

HFCE-F22

FLUXGATE CURRENT SENSOR



File No.: IEC 62955



Features

- Fluxgate current sensor
- All-in-One highly integrated digital residual current action indicator
- On-board residual current protection modules for charging piles
- Meets IEC62752 residual current operating characteristics

SCOPE OF APPLICATION

HFCE-F22 Inspection modules are integrated with instrument transformers.
Measurement of various irregular waveform current under electrically isolated conditions.

ELECTRICAL DATA (Ta=25°C)

Type	Sym	Min	Typ	Max
Supply voltage	V _{DD}	4.85V	5V	5.15V
Power Consumption	P _c			110mW
Voltage input/output, low level	V _L	0V		0.6V
Voltage input/output, high level	V _H	4.2V		5V
Ambient operation temperature	T _A	-40°C		+105°C
Ambient storage temperature	T _S	-40°C		+105°C
Theoretical design life ¹	—		20Yr	
Operating altitude ²	—			4000m

RESIDUAL CURRENT RELATED CHARACTERISTICS

Parameter	Sym	HFCE-F22/ D-S5-1
Rated residual operating current (DC)	I _{AN1}	6mA DC
Rated residual operating current (rms)	I _{AN2}	30mA rms

ORDERING INFORMATION

Product Part NO.	HFCE	-F	22	D	-S	5	-□	(XXX)
	CF:Fluxgate current sensor							
Working Principle	F: For leakage							
Sequence number	22: 22							
Output method	D: Digital signal							
Operating Voltage Mode	S: Single power supply							
Typical operating voltage	5: 5V							
Programming Code	1: RDC-PD 3: CCID20							
Special code ¹⁾	XXX: Customer special requirement							

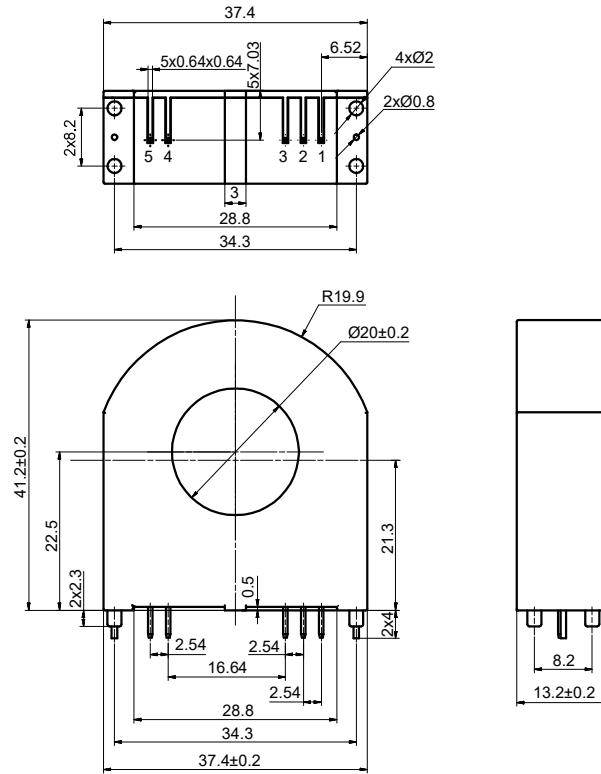
Notes: 1) The customer special requirement express as special code after evaluating by Hongfa.



