

## Precision current transformer

### HCG 2mA~2000A

### HCG-V 50V~600V

Used to measure AC current or voltage, the measured current (voltage) on the primary side is electrically isolated from the output current (voltage) on the secondary side

Feature:

Test frequency: 50Hz (400Hz~20KHz)

Response time: less than 10uS

Linearity: 0.1%~0.5%

No insertion loss measured

Used to measure AC current or voltage

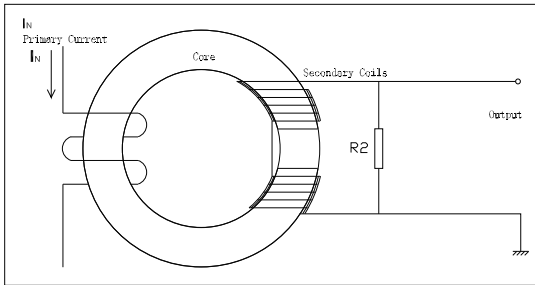
The primary current(voltage) is highly isolated from the secondary output signal

Passive

### HCG series precision current transformer

Part No	Rated current I <sub>N</sub> (A)AC	f(Hz)	I <sub>P</sub> (A)AC	Output current I <sub>M</sub> (mA)AC	Accuracy T <sub>a</sub> =25°C	Turns ratio K <sub>N</sub>	Output voltage V <sub>M</sub> (V)	V <sub>i</sub> (KV)	T <sub>a</sub> (°C)	W(g)	Input hole mm	Fig. No.
HCG-500	20	50/400	24	40	0.5%	1:500	<2	3	-40~+85	60	φ 9	2
HCG-1000	40	50/400	48	40	0.5%	1:1000	<2	3	-40~+85	60	φ 9	2
HCG-*M	1...25	50/400	30	I <sub>N</sub> /K <sub>N</sub>	0.2%	1:500 (1000、2000、2500)	<2	2	-40~+85	15	φ 6.8	1
HCG-*E	20...100	400...20K	120	I <sub>N</sub> /K <sub>N</sub>	0.5%	1:200(500、1000)	<2	2	-40~+85	55	φ 12	3
HCG-*EB	5...100	50/400	120	I <sub>N</sub> /K <sub>N</sub>	0.5%	1:500(1000)	<2	2	-40~+85	55	φ 12	3
HCG-*F	5...200	400...20K	240	I <sub>N</sub> /K <sub>N</sub>	0.5%	1:500(1000、2000)	<2	3	-40~+85	105	φ 20	6
HCG-*FB	5...200	5...200	240	I <sub>N</sub> /K <sub>N</sub>	0.5%	1:500(1000、2000)	<2	3	-40~+85	105	φ 20	6
HCG-*G	100...500	50/400	600	I <sub>N</sub> /K <sub>N</sub>	0.5%	1:1000(2000、3000、4000、5000)	<2	6	-40~+85	360	φ 35	10
HCG-*K	100...1000	50/400	1200	I <sub>N</sub> /K <sub>N</sub>	0.5%	1:1000(2000、3000、4000、5000)	<2	6	-40~+85	700	φ 45	11
HCG-*L	100...1500	50/400	1800	I <sub>N</sub> /K <sub>N</sub>	0.5%	1:1000(2000、3000、4000、5000)	<2	6	-40~+85	700	φ 55	12
HCG-*N	100...2000	50/400	2400	I <sub>N</sub> /K <sub>N</sub>	0.5%	1:1000(2000、3000、4000、5000)	<2	6	-40~+85	760	φ 72	15
HCG010	5/10/20/50/75/100	50	I <sub>N</sub> ×120%	IN/3000	1.0%	1:3000	<2	2.5	-15~+60	55	φ 10	4
HCG016	70/100/150	50	I <sub>N</sub> ×120%	IN/3000	1.0%	1:3000	<2	2.5	-15~+60	95	φ 16	4
HCG024	100/150/200/250	50	I <sub>N</sub> ×120%	IN/3000	1.0%	1:3000	<2	2.5	-15~+60	200	φ 24	4

