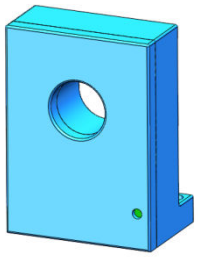
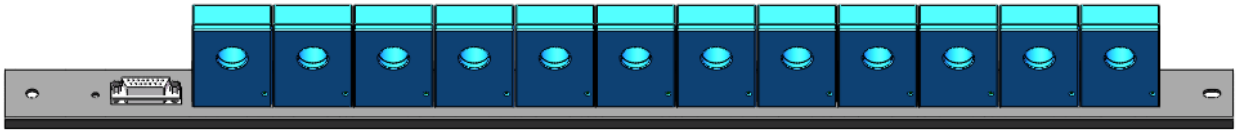
DC Leakage Current Sensor

SCD12





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, screw fastening, guide bar installation.
- Overall size(mm): 45(L)×30.6(W)×62(H)； Aperture：17mm
- 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

Certifications

Technical Parameters

Model / Parameters (25℃)	SCD12-				
	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 ε_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		70		g

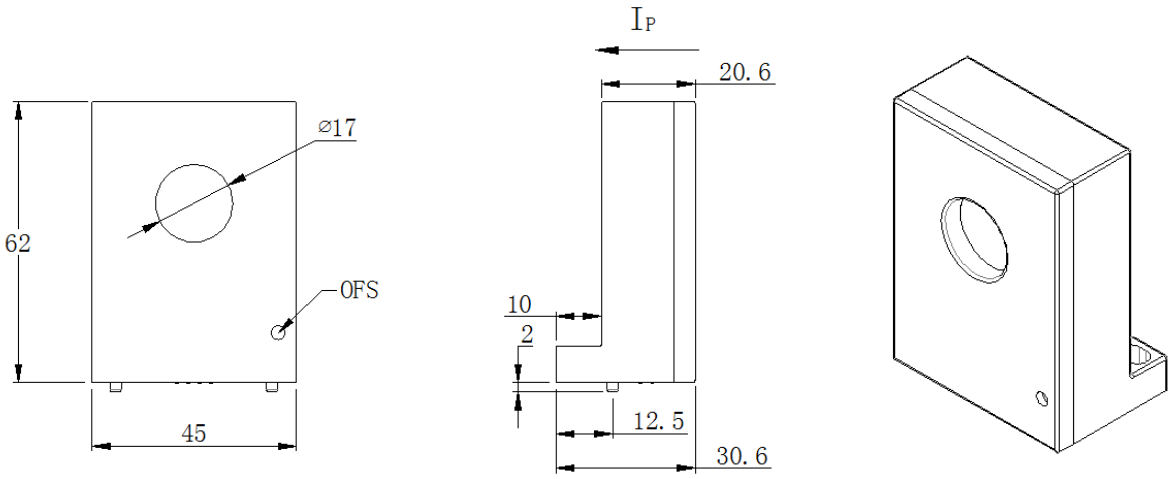
Remark：

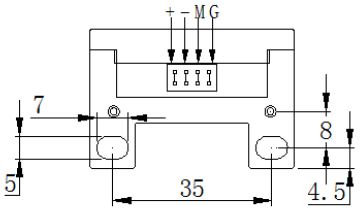
1. If VC is less than the minimum value, the measurement will be inaccurate. If VC is greater than the maximum value, it may cause permanent failure of the measuring device.

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

Dimensions (in mm)

SCD12 dimension：

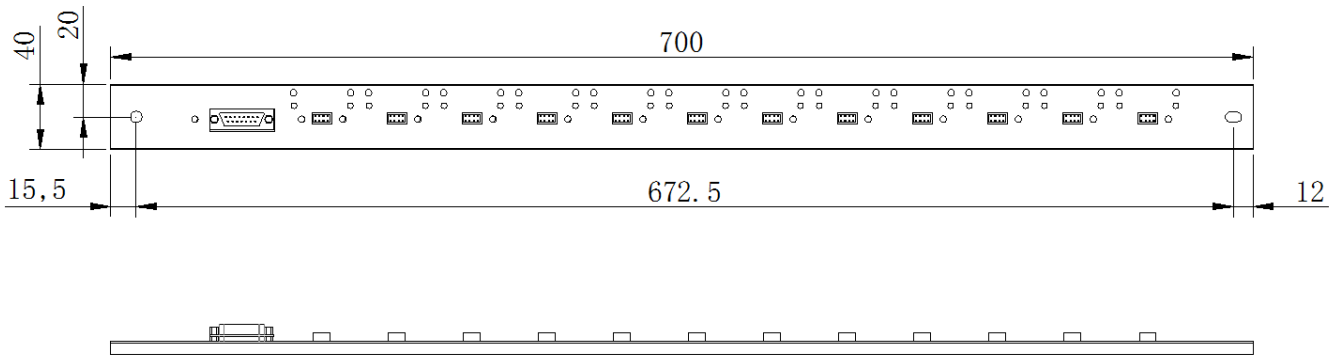




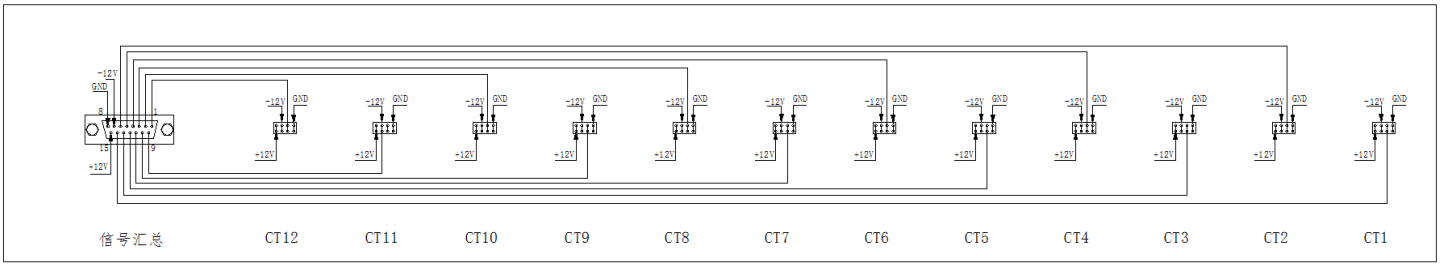
单位：mm

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

Dimensional drawing of the guide bar:



Wiring diagram:



Notes:

1. Product size error: ±0.5mm;

2. Primary aperture: φ17mm;

3. Fastening hole: ○5*2mm*2;

4. Output terminal: 2.54mm-2*4P, Guide output: DB15 interface;

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;