



CS03-6mA/30mA-P Series current sensor

Function

description:

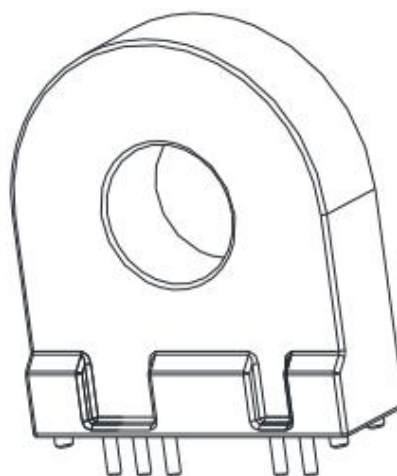
The current sensor is suitable for the measurement of B type residual current.

peculiarity:

- ◆ High precision
- ◆ Board insert mounting
- ◆ High reliability
- ◆ Digital signal output
- ◆ Low power consumption

Application field:

- ◆ New energy vehicle charging pile



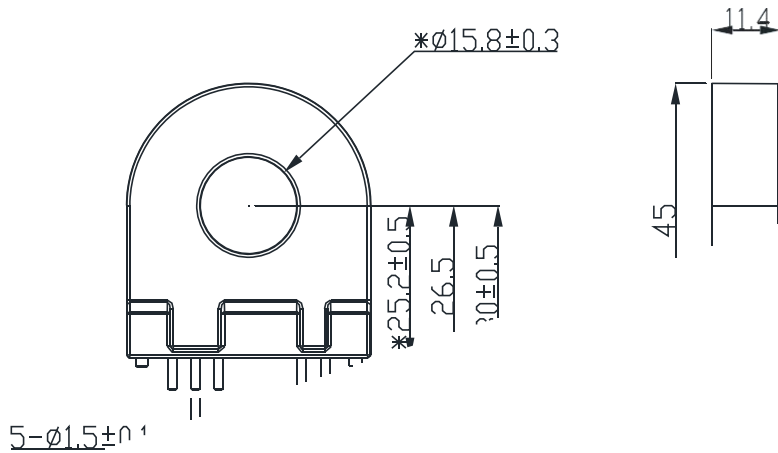
Model list:

Model number	Rated input current I_{PN} (A)	Measuring range I_{PM} (A)
CS03-6mA/30mA-P	6mA (DC) /30mA (AC)	6mA (DC) /30mA (AC)

