

Open loop hall effect current sensor

HCF-5A~1200A HCK-20A~15,000A

Used to measure DC, AC, pulse current.... The measured current on the primary side is electrically isolated from the output current on the secondary side

Feature:

Test frequency: 0~20KHz

Response time: Less than 10uS

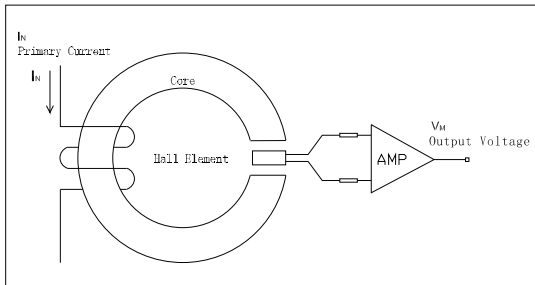
Linearity: 0.1%

No insertion loss measured

Measure AC, DC and pulse current

The primary current is highly isolated from the secondary output signal

Open-loop Hall magnetic compensation principle manufacturing

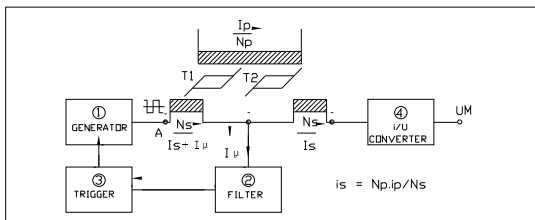


Working principle:

When the measured current I_N flows through the conductor, a magnetic field proportional to the current is generated around the conductor, which is measured by the Hall element. The output voltage V_m is proportional to the measured current I_N , and the V_m accurately reflects the current on the primary side.

Low current (leakage current) sensor

HCD-20mA~300mA(DC)



Working principle:

The compensation current generated by the internal square wave shaker compensates the primary current to achieve magnetic field balance. At this time, the output value accurately reflects the primary current, which is mainly used for small current and difference current detection.

HCF Series hall effect current sensor

Part No (* rated current)	Rated input current I_N (A)	I_r (A)	V_m (V)	$T_a=25^\circ\text{C}$	I_{off} (mV)	V_c (V)	I_c (mA)	V_i (KV)	T_a ($^\circ\text{C}$)	W (g)	Input hole mm	Fig. No.
HCF-*BP	50/100/300/500/600	$\pm I_N \times 133\%$	$2.5V \pm 1.5V$	1.0%	$2.5V \pm 30mV$	+5	15	2.5	-40~+85	85	10x20	1
HCF-*FS	50/100/300/500/600	$\pm I_N \times 133\%$	$2.5V \pm 1.5V$	1.0%	$2.5V \pm 30mV$	+5	15	2.5	-40~+85	85	$\phi 20$	19
HCF-*P	5/10/15/20/25	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	2.5	-10~+70	15	PCB	7
HCF-*B	10/50/100/200/300/400/600	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	2.5	-10~+70	40	10x20	13
HCF-*H	50/100/200/300/400/500/600	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	3	-10~+70	80	16x22	14
HCF-*F	20/50/100/200/400/600	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	3	-10~+70	105	$\phi 20$	10
HCF-*G	50/100/200/400/600/800	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	360	$\phi 35$	11
HCF-*K	100/300/500/800/1000	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	700	$\phi 45$	4
HCF-*L	200/500/1000/1200	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	900	$\phi 55$	8

HCK Series hall effect current sensor(Split core)

Part No (* rated current)	Rated input current I_N (A)	I_r (A)	V_m (V)	$T_a=25^\circ\text{C}$	I_{off} (mV)	V_c (V)	I_c (mA)	V_i (KV)	T_a ($^\circ\text{C}$)	W (g)	Input mm	Fig. No.
HCK-*R	50/100/200/400/600/800	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	290	$\phi 40$	2
HCK-*R1	20/50/100/200/300/400/500	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	100	$\phi 21$	12
HCK-*Y4	50/100/200/300/400/500/600	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	110	15x41.5	3
HCK-*Y31	100/500/1000/1500/2000	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	330	16x64	16
HCK-*Y2	500/1000/2000/3000/6000	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	550	23x103.5	5
HCK-*Y21	500/1000/2000/3000/6000	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	660	40x103.5	17
HCK-*Y1	1000/2000/3000/5000/10000	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	800	50x165	6
HCK-*Y11	2000/3000/5000/10000/15000	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	1100	78x165	18
HCK-*Y0	2000/3000/5000/8000	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	600	20.5x165	9
HCK-*Y01	1000/2000/3000/4000/5000	$\pm I_N \times 150\%$	± 4	1.0%	± 30	$\pm 12 \sim 15$	25	5	-10~+70	1000	20.5x205	15

