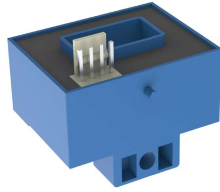


# HFCH-C18(0.625V)

## 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, Power supplies for welding

## SCOPE OF APPLICATION

HFCH-C18 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-C18 / 50	HFCH-C18 / 100	HFCH-C18 / 150	HFCH-C18 / 200	HFCH-C18 / 300	HFCH-C18 / 400	HFCH-C18 / 500	HFCH-C18 / 600
Primary nominal rms current	$I_{PN}$	50A	100A	150A	200A	300A	400A	500A	600A
Primary current, measuring range	$I_{PM}$	±150A	±300A	±450A	±600A	±900A	±1100A	±1100A	±1100A
Rated output voltage	$V_{OUT}$	$V_{ref} \pm 0.625V @ I_{PN}, T=25^{\circ}C$							
Electrical offset voltage	$V_{OE}$	$2.5V \pm 0.02V @ I_P=0, T=25^{\circ}C$							
Reference voltage	$V_{ref}$	$2.5V \pm 0.02V$							
Error	X	$\leq \pm 1\% @ I_{PN}$							
Linearity error	$\epsilon_L$	$< \pm 0.8\% @ I_{PN}$							
Temperature coefficient of $V_{OE}$	$TCV_{OE}$	$\leq \pm 0.1 mV/^{\circ}C$							
Temperature coefficient of $V_{ref}$	$TCV_{ref}$	$\leq \pm 8mV(-40^{\circ}C \sim 105^{\circ}C) @ I_P=0A$							
Temperature coefficient of $V_{OUT}$	$TCV_{out}$	$\leq \pm 170ppm/K(-40^{\circ}C \sim 105^{\circ}C)$							
Response time	$T_r$	$\leq 5 \mu s$							
Frequency bandwidth (-3 dB)	BW	DC---200kHz							
Supply voltage ( $\pm 5\%$ )	$V_C$	+5V							
Current consumption@ +5 V	$I_C$	$< 25mA$							
Operating temperature	$T_A$	$-40^{\circ}C \sim +105^{\circ}C$							
Storage temperature	$T_S$	$-40^{\circ}C \sim +105^{\circ}C$							

## 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) Recommended fastening torque 1.5 N·m.
  - 3)  $V_{OUT}$  is positive when  $I_P$  flows in the direction of the arrow.
  - 4) Primary conductor temperature  $< 100^{\circ}C$ .
  - 5) The primary busbar fixed in the center of aperture is recommended. The position of busbar has impact on the accuracy of transducer.



HONGFA CURRENT TRANSFORMER  
ISO9001 CERTIFIED

2024 Rev. 1.00

## ORDERING INFORMATION

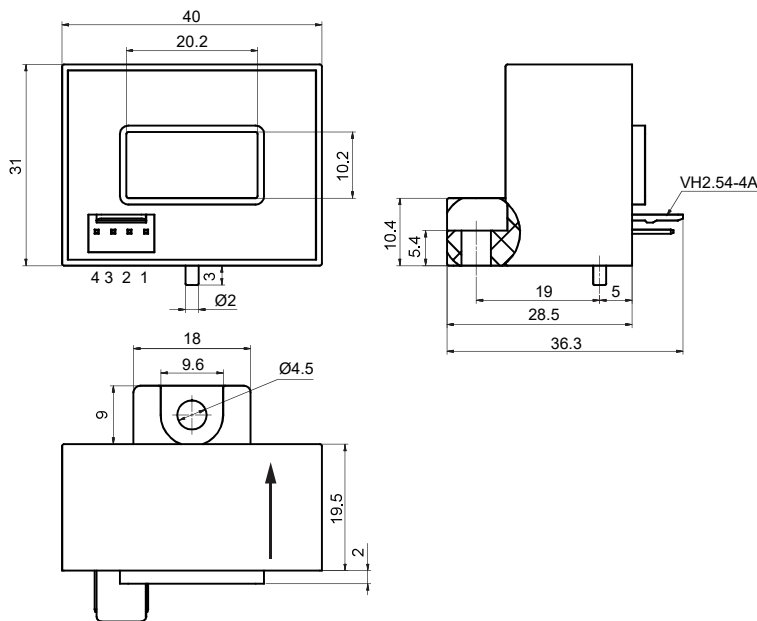
	HFCH	-C	18	□□□	-V	0.625	-S	5	(XXX)
Product Part NO.	CH:Hall effect sensor								
Working Principle	C: Programmable Sensor								
Sequence number	18: 18								
Nominal current	50:50A 100:100A 150:150A 200:200A 300:300A 400:400A 500:500A 600:600A								
Output method	V: Voltage output								
Typical output value	0.625: 0.625V								
Operating Voltage Mode	S:Single power supply								
Typical operating voltage	5: 5VDC								
Special code <sup>1)</sup>	XXX: Customer special requirement								

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

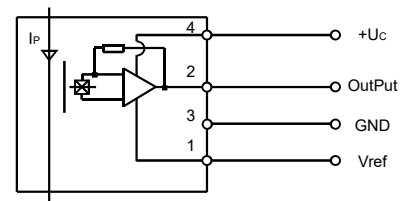
## OUTLINE DIMENSIONS, WIRING DIAGRAM

Unit: mm

Outline Dimensions



Wiring Diagram



Notes:

Pin 1	Vref
Pin 2	Vout
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.