



DATA SHEET

Hall Effect Current Sensor

PN: CHB_LTH/LTR15D

IPN=5~300A

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

- Variable speed drives
- Welding machine
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Electrochemical



RoHS

Electrical data $T_a=25^\circ C$ $V_c = \pm 15VDC$

Parameter	Ref	CHB50 LTH/LTR 15D	CHB100 LTH/LTR 15D	CHB150 LTH/LTR 15D	CHB200 LTH/LTR 15D	CHB300 LTH/LTR 15D	CHB300 LTH/LTR 15D
Rated input $I_{pn}(A)$		5-50	10-100	30-150	20-200	30-300	30-300
Measuring range $I_p(A)$		150($\pm 18V$, 82 Ω)	300($\pm 18V$, 30 Ω)	450 ($\pm 18V$, 33 Ω)	450($\pm 18V$, 33 Ω)	900 ($\pm 18V$, 3.0 Ω)	900($\pm 18V$, 2.0 Ω)
Turns ratio $N_p/N_S (T)$		1:1000	1:1000	1:1500	1:2000	1:2000	1:3000
Output current rms $I_S(mA)$		5(5A)- 50(50A) $\pm 0.2\%$	10(10A) - 100(100A) $\pm 0.2\%$	20 (30A) - 100(150A) $\pm 0.2\%$	10(20A)- 100(200A) $\pm 0.2\%$	15 (30A) - 150(300A) $\pm 0.2\%$	10(30A)- 100(300A) $\pm 0.2\%$
Secondary coil resistance $R_S (\Omega)$		30	25	20	30	28	53
Measure resistor with $\pm 12V RM (\Omega)$		@50Amax 180(max)	@100Amax 75(max)	@150Amax 90(max)	@200Amax 90(max)	@300Amax 48(max)	@300Amax 68(max)
		@150Amax 40(max)	@300Amax 12(max)	@300Amax 33(max)	@600Amax 15(max)	@600Amax 10(max)	@600Amax 1.0(max)
Measure resistor with $\pm 15V RM (\Omega)$		@50Amax 240(max)	@100Amax 110(max)	@150Amax 120(max)	@200Amax 120(max)	@300Amax 70(max)	@300Amax 91(max)