\* : Turns ratio



Working principle:

When the measured current flows through the conductor, a magnetic field is generated around the conductor in direct proportion to the current. The magnetic field is measured by the secondary coil, and its output current or voltage is proportional to the measured current. This signal accurately reflects the Valid value of the primary current

### HCG series precision current transformer

Part No	Rated current I <sub>N</sub> (A)AC	f(Hz)	I <sub>P</sub> (A)AC	Output voltage V <sub>M</sub> (V) AC	Accuracy T <sub>a</sub> =25°C	Turns ratio K <sub>N</sub>	Output voltage V <sub>M</sub> (V)	V <sub>i</sub> (KV)	T <sub>a</sub> (°C)	W(g)	Input hole mm	Fig. No.
HCG-*AE	5/10/50	50	I <sub>N</sub> ×100%	5V	0.5%	1:1000 (2000)	...	2	-40~+85	50	φ 12	3
HCG-*AF	50/100/200	50	I <sub>N</sub> ×100%	5V	0.5%	1:2000	...	3	-40~+85	105	φ 20	13
HCG-*AG	100/200/300/400/500	50	I <sub>N</sub> ×100%	5V	0.5%	1:1000(2000、3000、4000、5000)	...	6	-40~+85	250	φ 35	10
HCG-*AK	200/400/600/800/1000	50	I <sub>N</sub> ×100%	5V	0.5%	1:1000(2000、3000、4000、5000)	...	6	-40~+85	700	φ 45	11
HCG-*AL	300/600/900/1200/1500	50	I <sub>N</sub> ×100%	5V	0.5%	1:1000(2000、3000、4000、5000)	...	6	-40~+85	700	φ 55	12
HCG-*AH	400/800/1200/1600/2000	50	I <sub>N</sub> ×100%	5V	0.5%	1:1000(2000、3000、4000、5000)	...	6	-40~+85	760	φ 72	15

\* : Rated input current

### HCG-V series precision voltage transformer

Part No	Rated voltage I <sub>N</sub> (A)AC	f(Hz)	I <sub>P</sub> (A)AC	Output voltage V <sub>M</sub> (V) AC	Accuracy T <sub>a</sub> =25°C	Turns ratio K <sub>N</sub>	Output voltage V <sub>M</sub> (V)	V <sub>i</sub> (KV)	T <sub>a</sub> (°C)	W(g)	Input hole mm	Fig. No.
HCG-V-2MA	2mA	50	4mA	2mA	0.5%	1:1	<1	2.5	-40~+85	6	PCB	5
HCG-V-*A	50/100/200	50	V <sub>N</sub> ×120%	5V	0.5%	...	...	2.5	-40~+85	70	PCB	7
HCG-V-*B	300/400	50	V <sub>N</sub> ×120%	5V	0.5%	...	...	2.5	-40~+85	90	PCB	8
HCG-V-600C	600	50	720	5V	0.5%	...	...	3	-40~+85	205	PCB	9
HCG-V-*S	50/100/300/500	50	V <sub>N</sub> ×120%	5V	0.5%	...	...	2.5	-40~+85	240	Terminal	14