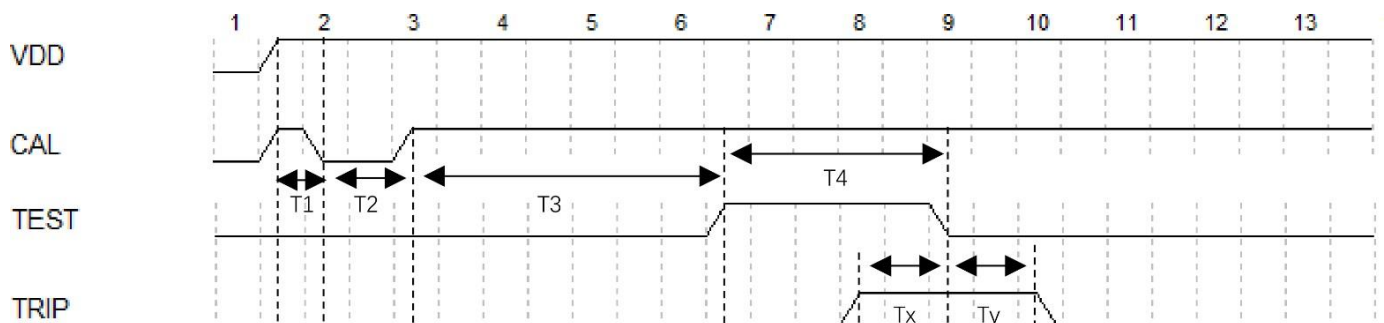
**CS03-6mA/30mA-P Parameter list**

Parameter	symbol	unit	Minimum value	Typical value	Maximum value	remark
Electrical parameter						
Supply voltage	VDD	V	4.85	5	5.15	
Current consumption	IDD	mA	20	-	80	
Rated residual DC operating current	I Δ NDC	mA	-	6	-	
Rated remaining AC operating current	I Δ NAC	mA	-	30	-	
Residual DC current is given as range value	I Δ NDC, Range	mA	3.2	4.5	5.8	
Residual AC current operating range value	I Δ NAC, Range	mA	18	24	27	
Performance parameter						
Action output low level voltage	V _{trip-OUT,low}	V	0	-	0.6	
Action output high level voltage	V _{trip-OUT,high}	V	4.85	-	5.15	
Self-check input low voltage	V _{test-IN,low}	V	0	-	0.6	
Self-check input high level voltage	V _{test-IN,high}	V	2.5	-	5.1	
Calibrate the input low-level voltage	V _{cal-IN,low}	V	0	-	0.6	
Calibrate the input high level voltage	V _{cal-IN,high}	V	2.5	-	5.1	
Universal parameter						
Operating ambient temperature	TA	°C	-40--105			
Storage ambient temperature	TS	°C	-40--105			

Note: Incorrect wiring may damage the sensor;

**Mechanical dimension: (unit: mm)****Instructions for use:**

Pin1	Vcc	5V
Pin2	TRIP	High level output
Pin3	GND	Ground connection
Pin4	calibrate	Product accuracy calibration
Pin5	self-inspection	Product function self-test

Sequence chart:

1. VDD power-on speed $\geq 3\text{ms/V}$

2. $T1 \geq 100\text{ms}$

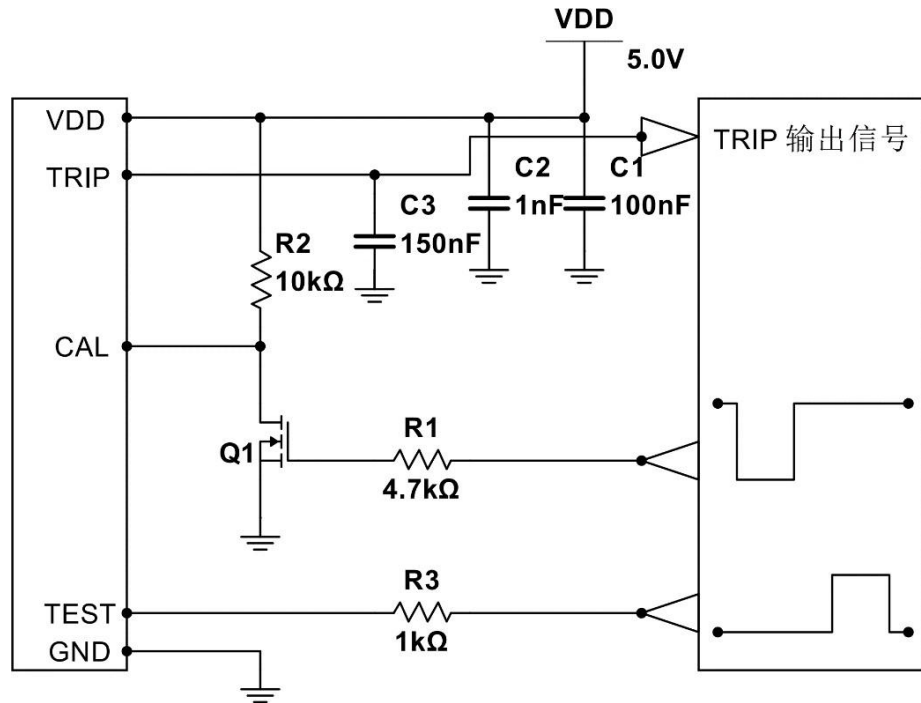
3. $50\text{ms} \leq T2 \leq 100\text{ms}$, CAL low level time greater than 50ms into the zero calibration, calibration completion time $T3 \geq 500\text{ms}$

4. TEST The self-test signal can only be enabled after T3 is completed, and the required duration is $T4 = 400\text{ms}$

5. TRIP pin output high level duration $Tx = 100\text{ms}$ (verify self-test function), $Ty = 100\text{ms}$ is TRIP pin high level fading time (prohibit verification self-test function)



Application circuit:



Attention:

Sensors must comply with IEC61010-1 standards. Sensors must be installed in electronic or electrical equipment that meets application standards and safety requirements in accordance with the instructions for use.

Watch out. Watch out for shocks.



When the sensor is working, some parts may be subjected to dangerous voltages (such as the primary busbar, power supply), and ignoring these will result in damage and serious danger. The sensor is a built-in device, and its conductive part must be guaranteed not to be touched by the outside world after installation. Protective case or shielding cover can be added if necessary. The main power supply must be able to be disconnected.