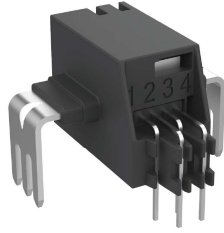


HFCH-C09

OPEN LOOP HALL-EFFECT CURRENT SENSOR



Features

- Low insertion losses
- Easy installation
- Low power consumption
- High immunity to external interference

Applications

Uninterruptible Power Supplies (UPS), Static converters for DC motor drives, AC variable speed drives and servo motor drives, Solar inverters

SCOPE OF APPLICATION

HFCH-C09 family is suited for the electronic measurement of currents:
DC, AC, pulsed, with galvanic separation between the primary circuit and the secondary circuit.

ELECTRICAL DATA (Ta=25°C)

Parameter	Sym	HFCH-C09/10	HFCH-C09/16	HFCH-C09/20	HFCH-C09/32	HFCH-C09/40	HFCH-C09/50
Primary nominal rms current	I_{PN}	10A	16A	20A	32A	40A	50A
Primary current, measuring range	I_{PM}	±25A	±40A	±50A	±80A	±100A	±125A
Rated output voltage	V_{OUT}	0.8V@ I_{PN} , T=25°C					
Electrical offset voltage	V_{OE}	≤10mV($V_{OUT}-V_{ref}$)@ $I_P=0$, T=25°C					
Reference voltage	V_{ref}	2.5±0.02V@ I_{PN}					
Error	X	≤±0.8%@ I_{PN} , T=25°C					
Error	X	≤±1.5%@ I_{PN} (-40°C~105°C)					
Linearity error	ϵ_L	≤±0.5%@ I_{PN}					
Linearity error	ϵ_L	≤±0.5%@ I_{PM}					
Temperature coefficient of V_{ref}	TCV_{ref}	≤±8mV(-40°C~105°C)@ $I_P=0A$					
Temperature coefficient of V_{OUT}	TCV_{out}	≤±170ppm/K(-40°C~105°C)					
Response time	T_r	≤2.5 μs					
Frequency bandwidth (-3 dB)	BW	DC---240kHz					
Supply voltage (±5 %)	V_c	+5V					
Current consumption@ +5 V	I_c	<20mA					
Operating temperature	T_A	-40°C ~ +105°C					
Storage temperature	T_S	-40°C ~ +105°C					

INSULATION COORDINATION

Insulation resistance	R_{INS}	DC500V, >1000MΩ
Insulation strength	U_d	4.5kV a.c., 50/60Hz, 1min
Impulse withstand voltage 1.2/50 μs	V_{NI}	8 KV
Clearance	d_{CI}	8 mm
Creepage distance	d_{CP}	8 mm

Notes: 1) If the V_c is less than the minimum value, the measurement will be inaccurate; if the V_c is more than the maximum value, the measurement device may fail permanently.

2) Wave soldering profile: maximum 260°C for 10s.

3) V_{OUT} is positive when I_P flows in the direction of the arrow.

4) Primary conductor temperature < 120 °C.



HONGFA CURRENT TRANSFORMER
ISO9001 CERTIFIED

2024 Rev. 1.00

ORDERING INFORMATION

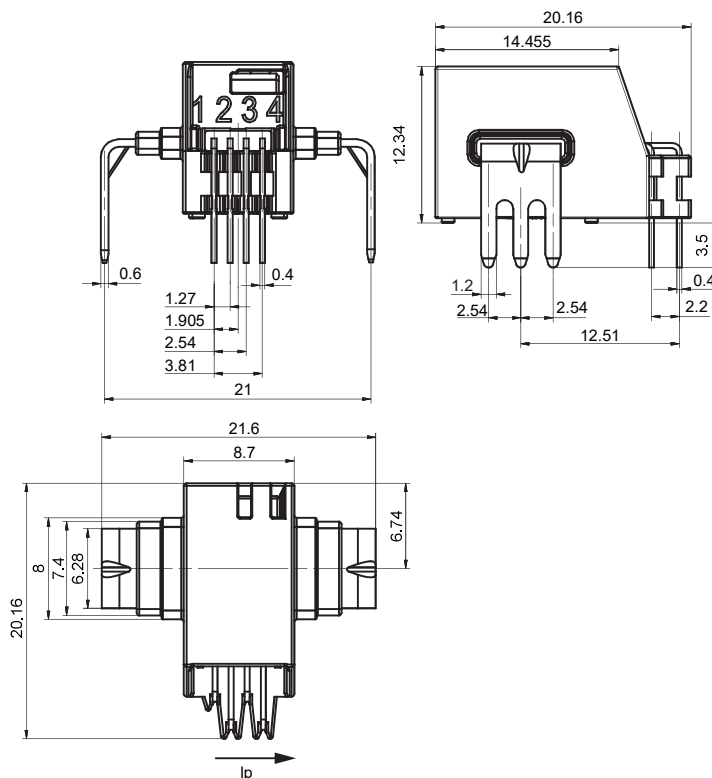
	HFCH	-C	09	□□□	-V	0.8	-S	5	(XXX)
Product Part NO.	CH:Hall effect sensor								
Working Principle	C: Programmable Sensor								
Sequence number	09: 09								
Nominal current	10:10A 16:16A 20:20A 32:32A 40:40A 50:50A								
Output method	V: Voltage output								
Typical output value	0.8: 0.8V								
Operating Voltage Mode	S:Single power supply								
Typical operating voltage	5: 5VDC								
Special code ¹⁾	XXX: Customer special requirement								

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

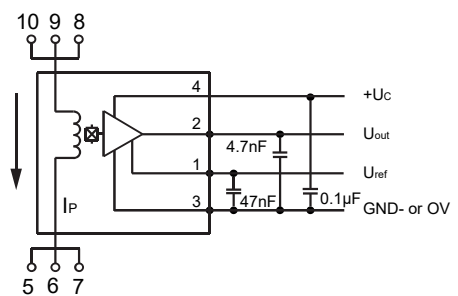
OUTLINE DIMENSIONS, WIRING DIAGRAM

Unit: mm

Outline Dimensions



Wiring Diagram



Notes:

Pin 1	V _{ref}
Pin 2	V _{out}
Pin 3	GND
Pin 4	(+5V)

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 user'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.