\* : Rated input voltage

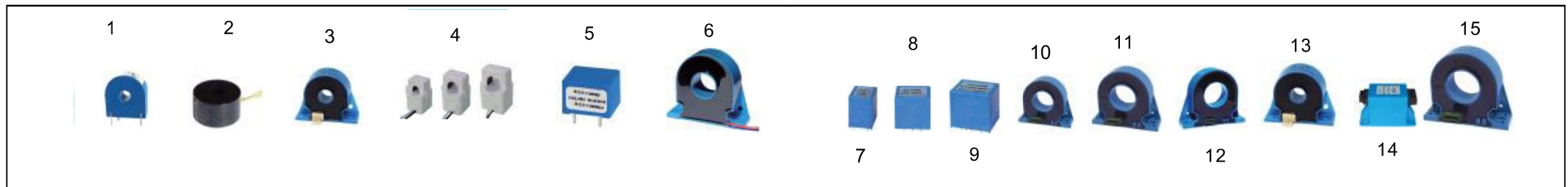


Fig. 1

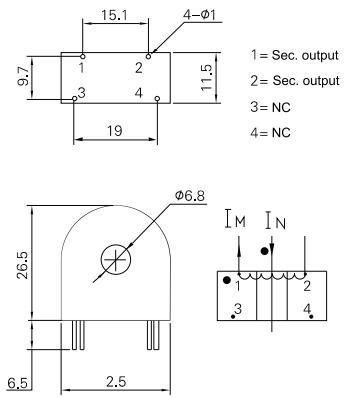


Fig. 2

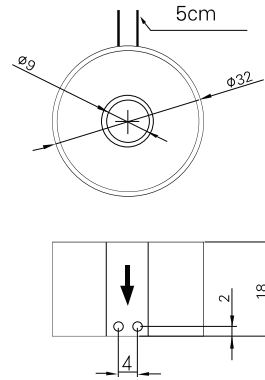
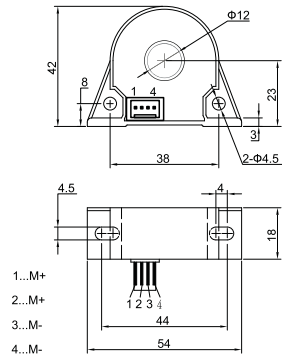
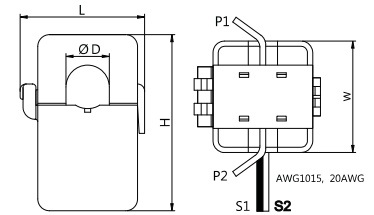


Fig. 3



HCG-EB (E) Output Lead wire 500mm, Red M+ , Blue M-

Fig. 4



	(mm)			
	D	L	W	H
HCG010	10.0	29.4	26.4	41.7
HCG016	16.0	36.9	39.2	52.9
HCG024	24.0	51.2	47.0	70.2

Fig. 5

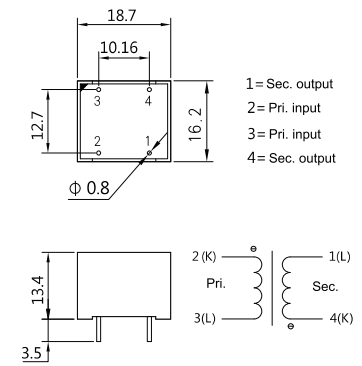
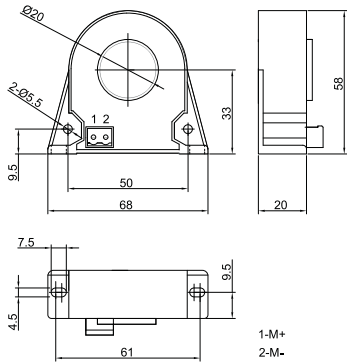


