DATA SHEET
High Accuracy Current Sensor

P/N: CFB600TR15D300 | **I_{PN}=600A**

Feature

- It is a current sensor, based on the principle of fluxgate principle.
- Electrostatic shield between primary and secondary circuit
- It provides accurate electronic measurement of DC, AC or pulsed voltage.
- Supply voltage: ±14~±16 V

Advantages

- High accuracy
- Wide frequency bandwidth
- Low temperature drift
- Very good linearity
- Optimized response time

Applications

- Metrological verification and calibration
- Laboratory current measurement
- Instrumentation (e.g. power analyzer)
- Medical equipment (e.g. MRI)
- Battery pack detection
- Power control

RoHS

Electrical data: (T_A=25℃±5℃)

Parameters \ Type	CFB600TR15D300		
Rated Input I_{PN}(A)	±600		
Measuring Range I_{PM}(A) 1Min/Hour	±720		
Current consumption I_C (mA) I_{PM} Range	Minimum	Standard	Maximum
	±20	±320	±380
Power Supply V_C	±14	±15	±16
Current change Input:Output K_N	2000：1		
Rated Output Current(I_{SN})mA	--	±300	--

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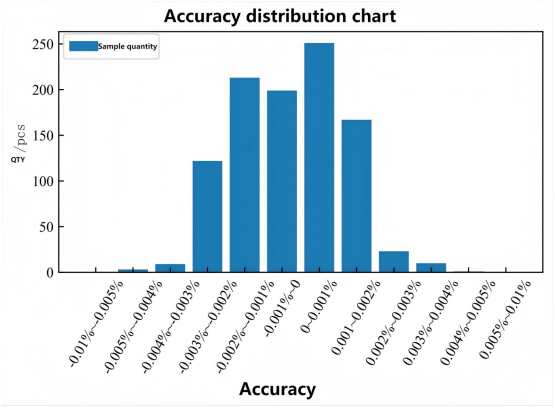
Measuring Resistance(Ω) R_M	0	5	10
Operating voltage Vc (Vdc)	--	--	±16. 5
Limiting ambient temperature T_B(℃)	-40	--	95
Electrostatic discharge voltage (HBM - Human Model) $U_{ESD\ HBM}$ (KV)	--	-	4
Accuracy Xe (A) @0%~17%I_{PN}	--	--	0.01
Accuracy Xe (V) RD% @17%I_{PN}~I_{PM}	--	--	0.01
Ratio error X_{Ge} (A) @0%~17%I_{PN}	--	--	0.01
Ratio error X_{Ge} RD% @17%I_{PN}~I_{PM}	--	--	0.01
Linearity ε_L (ppm)	--	--	0.01
Temperature drift coefficient TCI ppm/K	--	--	2
Time drift coefficient TT ppm/month	--	--	2
Power supply anti interference TV ppm/V	--	--	5
Zero offset current I_O （mA） 25±10℃	--	--	±0.005
Zero offset current I_{OT}（mA） Within the full operating temperature range	--	--	±0.010
Ripple current In DC-10Hz (ppm)	--	--	5
Dynamic response time tr(us) di/dt=100A/us rise to 90%I_{PN}	--	--	1
Bandwidth(- 3dB) F (kHz)	0	--	100

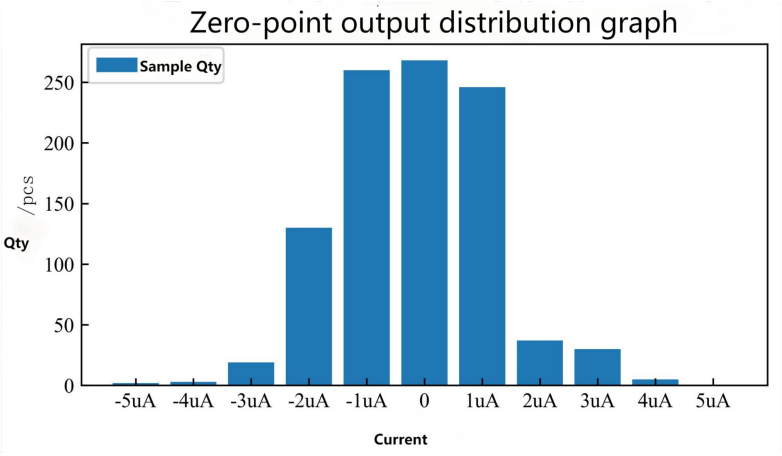
Insulation Coordination：

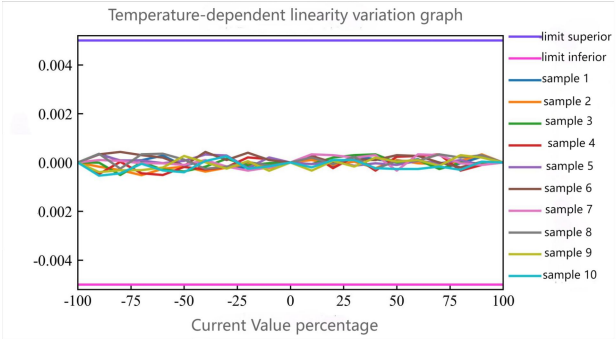
Item	Symbol	Test condition	Value	Unit
RMS voltage for AC insulation test	V_d	50Hz/1Min between primary and secondary	2.5	KV
Creep age distance	d_{CP}	--	7.9	mm
Creepage distance	d_{CI}	--	7.9	mm
Shell Material	--	--	Flame-retardant nylon	--

