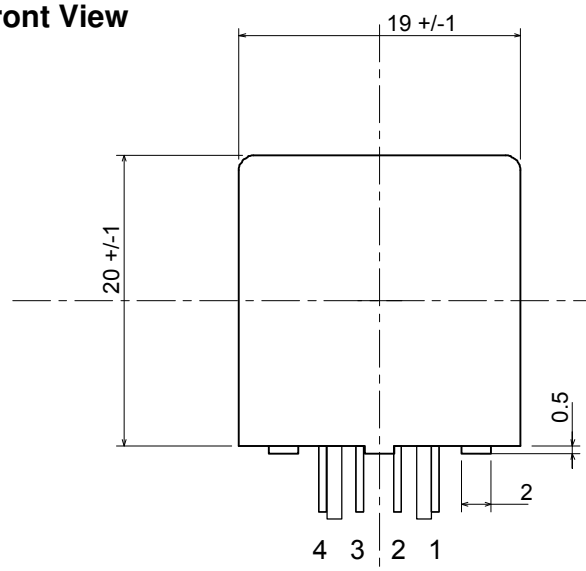
Applications

- 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)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications

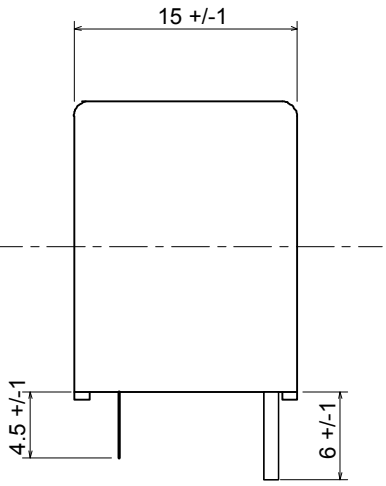
010809/3

LA 03 ... 20-PB

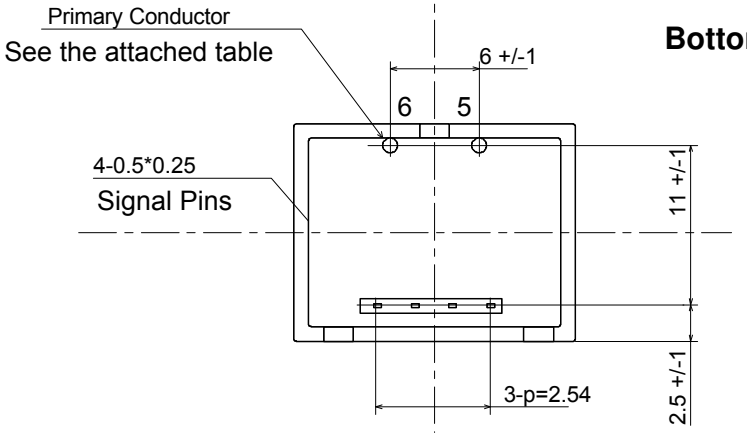
Front View



Right View



Bottom View



Terminal Pin Identification

Primary Conductor

Part No.	Diameter
LA 03PB	0.5 d
LA 05PB	0.5 d
LA 10PB	0.65 d
LA 15PB	0.8 d
LA 20PB	1.0 d

Signal Pins

1 -Vcc
2 0V
3 +Vcc
4 Output

Direction of Current Flow

5 (+) → 6 (-)

UNIT : mm