HCD Series low DC current sensor

Part No (* rated current)	Rated input current I_N (A)	I_r (mA)	V_m (V)	$T_a=25^\circ\text{C}$	V_{off} (mV)	V_c (V)	I_c (mA)	V_i (KV)	T_a ($^\circ\text{C}$)	W (g)	Input mm	Fig. No.
HCD-*F	20/50/100/200/300	$\pm I_N \times 150\%$	± 5	1.0%	± 50	$\pm 12 \sim 15$	25	3	-10~+85	105	$\phi 20$	19
HCD-*G	20/50/100/200/300	$\pm I_N \times 150\%$	± 5	1.0%	± 50	$\pm 12 \sim 15$	25	5	-10~+85	360	$\phi 35$	11

* : Rated current

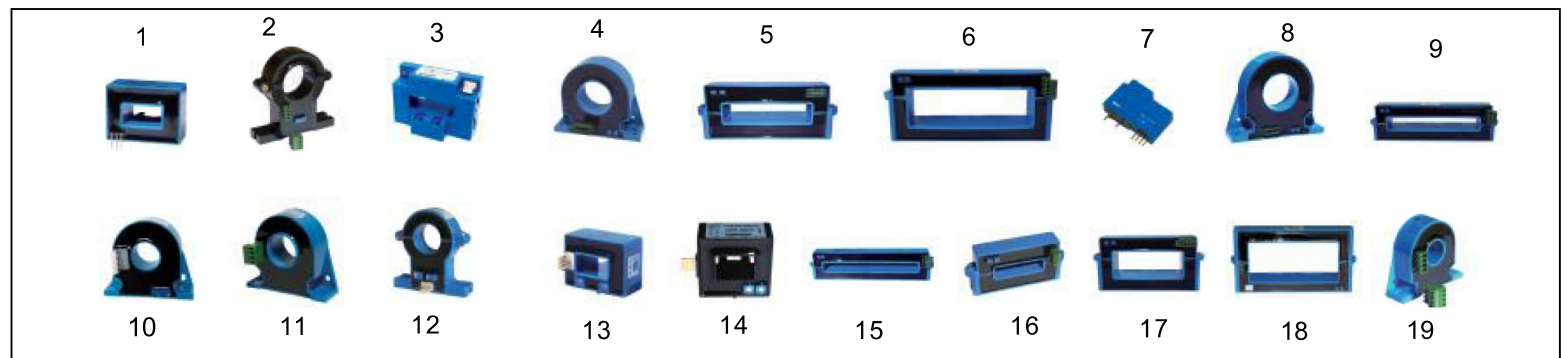


Fig. 11

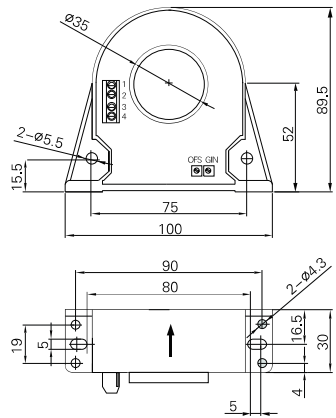


Fig. 12

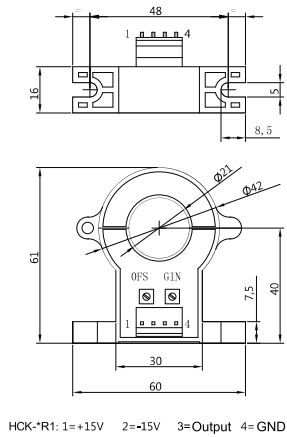


Fig. 13

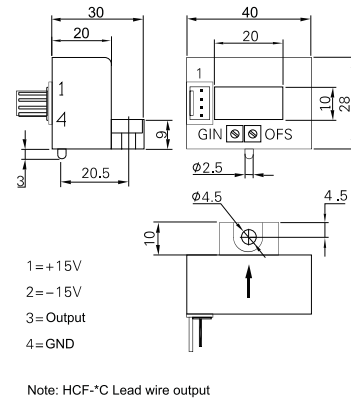


Fig. 14

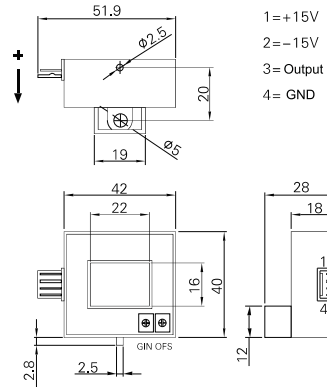


Fig. 15

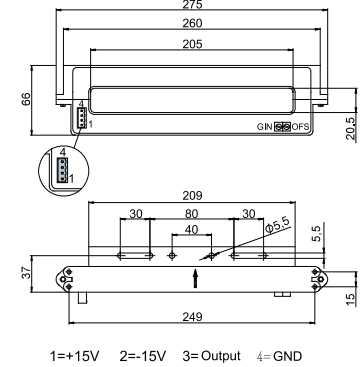


Fig. 16

