

# DC Leakage Current Sensor

## SCD20



### Product description

#### Features

- SCD series DC leakage current sensor, using the principle of magnetic modulation closed-loop, for isolated measurement of DC milliamperes 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.
- Power supply: DC +12V

#### 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

## Technical Parameters

Model Parameters (25°C)	SCD20-				
	10mA	20mA	50mA	100mA	1A
Primary Current I <sub>PN</sub> (DC)	10mA	20mA	50mA	100mA	1A
Primary Current Max. Peak Value I <sub>PM</sub> (DC)	±10mA	±20mA	±50mA	±100mA	±1A
Output voltage V <sub>out</sub> @±I <sub>PN</sub> , R <sub>L</sub> =10KΩ	3V±2V(±1%)				

## Electrical Data

Item	Min.	Typical	Max.	Unit
Input power supply voltage range V <sub>c</sub> (±5%) (Remark 1)	+11	+12	+24	V <sub>DC</sub>
Current consumption I <sub>c</sub>	-	+18	-	mA
Withstand resistance R <sub>INS</sub> @500V DC	1000	-	-	MΩ
Output voltage V <sub>out</sub> @I <sub>PN</sub> , R <sub>L</sub> =10KΩ, T <sub>A</sub> =25°C	$V_{OUT} = 3 + 2.02 * \frac{R_L}{100 + R_L} * \frac{I_P}{I_{PN}} + V_{OE}$			V
Output internal resistance R <sub>OUT</sub>	-	100	-	Ω
Load Resistance R <sub>L</sub>	-	10	-	KΩ
Accuracy X @I <sub>PN</sub> , T <sub>A</sub> =25°C	-	±1.5	-	%
Linearity ε <sub>L</sub> @R <sub>L</sub> =10KΩ, T <sub>A</sub> =25°C	-	±1	-	%
Offset voltage V <sub>OE</sub> @T <sub>A</sub> =25°C	-	3V±50	-	mV
Temperature coefficient of offset voltage TCV <sub>OE</sub>	-	±2	±3	mV/°C
Response Time t <sub>D</sub> @ 0→I <sub>PN</sub>	-	500	900	ms
Operating ambient temperature range T <sub>A</sub>	-10	25	75	°C
Storage ambient temperature range T <sub>s</sub>	-25	25	85	°C
Insulation withstand voltage VD@50Hz, 60s, 0.1mA		3000		V <sub>AC</sub>
Weight m		310		g

Remark:

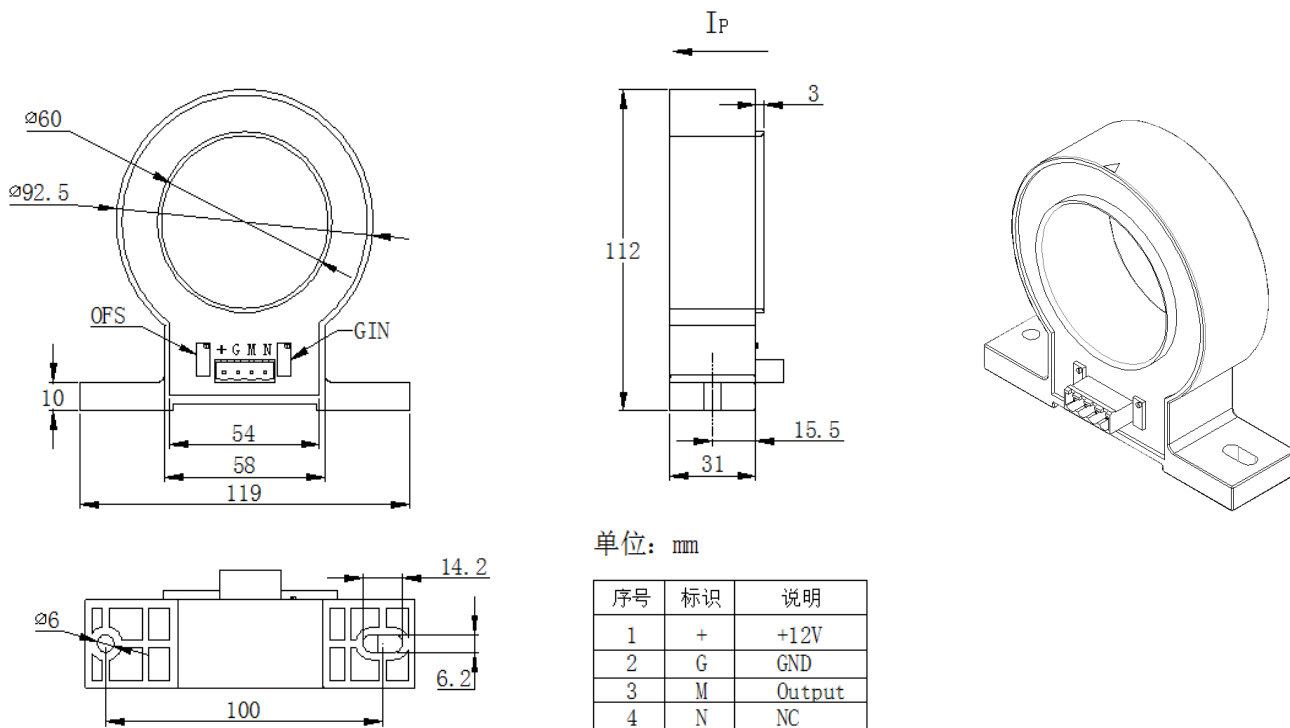
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If VC is less than the minimum value, the measurement will be inaccurate. If VC is greater than the maximum value, it may cause permanent failure of the measuring device.

**Dimension (in mm):**



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, OFS is the zero adjustment, and GIN is the output regulation;
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;