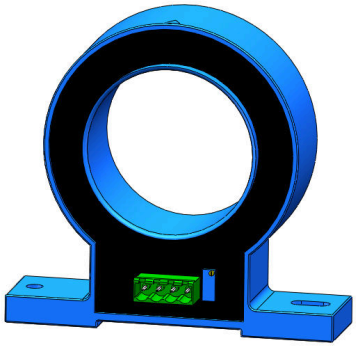
# DC Leakage Current Sensor

## SCD3



## Product description

### Features

- SCD series DC leakage current sensor, using the principle of magnetic modulation closed-loop, for isolated measurement of DC milliampere small current.
- The isolation voltage between primary and secondary is greater than 3000VAC.
- Temperature compensation circuit control, zero drift, accurate measurement.
- Perforated input, unplugging terminals, screw fastening flat mounting.
- Overall size(mm): 119(L)×31(W)×112(H)； Aperture：60mm
- Comply with UL94-V0 flame retardant rating.

### Applications

- Widely used in emerging industries and fields such as electric power, industrial automation, solar photovoltaic, etc.

### Implementation standards：

- GB/T 7665-2005
- JB/T 25480-2010
- JB/T 11205-2011
- SJ 20790-2000

## Certification：

## Technical Parameters

| Model / Parameters (25℃) | SCD3- | | | | |
|---|---|---|---|---|---|
| | 10mA | 20mA | 50mA | 100mA | 1A |
| Primary Current $I_{PN}$ (DC) | 10mA | 20mA | 50mA | 100mA | 1A |
| Primary Current Max. Peak Value $I_{PM}$(DC) | ±12mA | ±24mA | ±60mA | ±120mA | ±1.2A |
| Output voltage $V_{out}$ @±$I_{PN}$, $R_L$=10KΩ | ±5V±1% | | | | |

## Electrical Data

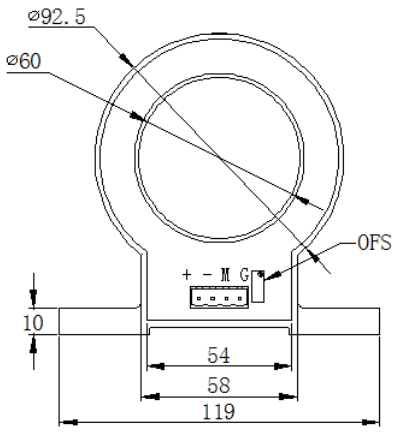
| Item | Min. | Typical | Max. | Unit |
|---|---|---|---|---|
| Input power supply voltage range Vc (±5%) (Remark 1) | ±11 | ±12 | ±18 | $V_{DC}$ |
| Current consumption Ic | - | ±10 | - | mA |
| Withstand resistance $R_{INS}$ @500V DC | 1000 | - | - | MΩ |
| Output voltage Vout @$I_{PN}$, $R_L$=10KΩ, $T_A$= 25℃ | 4.950 | 5.000 | 5.050 | V |
| Output internal resistance $R_{OUT}$ | - | 100 | - | Ω |
| Load Resistance $R_L$ | - | 10 | - | KΩ |
| Accuracy X @$I_{PN}$, $T_A$= 25℃ | - | ±1 | - | % |
| Linearity $\varepsilon_L$ @$R_L$=10KΩ, $T_A$= 25℃ | - | ±0.5 | - | % |
| Offset voltage $V_{OE}$ @$T_A$= 25℃ | - | ±50 | - | mV |
| Temperature coefficient of offset voltage $TCV_{OE}$ | - | ±1 | ±2 | mV/℃ |
| Response Time $t_D$ @ 0→$I_{PN}$ | - | 500 | 900 | ms |
| Operating ambient temperature range $T_A$ | -10 | 25 | 75 | ℃ |
| Storage ambient temperature range $T_s$ | -25 | 25 | 85 | ℃ |
| Insulation withstand voltage VD@50Hz, 60s, 0.1mA | | 3000 | | $V_{AC}$ |
| Weight m | | 310 | | g |

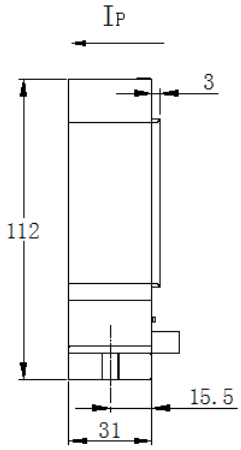
Remark：

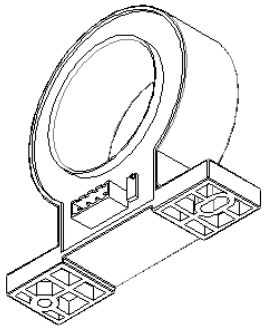
1. If VC is less than the minimum value, the measurement will be inaccurate. If VC is greater than the maximum value, it may cause permanent failure of the measuring device.

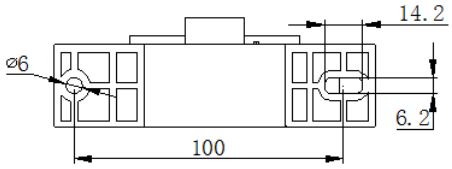
2. $V_{OUT} = 5.05 * \frac{R_L}{100 + R_L} * \frac{I_P}{I_{PN}} + V_{OE}$

## Dimensions (in mm):






单位：mm

| 序号 | 标识 | 说明 |
|---|---|---|
| 1 | + | +12V |
| 2 | - | -12V |
| 3 | M | Output |
| 4 | G | 0V |

Notes:

1. Size error: ±1mm;
2. Primary aperture: φ60mm;
3. Fastening hole: φ6mm*2;
4. Output terminal: 2EDGVC-5.08-4P;
5. The IP indication direction is the positive direction of the current, and the OFS is the zero adjustment;
6. Incorrect wiring may cause damage to the sensor;
7. The zero voltage of the sensor can be adjusted appropriately according to the needs of users;