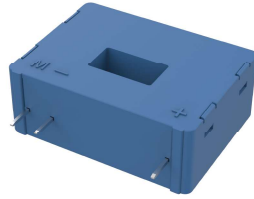


# HFCH-L01

## CLOSED LOOP HALL-EFFECT CURRENT SENSOR



### Features

- Excellent accuracy and very good linearity
- Optimized response time, wide frequency bandwidth
- 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-L01A 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-L01/25	HFCH-L01/50	HFCH-L01/75	HFCH-L01/100
Primary nominal rms current	$I_{PN}$	25A	50A	75A	100A
Primary current, measuring range	$I_P$	$\pm 37.5A$	$\pm 75A$	$\pm 100A$	$\pm 150A$
Secondary nominal rms current	$I_{SN}$	25mA	50mA	50mA	50mA
Turns ratio	N	1:1000	1:1000	1:1500	1:2000
Measuring resistance@ $I_{PN}$	$R_M$	0-75 $\Omega$	0-75 $\Omega$	0-75 $\Omega$	0-75 $\Omega$
Measuring resistance@ $I_{PM}$	$R_M$	0-50 $\Omega$	0-50 $\Omega$	0-50 $\Omega$	0-50 $\Omega$
Electrical offset current	$I_o$	$\leq \pm 0.2mA @ I_P=0$			
Linearity error	$\epsilon_L$	$< \pm 0.1\% @ I_{PN}$			
Error	X	$\leq \pm 0.4\% @ I_{PN}$			
Response time	Tr	1 $\mu s$ max			
Temperature coefficient of $I_o$	$I_{OT}$	$\leq \pm 0.4mA (-40^\circ C \sim 85^\circ C)$			
Supply voltage	$V_c$	$\pm 15V DC \pm 5\%$			
Current consumption	$I_c$	$< 10mA + I_{SN}$			
Frequency bandwidth (-3dB)	BW	DC---100kHz			
Operating temperature	$T_A$	$-40^\circ C \sim +85^\circ C$			
Storage temperature	$T_s$	$-40^\circ C \sim +90^\circ C$			

## INSULATION COORDINATION

Insulation resistance	$R_{INS}$	DC500V, >1000M $\Omega$
Insulation strength	$U_d$	2.5kVa.c., 50/60Hz, 1min
Impulse withstand voltage 1.2/50 $\mu s$	$V_{NI}$	8 KV
Clearance	$d_{CI}$	7.9 mm
Creepage distance	$d_{CP}$	11.4 mm

- Notes:**
- 1) Connected according to the connection requirements.
  - 2) Temperature of the primary conductor should not exceed 100°C.
  - 3)  $I_{OUT}$  is positive when  $I_P$  flows in the direction of the arrow.



HONGFA CURRENT TRANSFORMER  
ISO9001 CERTIFIED

2024 Rev. 1.00

## ORDERING INFORMATION

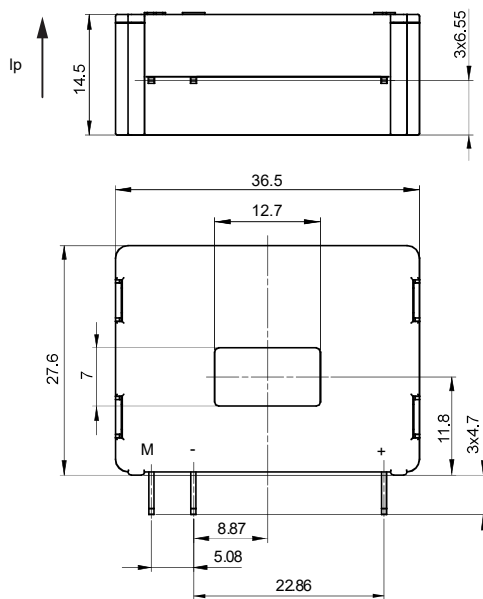
	HFCH	-L	01	/□□□	-C	□□□	-D	15	(XXX)
Product Part NO.	CH: Hall effect sensor								
Working Principle	L: Closed Loop Sensor								
Sequence number	01: 01								
Nominal current	25: 25A 50: 50A 75: 75A 100: 100A								
Output method	C: Current signal								
Typical output value	25: 25mA 50: 50mA								
Operating Voltage Mode	D: Dual power supplies								
Typical operating voltage	15: 15VDC								
Special code <sup>1)</sup>	XXX: Customer special requirement								

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

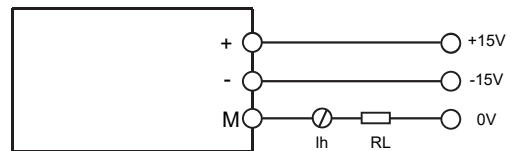
## OUTLINE DIMENSIONS, WIRING DIAGRAM

Unit: mm

Outline Dimensions



Wiring Diagram



Notes:

+	(+15V)
-	(-15V)
M	$I_0$

### 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.