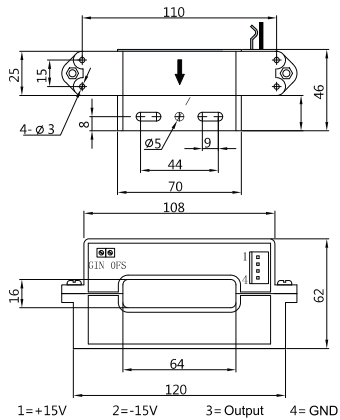


Fig. 17

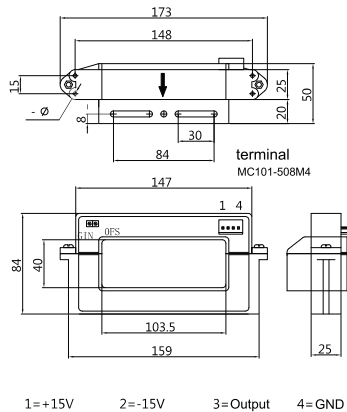


Fig. 18

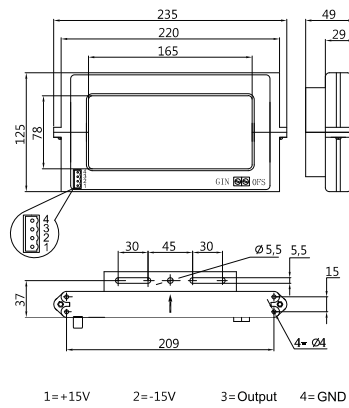
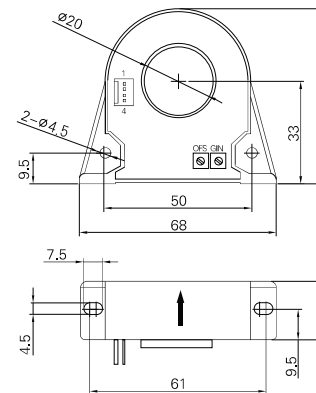


Fig. 19



M	Output
M+	Output+
M-	Output-
NC	NO
IN	Input
IN+(+HT)	Input+
IN-(-HT)	Input-
+VN	Input voltage+
-VN	Input voltage-

I_N	Nominal current	V_{off}	Offset voltage
V_N	Nominal voltage	T_d	Temperature drift
I_p	Measuring range	L	Linearity
R_M	Measuring resistance	T_r	Response time
I_M	Output current	f	Frequency bandwidth
V_M	Output voltage	T_a	Operating temperature
K_N	Turns ratio	T_s	Storage temperature
X	Accuracy	I_c	Current consumption
V_c	Supply voltage	R_s	Secondary resistance
V_i	Isolation voltage	R_N	Primary resistance
I_{off}	Offset current	W	Weight