



DATA SHEET

DC Leakage Current Sensor

PN: CHD_LH15D5

IPN=05~100mA

Feature

- DC Leakage Current Sensor develops on base of magnetic modulation closed loop principle
- Apply unique patented technology for measure tiny current (mA level)
- Supply voltage: DC $\pm 12\sim 18$ V

Advantages

- High accuracy
- Easy installation
- Wide current measuring range
- Optimized response time
- Low power consumption
- High immunity to external interference
- Very good linearity
- Can be customized

Applications

- The current detection of the lift
- DC panel detection
- The signal system
- Current differential detection
- AC variable-speed drive/ Servo drive
- UPS and Inverter applications



RoHS

Electrical data: (Ta=25°C, Vc=±15VDC, RL=10KΩ)

Parameter \ Ref	CHD05 LH15D5	CHD10 LH15D5	CHD20 LH15D5	CHD40 LH15D5	CHD50 LH15D5	CHD100 LH15D5
Rated input Ipn(mA) DC	05	10	20	40	50	100
Measuring range Ip(mA)	0~±10	0~±20	0~±40	0~±80	0~±100	0~±200
Output voltage Vo(V)	±5.0*(IP/IPN)					
Supply voltage VC(V)	(±12~±18) ±5%					
Accuracy XG(%)	@IPN,T=25°C		≤ ±1.0			
Offset voltage VOE(mV)	@IP=0,T=25°C		<±50			
Temperature variation of VOE VOT(mV/°C)	@IP=0, -10~75°C		≤ ±1.0			
Hysteresis offset voltage VOH(mV)	@IP=0,after 1*IPN		≤ ±25			
Linearity error εr(%FS)	≤1.0					
Response time tra(ms)	@90% of IPN		≤300			
Power consumption IC(mA)	9.0+Is					
Bandwidth BW(KHZ)	@-3dB,IPN		DC			
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC		3.0			



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General data:

Parameter	Value
Operating temperature TA(°C)	-10 ~ +70
Storage temperature TS(°C)	-20 ~ +85
Mass M(g)	75
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

Technical drawings of the sensor showing dimensions in millimeters:

- Top view: Overall width 72.00, inner width 64.00, distance from left edge to secondary pin 56.00, secondary pin diameter $\phi 4.00$, secondary pin height 9.00.
- Front view: Overall width 50.00, inner diameter $\phi 20.00$, distance from bottom edge to secondary pin 35.00, secondary pin diameter $\phi 6.00$.
- Side view: Overall height 60.00, secondary pin height 18.00.

Connection

Block diagram of the sensor's internal circuitry:

- Input: IPN (Primary Pin)
- Stages: Oscillators (振荡器), Modem (调制解调), Intergrator (积分器), Rectifier (整流器)
- Output: +15V, Out, -15V, GND
- Other components: Secondary coil, M (Measurement point)

General tolerance
 General tolerance: $\leq \pm 0.5\text{mm}$
 Primary through-hole: $D20 \pm 0.15\text{mm}$
 Secondary pin: 2EDG5.08-04P

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.

