



# DATA SHEET

## Hall Effect Current Sensor

PN: CHB\_LTA15D50/100/150

IPN=50~300A

### Feature

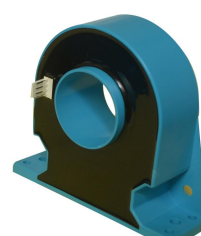
- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC, pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC  $\pm 12 \sim 18V$

### Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time
- High immunity to external interference
- Very good linearity
- Can be customized

### Applications

- The application of variable frequency electrical appliances
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications



RoHS

Electrical data: ( $T_a = 25^\circ C$ ,  $V_c = \pm 15VDC$ )

Parmeter \ Ref	CHB50 LTA15D50	CHB100 LTA15D100	CHB200 LTA15D100	CHB300 LTA15D150
Rated input $I_{pn}(A)$	50	100	200	300
Measuring range $I_p(A)$	0 ~ $\pm 150$	0 ~ $\pm 300$	0 ~ $\pm 600$	0 ~ $\pm 900$
Turns ratio $N_p/N_S (T)$	1:1000	1:1000	1:2000	1:2000
Output current rms $I_S(mA)$	$\pm 50 * IP/IPN$	$\pm 100 * IP/IPN$	$\pm 100 * IP/IPN$	$\pm 150 * IP/IPN$
Secondary coil resistance $R_S (\Omega)$	15	15	22	15
Inside resistance $R_M (\Omega)$	$[(V_C - 0.6V) / (I_S * 0.001)] - R_S$			
Supply voltage $V_C(V)$	$(\pm 12 \sim \pm 18) \pm 5\%$			
Accuracy $X_G(\%)$	@IPN, $T = 25^\circ C$ $< \pm 0.5$			
Offset current $IOE(mA)$	@IP=0, $T = 25^\circ C$ $< \pm 0.2$			
Temperature variation of IOE $IOT(mA/^\circ C)$	@IP=0, $-40 \sim +85^\circ C$ $< \pm 0.005$			
Linearity error $\epsilon_r(\%FS)$	$< 0.1$			
$Di/dt$ accurately followed ( $A/\mu s$ )	$> 100$			
Response time $t_{ra}(\mu s)$	@90% of IPN $< 1.0$			
Power consumption $I_C(mA)$	$15 + I_S$			



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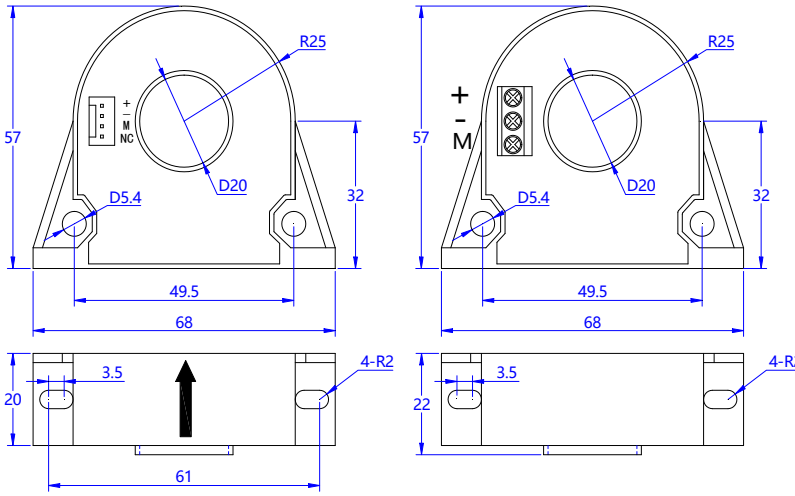
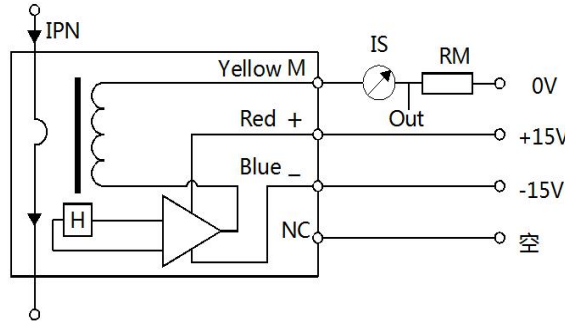
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Bandwidth BW(KHZ)	@-3dB,IPN	DC-200
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	6.0

## General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55 ~ +125
Mass M(g)	70
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

CHB-LTA15D50/100/150M	CHB-LTA15D50/100/150S	Connection
		
		<p>General tolerance</p> <p>General tolerance: &lt; ±0.5mm</p> <p>Primary through-hole: D 20±0.15</p> <p>Connection of Secondary :</p> <p>M:2510-04A ( instead of MOLEX5045-04A)</p> <p>S :DG301-5.0-03P</p>

## Remarks:

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- Custom design is available for the different rated input current and the output voltage.
- The dynamic performance is the best when the primary hole is fully filled with.
- The primary conductor should be <100°C.

**WARNING : Incorrect wiring may cause damage to the sensor.**



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