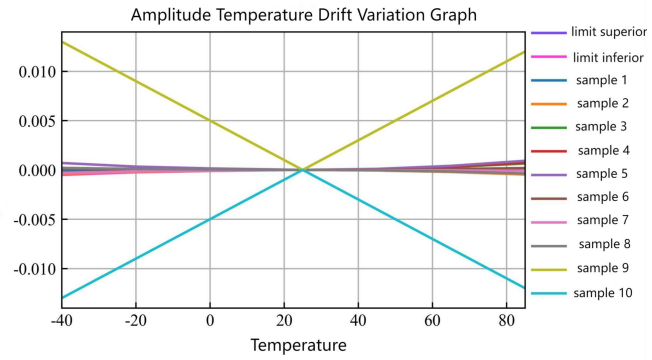
General data：	
Parameter	**Value**
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-45~ +85
Mass M(g)	70g±10g
Standards	IEC60950-1:2001
	JB/T7490-2007
	SJ20790-2000
	UL94-V0
	EN60947-1:2004

Characteristic Diagram

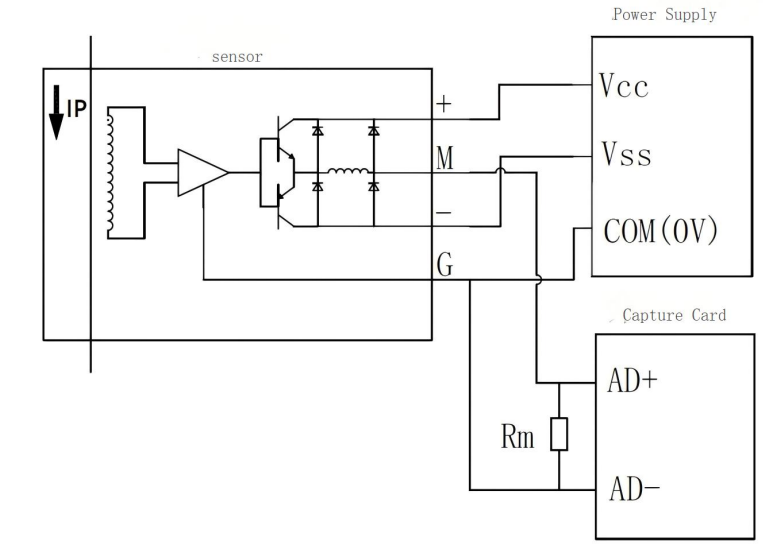






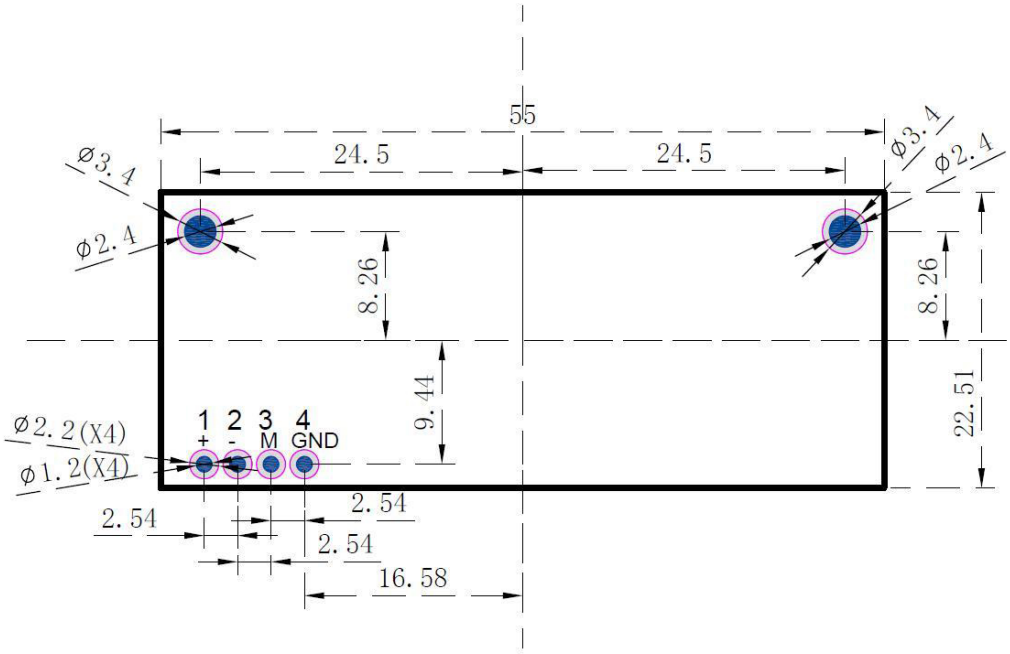


Wiring Diagram

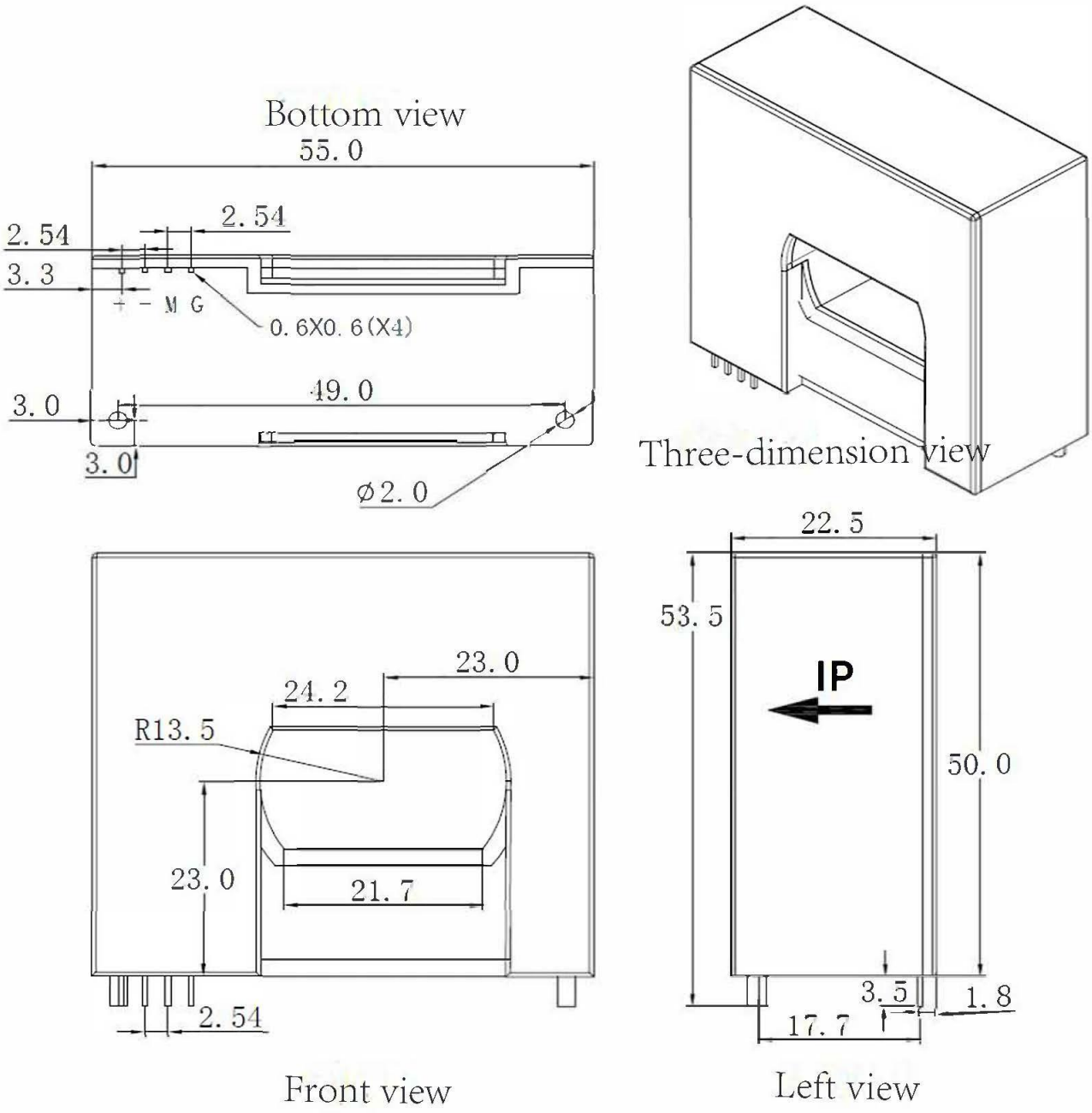


Remark:Differential sampling of the acquisition card can measure the voltage across the sampling resistor, which can improve the acquisition accuracy.
The accuracy and temperature drift of the sampling resistor Rm will directly affect the acquisition accuracy. Therefore, it is recommended to select a resistor with high accuracy, low temperature drift and appropriate power.

PCB Package Drawing:



Dimensions(mm):



Remarks:

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- Before using the product, please make sure to carefully read the user manual.When moving the product, please make sure to turn off the power first and unplug all the connecting cables that are connected to it.If any damage is found to the casing, firmware, power cord, connecting cable, or connected equipment, please immediately disconnect the device from the power supply. and If there are any concerns about the safe operation of the equipment, please immediately shut down the equipment and its related accessories, and contact our company's technical support department as soon as possible to communicate and resolve the issue.
- When the direction of the input current IP is consistent with the direction indicated by the arrow in the outline drawing, the output current IS is in the forward direction.
- Please try to locate the primary conductor at the center of the probe aperture as much as possible.
- This module is a standard sensor, please contact us for special applications.
- We reserve the right to modify this sensor manual without prior notice.

WARNING : Incorrect wiring may cause damage to the sensor.