



# DATA SHEET

## Closed-loop DC Leakage Current Sensor

**PN: CHD\_ES15D5**

**IPN=20/200/500mA**

### Feature

- DC leakage current sensor using the Flux-gate principle
- Capable measurement of tiny DC current signal, with galvanic separation between primary circuit and secondary circuit
- Supply voltage: DC  $\pm 12 \sim 18$  V

### Advantages

- Easy installation
- Only one design for wide current ratings range
- Low power consumption
- High immunity to external interference

### Applications

- The current detection of the lift
- DC panel detection
- The signal system
- Current differential detection



RoHS



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

Parameter \ Ref	CHD20ES15D5	CHD200ES15D5	CHD500ES15D5
Rated input I <sub>pn</sub> (mA) DC	20	200	500
Measuring range I <sub>p</sub> (mA)	0~±28	0~±280	0~±700
Output voltage V <sub>o</sub> (V)	±5.0*(IP/IPN),DC		
Load resistance R <sub>L</sub> (KΩ)	>10		
Supply voltage V <sub>C</sub> (V)	(±12 ~±18) ±5%		
Accuracy X <sub>G</sub> (%)	@IPN,T=25°C	≤±2.0	
Offset voltage V <sub>OE</sub> (V)	@IP=0,T=25°C	<±0.3	
Temperature variation of V <sub>OE</sub> V <sub>OT</sub> (V/°C)	@IP=0,-40 ~ +85°C	<±0.8	
Hysteresis offset voltage V <sub>OH</sub> (mV)	@IP=0,after 1*IPN	≤±25	
Linearity error ε <sub>r</sub> (%FS)	<1.0		
Response time t <sub>ra</sub> (ms)	@90% of IPN	<200	
Power consumption I <sub>C</sub> (mA)	15+I <sub>s</sub>		
Bandwidth BW(KHZ)	@-3dB,IPN	DC	
Insulation voltage V <sub>d</sub> (KV)	@50/60Hz, 1min,AC	3.0	



**Cheemi Technology Co., Ltd**  
 Tel: 025-85996365 E-mail: info@cheemi-tech.com www.cheemi-tech.com  
 Add: N22, Xianlongwan, Xianyin South Road, Qixia District, Nanjing - China.

## General data:

Parameter	Value
Operating temperature TA(°C)	-20 ~ +85
Storage temperature TS(°C)	-40~ +125
Mass M(g)	13
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>Primary through-hole: D 8.2 + 0.25</p> <p>Connection of Secondary: Male XH2.54-04A</p> <p>Accessories:</p> <p>Female (XH2.54-04Y)*1PCS</p> <p>Metal Terminal (XH-T)*4PCS</p>
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## Remarks:

- 1. Setting the jump value of the door valve is about 1.3V.
- 2. The primary current is 10mA, that is to say, if the primary current is 2mA, 5 T or more will be needed.
- 3. When environment (temperature) offset + normal temperature zero offset is - 1.1V, @10mA, the sensor output is 2.5V (relative zero output), then the actual voltage output is 2.5V-1.1V = 1.4V > 1.3V, the product will jump trigger, but in fact the maximum offset will not exceed 0.8V.
- 4. When the ambient (temperature) offset + normal temperature zero offset is greater than 0, the output of the sensor is 2.5V (relative zero output) at 10mA, and the actual output of the voltage is 2.5V + positive >= 2.5V > 1.3V, the jump trigger will occur.
- 5. All environmental impacts and product self-effects can be avoided through the above-mentioned settings.

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



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