Fig. 6



HCG-F(FB) Output Lead wire 500mm, Red M+ , Blue M-

Fig. 7

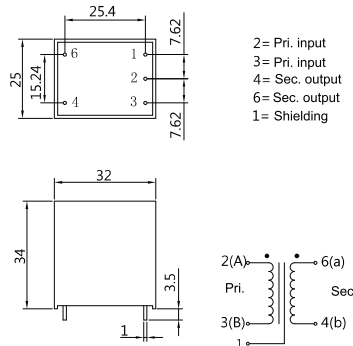


Fig. 8

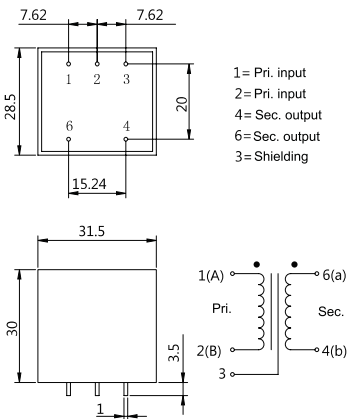


Fig. 9

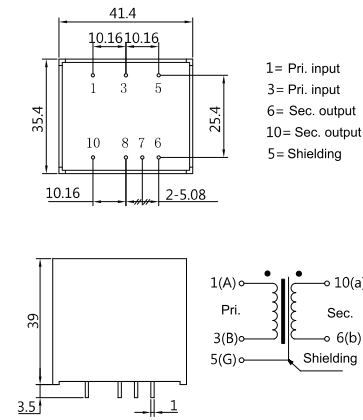
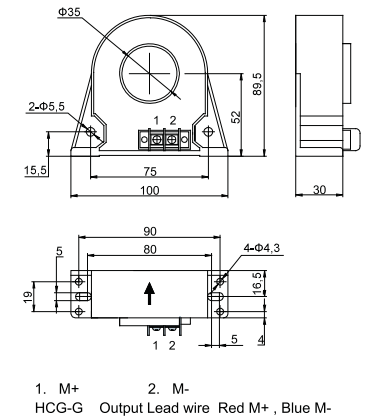


Fig. 10



HCG-G Output Lead wire Red M+ , Blue M-

Fig. 11

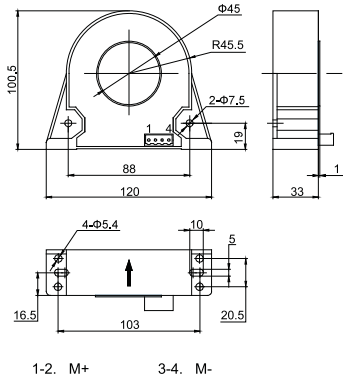


Fig. 12

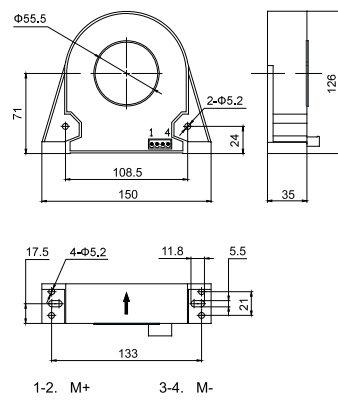


Fig. 13

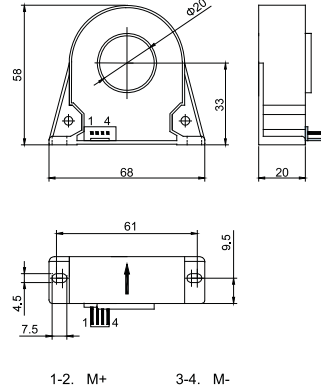


Fig. 14

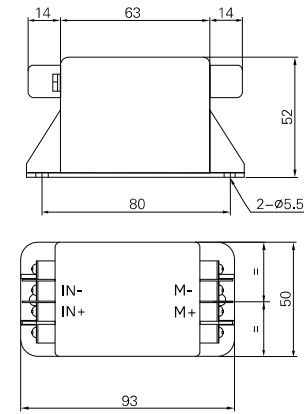
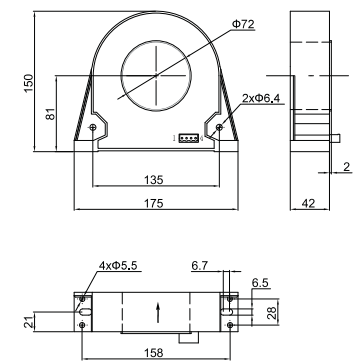


Fig. 15



$I_N$	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

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