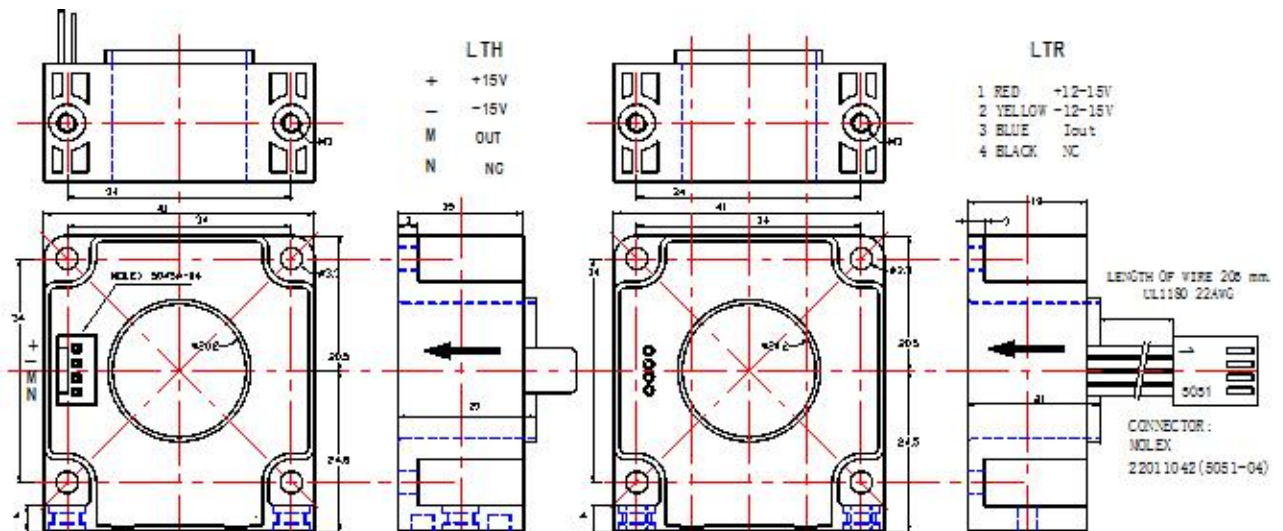
Cheemi Technology Co., Ltd

	@150Amax 60(max)	@300Amax 20(max)	@300Amax 50(max)	@600Amax 25(max)	@600Amax 20(max)	@750Amax 2.0(max)
Supply voltage VC(V)	±12~±18					
Accuracy XG(%)	@IPN,T=25°C		< ±0.5			
Offset current IOE(mA)	@Ip=0		≤±0.2			
Offset drift(mA)	@ -40°C ~ 85°C		±0.5			
Accuracy XG(%)	@IPN,T=25°C		< ±0.1			
Linearity error εr(%FS)	@Ip=0±Ipn		≤0.1			
Di/dt accurately followed A/μs			> 100			
Response time tra(μs)	@100A/μS,10%-90%		< 1.0			
Power consumption IC(mA)			≤20+IpXNs			
Bandwidth BW(KHZ)	@ -3db		DC...100			
Insulation voltage Vd(KV)	@ 50HZ,AC,1min		3			

General data

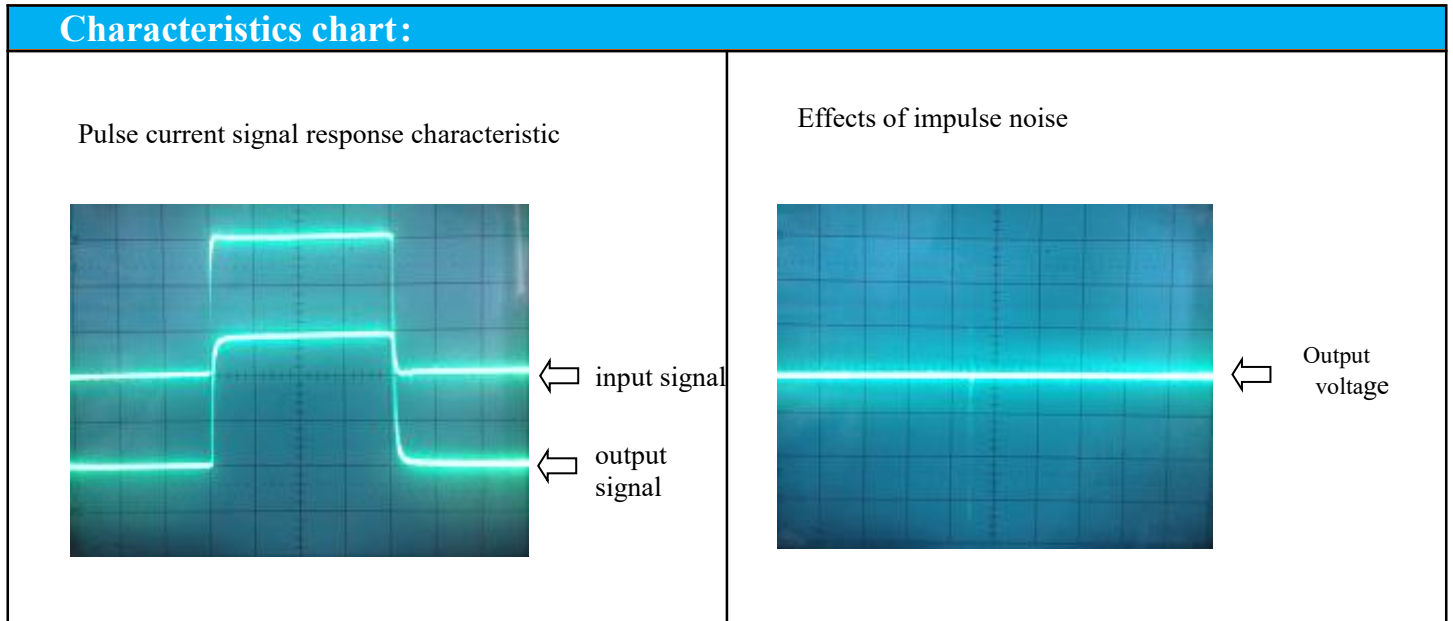
Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-40~ +125
Mass M(g)	LTH:58,LTR:64
Plastic material	UL94-V0.
Standards	EN60947-1:2004
	IEC60950-1:2001
	EN50178:1998
	SJ 20790-2000

Dimensions(mm):



- All dimensions are in mm.
- General tolerance ±1mm.
- Primary Through-Hole: 20.2 (mm)
- Length of wire 205mm UL1180 22AWG CONNECTOR:MOLEX22011042(5051-04)





- Directions for use**
- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
 - Is will be in a forward direction when the I_p flows according to the direction of arrowhead.
 - Custom design is available for the different rated input current and the output voltage.
 - The dynamic performance is the best when the primary hole if fully filled with.
 - The primary conductor should be $\leq 120^\circ\text{C}$.
- WARNING : Incorrect wiring may cause damage to the sensor.**

