

DATA SHEET

Hall Effect Current Sensor



PN: CHB_LSP15D25

IPN=25/50A

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 $\pm 12 \sim 15V$

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time
- High immunity to external interference

Applications

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



RoHS



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

Parameter \ Ref	CHB25LSP15D25	CHB50LSP15D25
Rated input $I_{pn}(A)$	25	50
Measuring range $I_p(A)$	0 ~ ± 50	0 ~ ± 100
Turns ratio $N_p/N_S (T)$	1:1000	1:2000
Output current rms $I_S(mA)$	$\pm 25 * I_P / I_{PN}$	$\pm 25 * I_P / I_{PN}$
Secondary coil resistance $R_S (\Omega)$	30	40
Inside resistance $R_M (\Omega)$	$[(V_C - 2.0V) / (I_S * 0.001)] - R_S$	
Supply voltage $V_C(V)$	$(\pm 12 \sim \pm 15) \pm 5\%$	
Accuracy $X_G(\%)$	@ $I_{PN}, T=25^\circ C$	$< \pm 0.5$
Offset current $I_{OE}(mA)$	@ $I_P=0, T=25^\circ C$	$< \pm 0.2$
Temperature variation of IOE $I_{OT}(mA/^\circ C)$	@ $I_P=0, -40 \sim +85^\circ C$	$< \pm 0.5$
Linearity error $\epsilon_r(\%FS)$		< 0.1
dI/dt accurately followed ($A/\mu s$)		> 50
Response time $t_{ra}(\mu s)$	@90% of I_{PN}	< 1.0
Power consumption $I_C(mA)$		15+ I_s

Bandwidth BW(KHZ)	@-3dB,IPN	DC-100
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	4.0

General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55 ~ +125
Mass M(g)	10
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

	<p style="text-align: center;">Connection</p> <p style="text-align: center;">General tolerance</p> <p>General tolerance: <math>\pm 0.2\text{mm}</math> Primary through-hole: $D 8.5 \pm 0.15\text{mm}$ Fixed pin: $0.8 * 0.9 \pm 0.15\text{mm}$; Secondary pin: 3pin $0.25 * 0.5$</p>
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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 $< 100^{\circ}\text{C}$.

WARNING : Incorrect wiring may cause damage to the sensor.