



# DATA SHEET

## DC Leakage Current Sensor

**PN: CHD\_E4T15D5**

**I<sub>PN</sub>=05~2000mA**

### Feature

- DC Leakage Current Sensor develops on base of flux-gate principle
- Apply unique patented technology for measure tiny current (mA level)
- For the electronic measurement of currents: small DC single, with galvanic separation between primary circuit and secondary circuit
- Supply voltage: DC ±12~15 V

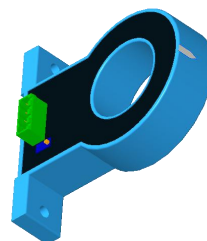
### Advantages

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

- Can be customized

### Applications

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



RoHS

### Electrical data: (T<sub>a</sub>=25°C, V<sub>c</sub>= ±15VDC, R<sub>L</sub>=10K Ω)

| Parameter Ref                                                    | CHD10 E4T15D5                               | CHD20 E4T15D5 | CHD30 E4T15D5 | CHD40 E4T15D5 | CHD50 E4T15D5 | CHD100 E4T15D5 | CHD1000 E4T15D5 |
|------------------------------------------------------------------|---------------------------------------------|---------------|---------------|---------------|---------------|----------------|-----------------|
| Rated input I <sub>pn</sub> (mA) DC                              | 10                                          | 20            | 30            | 40            | 50            | 100            | 1000            |
| Measuring range I <sub>p</sub> (mA)                              | 0~±14                                       | 0~±28         | 0~±42         | 0~±56         | 0~±70         | 0~±140         | 0~±1400         |
| Output voltage V <sub>o</sub> (V)                                | ±5.0*(I <sub>p</sub> /I <sub>PN</sub> ), DC |               |               |               |               |                |                 |
| Load resistance(R <sub>L</sub> )                                 | >10                                         |               |               |               |               |                |                 |
| Supply voltage V <sub>c</sub> (V)                                | (±12~±15) ±5%                               |               |               |               |               |                |                 |
| Accuracy X <sub>G</sub> (%)                                      | @I <sub>PN</sub> , T=25°C                   |               | ≤ ±1.0        |               |               |                |                 |
| Offset voltage V <sub>OE</sub> (mV)                              | @I <sub>p</sub> =0, T=25°C                  |               | < ±50         |               |               |                |                 |
| Temperature variation of V <sub>OE</sub> V <sub>OT</sub> (mV/°C) | @I <sub>p</sub> =0, -40~ +85°C              |               | ≤ ±2.0        |               |               |                |                 |
| Hysteresis offset voltage V <sub>OH</sub> (mV)                   | @I <sub>p</sub> =0, after 1*I <sub>PN</sub> |               | ≤ ±25         |               |               |                |                 |
| Linearity error ε <sub>r</sub> (%FS)                             | <1.0                                        |               |               |               |               |                |                 |
| Response time τ <sub>ra</sub> (ms)                               | @90% of I <sub>PN</sub>                     |               | <200          |               |               |                |                 |
| Power consumption I <sub>c</sub> (mA)                            | 10+I <sub>s</sub>                           |               |               |               |               |                |                 |



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|                           |                        |     |
|---------------------------|------------------------|-----|
| Bandwidth BW(KHZ)         | @-3dB, I <sub>PN</sub> | DC  |
| Insulation voltage Vd(KV) | @50/60Hz, 1min,AC      | 3.0 |

## General data:

| Parameter                    | Value                  |
|------------------------------|------------------------|
| Operating temperature TA(°C) | -10 ~ +70              |
| Storage temperature TS(°C)   | -25 ~ +70              |
| Mass M(g)                    | 220                    |
| Plastic material             | PBT G30/G15, UL94- V0; |
| Standards                    | IEC60950-1:2001        |
|                              | EN50178:1998           |
|                              | SJ20790-2000           |

## Dimensions(mm):

### 接线 Connection

### 公差 General tolerance

总公差  
General tolerance: <math>\pm 0.5\text{mm}</math>  
初级过孔尺寸  
Primary through-hole:  $D 40.0 \pm 0.3$   
次级连接器型号 Connection of Secondary :  
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 <math>< 100^\circ\text{C}</math>.

WARNING : Incorrect wiring may cause damage to the sensor.