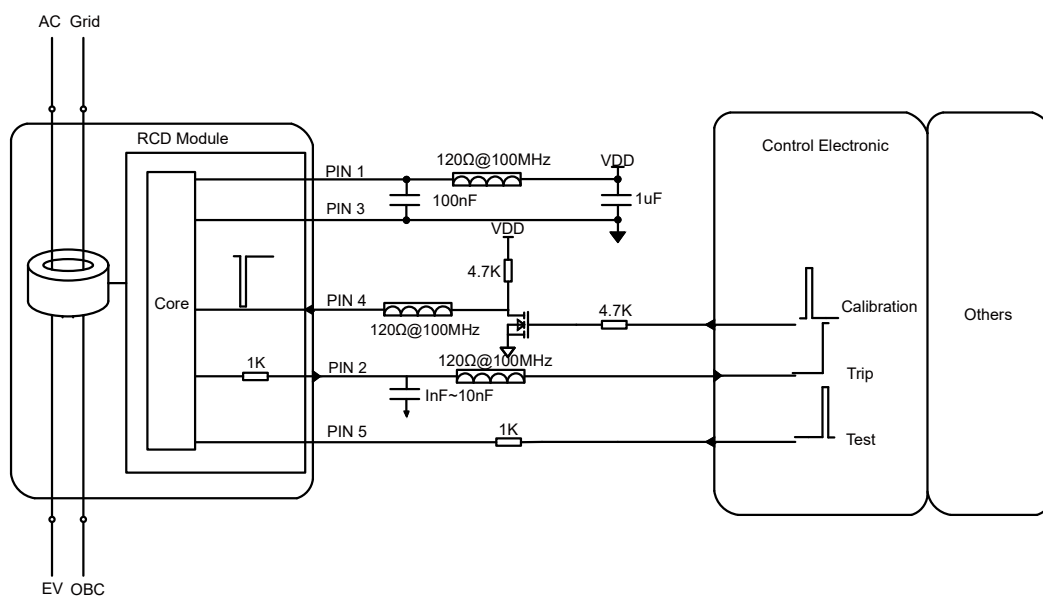
HONGFA CURRENT TRANSFORMER
ISO9001 CERTIFIED

2024 Rev. 1.00

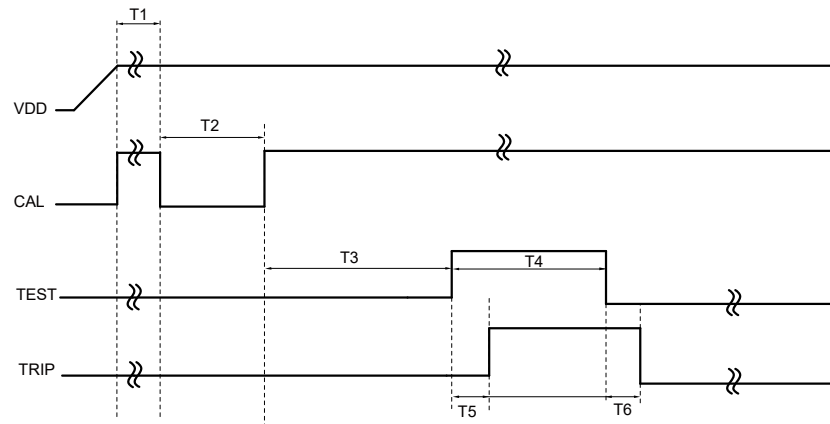
Outline Dimensions



Wiring Diagram



Timing Diagram



- Notes:**
- 1) VDD building up time should be $\leq 15\text{ms}$.
 - 2) T1 as the waiting time, it is suggested $T1 \geq 100\text{ms}$.
 - 3) T2 as the calibration and self-test order time, it is suggested $50\text{ms} \leq T2 \leq 100\text{ms}$.
 - 4) T3 indicates the time to wait for the completion of calibration, $T3 \geq 500\text{ms}$.
 - 5) T4 indicates the time for enabling the self-test signal, $T4 \approx 400\text{ms}$.
 - 6) T5 indicates the delay time of the action signal, and $T5 \approx 40\text{ms}$. It is recommended to wait 100ms after the end of T5 to detect the action signal.
 - 7) T6 indicates the maintenance time of the action signal after the self-test, and $T6 \approx 50\text{ms}$. It is recommended that the action signal be detected after another 100ms after the end of T6.
 - 8) Do not close the main loop switch in the process of self-check calibration, namely $(T1+T2+T3+T4)$, so as to prevent the residual current in the line from affecting the self-check calibration Quasi-procedure. When you finally receive the TRIP pin group flip, you can determine whether the RCD module is working properly for subsequent operations.

NOTES:

- 1) To avoid using current transformer under strong magnetic field, the external magnetic field will cause the accuracy of current transformer to change.
- 2) We could not evaluate all the performance and all the parameters for every possible application field and environment. Thus the user should be in a right position to choose the suitable produce for their own application. If there is any query, please contact HKG for the technical service. However, it is the use's responsibility to determine which product should be used only.
- 3) Operating temperature range in this specification refers to the maximum tolerable temperature range under specific load conditions.
- 4) To maintain the performances of current transformers, please do not make the current transformer drop or be shocked strongly.
- 5) All the performance data listed in the datasheet are the initial values tested under standard testing condition.
- 6) HKG reserves the right to change the product, the customer should confirm this specification before placing the order for the first time, may request us to provide the new specification if necessary.